INTRODUCTION TO NAVAJO WEAVING: THE ART AND HISTORY OF NAVAJO WEAVING

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INTRODUCTION TO NAVAJO WEAVING: THE ART AND HISTORY OF NAVAJO WEAVING

A Project

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Abstract

of

INTRODUCTION TO NAVAJO WEAVING: THE ART AND HISTORY OF NAVAJO WEAVING

by

Bridget Anne Gallagher

This project is an Alternative Culminating Experience for a Master of Arts in Education: Curriculum and Instruction with an Elective Emphasis on Arts in Education. It follows pathway I: Artist as Educator developing knowledge and skills in a particular area of the arts with a disposition towards applying the acquired expertise to arts education in a classroom setting. This project is Introduction to Navajo Weaving: The Art and History of Navajo Weaving. The author developed the functions and skills needed to progress in the craft of weaving for both personal growth and teaching purposes. Also, she established a progression in knowledge of the history of the Navajo weaving.

__________________________________, Committee Chair
Karen D. Benson, Ph.D.

________________________________
Date
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Clara and Michael, thank you for all of your support over the years, I love you both very much.
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acknowledgments</td>
<td>v</td>
</tr>
<tr>
<td><strong>Chapter</strong></td>
<td></td>
</tr>
<tr>
<td>1. INTRODUCTION</td>
<td>1</td>
</tr>
<tr>
<td>Overview</td>
<td>1</td>
</tr>
<tr>
<td>Rationale</td>
<td>1</td>
</tr>
<tr>
<td>Context</td>
<td>2</td>
</tr>
<tr>
<td>2. RELEVANT REVIEW OF THE LITERATURE</td>
<td>4</td>
</tr>
<tr>
<td>Theories and Practices of the Arts and Education</td>
<td>4</td>
</tr>
<tr>
<td>Introduction to Weaving</td>
<td>11</td>
</tr>
<tr>
<td>History in the Evolution of the Native People to the Americas</td>
<td>12</td>
</tr>
<tr>
<td>Migration of the Navajo Tribes in the Americas</td>
<td>14</td>
</tr>
<tr>
<td>A History in the Evolution of Navajo Weaving Practices</td>
<td>16</td>
</tr>
<tr>
<td>Four Transitional Periods of the Navajo Weave</td>
<td>18</td>
</tr>
<tr>
<td>Spirituality in Navajo Weaving</td>
<td>24</td>
</tr>
<tr>
<td>Conclusion</td>
<td>29</td>
</tr>
<tr>
<td>3. THE PROJECT</td>
<td>30</td>
</tr>
<tr>
<td>Methodology</td>
<td>31</td>
</tr>
<tr>
<td>Personal Background</td>
<td>31</td>
</tr>
<tr>
<td>My Project</td>
<td>33</td>
</tr>
</tbody>
</table>
Introduction to Looms.................................................................34
The Four-Shaft Loom ................................................................36
The Lap or Frame Loom ............................................................40
The Inkle Loom .........................................................................42
The Navajo Loom ......................................................................42

4. REFLECTIONS AND RECOMMENDATIONS ..........................50

References..................................................................................58
<table>
<thead>
<tr>
<th></th>
<th>LIST OF FIGURES</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Inkle table loom</td>
<td>35</td>
</tr>
<tr>
<td>2</td>
<td>Four-shaft loom</td>
<td>37</td>
</tr>
<tr>
<td>3</td>
<td>Lap loom</td>
<td>41</td>
</tr>
<tr>
<td>4</td>
<td>Navajo loom</td>
<td>43</td>
</tr>
</tbody>
</table>
Chapter 1

INTRODUCTION

Overview

The following research project was an Alternative Culminating Experience for a Master of Arts in Education: Curriculum and Instruction with an Elective Emphasis on Arts in Education. It follows Pathway I: Artist as Educator. The pathway of the artist as an educator was the narrative research project of developing knowledge and skills in Navajo weaving. Through researching information and guided exploration with teachers, the outcome established a concrete knowledge and application of the craft of weaving on four different styled looms, most notably the Navajo loom. A sample piece and four weaving projects were created using simple patterns on the different looms. Learning the new craft extended to its application of additional arts classroom instruction when teaching my arts education curriculum. Third grade students were able to appreciate gaining new knowledge of the craft and its origin. They were also able to use very simple techniques in weaving along with their own development of an original design concept applied directly to the weaving project. Through this period of learning and exploring students achieved an appreciation of aesthetic valuing and individual artistic expression and concluded with a meaningful critique.

Rationale

When crafting for either utilitarian purposes or aesthetic value, a strong base of nurturing the emotional satisfaction of the participant is needed. The act of developing,
designing, and constructing a craft piece is gratifying and the finished product brings a sense of reward and accomplishment. During the steps of creating, the thought process includes technical problem solving and reasoning. The initial steps also engage feelings and emotions of what the designed art piece might represent. Will it interpret something important to its maker or will it simply partake in functionality, or perhaps both? Ultimately, the overall personal satisfaction based on the experience of the event develops unique character along with a growing artistic mind. This gratifying manifestation can thread itself through culture and society, spread to others, and extend the development of an overall individuality in people.

**Context**

This narrative research project encompassed a path of personal exploration and growth. The initial research began with an investigative interest in the subject area of weaving. Through this interest the learning and its application began. For the researcher, the art of Navajo weaving and its history started with a basic study of how to weave on different types of looms.

Navajo weaving connected the spiritual with the weave. The researcher, from this point on, focused only on the Navajo weave. Marilyn Greaves and Mel Silva in the Sacramento area were the facilitators for the Navajo weave. Other research for this narrative study was done through the use of journals, contacting weaving guilds, reading articles and books, and, finally, talking with individual weaving artists. The primary sources of the investigation were teachers, books, and Internet sites.
A personal journal was established to record the step-by-step process of the entire narrative research study. The learning and application of actual weaving began while compiling a personal journal. The area of interest, Navajo weaving, was the final study and most in depth. With this knowledge, the introduction of Navajo weaving and its history was taken to a third-grade classroom for an in-depth arts lesson.

The cumulative narrative research project had an impact on the researcher’s teaching style by strengthening the knowledge base of artistic visions, skills, and accumulative information. The culminating experience further developed the researcher as a leader through setting examples of talent and knowledge in the classroom with students, as well as with co-workers – educators. Students were able to excel with thoughtful consideration in problem solving skills, perception of interpretations in art, storytelling, skillfulness in craft, and the development of an individualistic and artistic mind. The overall experience unfolded mindfully and was enlightened with the research of arts education specialists who discuss student needs and overall experiences in the arts.
Chapter 2

RELEVANT REVIEW OF THE LITERATURE

In this literature review, the author reflected upon how education for today’s youth was mainly focused on test-driven results in the classroom. Students have increasingly lost their ability to creatively, diversely, and mindfully pursue their education in current classroom situations, while teachers have been dictated to by the demands of district test-taking and the outcome of scores. The author, a fine arts, middle school education teacher, chose to research a project that would bring interest and intrigue, beyond test taking, to a group of students who would otherwise be unaware of the fascinating, historical journey of the Navajo weave. The research intertwined an investigation of the theories and practices of the arts in education with the author’s own exploration of a people’s past and their ever-evolving, artistic endeavor of weaving during the 19th century. Finally, the examination of the spiritual aspects of weaving in the Navajo tradition was addressed.

Theories and Practices of the Arts and Education

John Dewey’s (1934) definition of “art as experience” is difficult to comprehend, but is necessary because it is a path to understanding and establishing criteria for discussing comparisons with other education theorists, as well as to acquiring knowledge of concepts of how teaching is and is not implemented and facilitated in today’s classrooms. Other philosophers of education that follow Dewey’s sophisticated approach to an arts experience have cultivated his knowledge and pondered how learning is
facilitated inside a classroom, as well as the overall intrinsic gain of meaningful knowledge by the student. Within this realm, administrators, educators, and students have taken center stage (Dewey, 1934).

According to John Dewey (1934), an art experience does not just happen. Experience occurs continuously, because the interaction of a live creature with environing conditions is the very process of living. Under conditions of resistance and conflict, aspects and elements of the self and the world implicated in such an interaction qualify experience with emotions and ideas so conscious intent emerges (Dewey, 1934, p. 36).

Each art experience is unique to the individual. The art experience is built upon a diversity of experiences that sequentially take place, leading to an impact that culminates in a desired outcome. For example, a group of students may have similar art experience related to a history lesson in a classroom; however, each student will perceive the information differently and retain their own experience throughout all of the steps connected to the particular lesson, based on their own individual experiences in life prior to the art lesson. By linking art to the having of experiences, Dewey (1934) established an important connection to today’s arts education and, thus, allowed education theorists to ascertain the importance of developing arts and education curriculum that supported intrinsic and meaningful learning.

According to Dewey (1934), “there are conditions to be met without which an experience cannot come to be” (p. 45). He meant students needed to have had
experiences of their own that will allow them to understand and take in the experiences being taught inside the classroom. Students bring with them their own set of circumstances in life and from those, they process their own cognition of the learning environment. Parallel to Dewey, Donald Arnstine (1967), a philosopher of education stated,

New meanings are not acquired independent of change in disposition, which is to say, of one’s tendency to act. Thus it follows that, unless knowledge and skills are presented in a context in which appropriate dispositions have been formed, or are in the process of formation, they will not be acquired by students in any meaningful sense. (p. 36)

If a person’s experiences were limited in some way, perception between undergoing and doing might be disrupted. In the learning environment this is particularly true. It is important to consider a student’s background, connections to the world, and experiences of past and present in order to have established a successful, learning atmosphere. Unfortunately, educators are bound to curriculum that they themselves are forced to teach. Fewer and fewer educators have the freedom to teach students using their personal strategies and expertise to promote a child’s excitement in learning. This limited structure in the classroom disrupts the continuity of embracing the child’s inner experiences and guiding that child in the direction of meaningful learning.

Donald Arnstine (1967) followed in the tradition of John Dewey, but he focused more on having experiences in the classroom and less on the theoretical process in
achieving the experience. Arnstine, like Dewey, believed that students needed an acquired disposition in order to have continuing, meaningful, learning experiences. Arnstine (1967) also believed that social relevance was of key importance for students to be successful in learning. Social relevance pertained to the child’s personal experiences before entering the classroom and how the educator, when teaching curriculum to that child, considered those experiences, as well as enhanced current experiences to create new, meaningful learning. According to Arnstine (1967), “Rather than exert pressures on young adolescents to choose careers, or choose for them, schools might be better advised to afford resources and foster learnings with which students might be enabled later to make better choices” (p. 40). The fostering of social relevance was an important factor in implementing and teaching curriculum in the educational system.

Curriculum entails the knowledge and skill included in a school program. Curriculum is an ongoing and questionable fare that never seems to settle 100% on any one idea or way of achieving the goal of successful learning for the student and successful teaching for the educator. By examining the selection of content and tailoring it to individual student needs, the learning and teaching process may become more meaningful. Arnstine believed that on a national level, curriculum appeared to be stagnant in its purpose for achieving student learning.

Grouping students from varied social backgrounds and learning styles together and forcing them to learn all materials the same way without any variations of content or teaching style eventually stifles a student. Intellectually, he/she may not be learning
effectively. To heighten achievements in learning, students needed to cultivate freedom of thought, decision-making, and meaningful social interaction. Ideally, the curriculum and the teacher will have promoted the kind of learning that encourages a student’s natural thinking process based on the “whole” person. Advancing a thoughtful process through cultivation of freedom of thought, successful problem solving, and social success is the aim.

In 1967 a research group, Project Zero began studies on teaching the “whole” child. The founder was Nelson Goodman, a professor of Philosophy at Harvard University. Goodman wanted to study and improve education in the arts. He believed that arts learning should be studied as a serious cognitive activity. The mission of Project Zero was to build on the research to help create communities of reflective, independent learners; to enhance deep understanding within disciplines and to promote critical and creative thinking (Project Zero, 2008b).

The research projects are based on a detailed understanding of human cognitive development and of the process of learning in the arts and other disciplines. They place the learner at the center of the educational process, respecting the different ways in which an individual learns at various stages of life, as well as differences among individuals in the ways they perceive the world and express their ideas. (Project Zero, 2008a, ¶ 2)

Like Arnstine and Dewey, Goodman (Project Zero, 2008b) saw that teaching curriculum that included the arts in the classroom needed to be structured around the
individual student to see successful gains of learning in the classroom environment.

Today, educators and administrators have still struggled to develop meaningful ways of educating students of varied backgrounds based on the curriculum given to teach.

According to Elliot Eisner (1998), “A school in which the arts are absent or poorly taught is unlikely to provide the genuine opportunities children need to use the arts in the services of their own development” (p. 78). Eisner, a Professor of Education and Art at Stanford University, is an advocate of how arts can be used to improve education. In education, the arts teach imagination, many perspectives, and the importance of personal interpretation. Eisner (1998) was concerned about the way current curriculum is viewed.

The curriculum as a whole is heavily saturated with tasks and expectations that demand fealty to rule, opportunities to think in unique ways are diminished. When carried to an extreme, the school’s program becomes intellectually debilitating. (p. 82)

It is important to understand the role of arts in the classroom. Human development is not a “cookie cutter” process of memorizing taught information and writing those memorizations onto paper for the satisfaction of testing the knowledge. Human exploration and learning are much more complex in nature. Thus, students and teachers benefit from a more flexible curriculum and teaching style in the classroom. Curriculum is best suited to fit the needs of students and teachers by having flexible objectives and outcomes. The rigid style seen in today’s classrooms includes the front
loading of information and then testing the students on that information. It is not conducive to what students actually need. The less constrained flexibility of a newly-designed curriculum that includes the arts along with new teaching approaches will allow students a freedom of thought, autonomy in their judgment of choices, and social and academic success.

Dewey, Arnstine, Goodman, and Eisner all believed it was important to differentiate curriculum and instruction based on student needs. They also believed that incorporating the arts into curriculum was a key component. Differentiating instruction and incorporating the arts allows for more independent thinking and successful problem solving for the student. Today, the practice of having students placed into an educational system that only allows one way of processing thoughts and ideas in order to learn is archaic at best. The assumption that today’s students leave their formal class structures after high school and continue with a similar path of attempting to bring in new information and successful learning is unlikely. This is due to school systems failing to teach students in an effective manner.

The failed procedures in teaching and curriculum lead to high dropout rates, poor literacy, and an obvious lack of independent thinking and problem solving amongst youth today. Unless the education system becomes more flexible in its process of teaching and understanding student learning needs, the educational arena will continue to process students who are not aware of their own strengths and abilities and what they have to offer to society as young adults. Through a combination of historical fact and artistic
means, the author has taken the opportunity to increase her personal knowledge of a part of American history and share the knowledge with classroom students. In the following sections, the educational theories connect with historical information intended to inform the author and develop her knowledge base so she can effectively enrich and motivate her students with the Navajo weaving art form and its historical value.

Introduction to Weaving

According to Johnson, in Alfred Barlow’s *The History and Principles of Weaving By Hand and by Power* (1884), weaving “is an art by which threads of any substances are crossed and interlaced so as to be arranged into a perfectly expanded form, and thus be adapted to cover others bodies” (p. 1). Weaving, thought to have been around since the beginning of time, has no specific date of origin.

The earliest records of the art of weaving are to be found in the Old Testament, where frequent allusion is made to the loom and its products, of curtains, of fine twined linen, and blue and purple and scarlet, with cherubims of cunning work.

(Johnson as cited in Barlow, 1884, p. 2)

Today, through its evolution, weaving has proven to be not just for functionality purposes, but also for self-expression both artistically as well as spiritually. One particular style of weaving, the Navajo Weaving, combined both practicality in use and pleasing aesthetics with a deep spiritual sense.
History in the Evolution of the Native People to the Americas

As told in many history books, when Columbus landed in what is now known as the West Indies, he incorrectly thought he had reached the Indies. He called the native people he met Indians. The Indians of the Americas spoke hundreds of different languages, had many varied ways of life, and each group had its own name. Some Indians lived in large cities and others in small villages. Still others kept moving throughout the year, hunting animals and gathering wild plants. How the Native Americans arrived or began living in the Americas has been an ongoing debate between varied scientific communities.

It is thought that no people had lived in the Americas before the arrival of Indians. Some scientists believed the first Native Americans came from Asia at least 15,000 years ago. Others believed they may have arrived as early as 35,000 years ago. There have been two theories of chronological migration models that have been divided into two general schools of thought. “One school believes in a ‘short chronology,’ with the first movement into the New World occurring no earlier than 14,000-16,000 years ago. The ‘long chronology’ camp’s position is that the first group of people entered the hemisphere at a much earlier date, possibly 70,000 years ago or earlier, and may have been followed by one or more successive waves of immigrants” (Wikipedia, n.d., ¶ 1). In the article regarding models of migration to the new world, one particular factor that has continued to ensue is the disconnectedness of archaeological evidence between North American and South American hemispheres. In the Northern and Central part of the Americas, some
scientific evidence showed a migration from about 13,500 years ago. Most of this
evidence was primarily based on carbon dating of fluted points seemingly used for
hunting. Artifacts found near Clovis, New Mexico suggested that the radiocarbon years
B.P. (before present) was about 11,050 to 10,800. In article findings, Michael R. Waters
of Texas A&M University and Thomas W. Stafford Jr., proprietors of a private-sector
laboratory in Lafayette, Colorado and experts in the complex art of radiocarbon dating,
have claimed that the Clovis findings were set between 11,500 and 10,900 radiocarbon
years B.P. (Wikipedia, n.d.).

In the southern part of the Americas, the evidence displayed a more diverse
pattern of travel and existence. This questioned the possibilities of migration by both land
and sea. The article stated,

The Pacific model proposes that people reached South America before North
America following a Pacific route of water travel. Support for this argument is
based on components that were discovered at Monte Verde. The youngest layer
radiocarbon dated at 12,500 years, while the older component possibly dates back
as far as 33,000 B.P. However, the older dates associated with the site are still
debated. (Wikipedia, n.d., ¶ 16)

According to the Models of Migration article, many archaeologists concluded that
the Clovis model was not valid for the Southern Hemisphere, and they have been seeking
new theories to explain prehistoric sites that do not fit into the Clovis tool techno-
complex in South America. Some theorists have sought to develop a Pan-American
colonization model that integrates both North and South American archaeological records. The possibility of a combined migration appeared to be quite plausible. The archeology findings in the southern routes predated findings in the northern routes. Also, a travel route by boats to the southern Americas, pre-Clovis period, was not unrealistic. Weather fronts in the southern part of the world were much warmer than the northern Americas and travel by boat would not have been unlikely. Last, eating habits, that is, more seafood in the southern region predating the Clovis model, were also apparent. For the Navajo, based on archeological findings, the Clovis model seemed a better fit for some archeologists (Wikipedia, n.d.).

Migration of the Navajo Tribes in the Americas

A brief history of the Clovis model at the time of the first natives included the fact that huge ice sheets covered much of the northern half of the earth and much of the earth that is now underwater was dry land. One such area that was dry then but is now submerged is the Bering Strait. People following the animals they hunted wandered across this land, which was a distance of about 50 miles (80 kilometers). Long before European arrival, the Indians had spread throughout the New World. Varied tribes and cultures ranged from the Arctic regions of North America to the southern tip of South America. Jerrold E. Levy (1998), a professor of Anthropology, believed, “the Navajo tribe time line began with a migration from the sub Arctic around 1000 CE” (p. 24). By 1500, arrival in the Southwest was evident. During this long migration from the sub Arctic, the Navajo were primarily a nomadic, hunting-farming-gathering type people. In
Bonar’s (1996) book, Hedlund supported archeologists’ theories that “the Navajo and Apache may have entered the Southwest sometime during the 1400s, after a lengthy migration from the North. The Navajos found Pueblo Indians settled throughout the area and made their homes in present day northwestern New Mexico” (p. 49).

Frederick J. Dockstader (1987), author of The Song of the Loom also suggested the accounts of the Navajo’s origin and emergence into the world today were at one point interwoven with those of the Pueblos. Nestled into the northern part of Arizona and New Mexico they developed into the Navajos of today’s culture and exhibited many characteristics of their Pueblo neighbors. Most of these innovations were introduced through intertribal trading and natural proximity. As well, the presence of Pueblo wives or slaves captured by raiding parties of Navajo, whether willing or not, became a part of the Navajo tribe (Dockstader, 1987). In Bonar’s (1996) Woven by the Grandmothers, Joe Ben Wheat confirmed that the Pueblos had established presence in the southwest prior to the Navajo and presented important influences of innovations, particularly in weaving, to the Navajo tribes. The Navajo were a fierce tribe and never gave up their proud nature through fighting other tribes and defending their lands. However, they had the ability when forced by outsiders to compromise their values, to adapt, learn new trades, and transform those trades into their own metamorphic works. Weaving was one of those trades.
A History in the Evolution of Navajo Weaving Practices

From the beginning of time, people around the world made tools and developed skills for survival. Making garments and useful items such as blankets became increasingly important. Within these different cultures, techniques were mastered and influenced future generations. One such tool was the loom. The weaving loom and its tools were an important entity that firmly assisted in the development of useful and needed items and, ultimately, aided in the ease of living among various cultural tribes. With the establishment of the loom and its adjacent tools also came increased knowledge and the manipulation of fibers.

Dockstader (1987) discussed that it is not known to what degree the Navajo already knew the weaver’s craft. Some authorities argued the Navajos themselves lacked great knowledge of the weaving craft although they were well developed in the mastery of basketry. Archeological findings have showed traces of a small number of weaving tools at Navajo sites and have supported the idea of the Navajo having a small amount of knowledge of textile skills but not being highly developed in that craft.

During a period known as the Pueblo Revolt, 1680-1692, Dockstader (1987) continued, the Pueblo tribes fled to more distant Navajo areas for protection. Scholars believed that during this time the Navajo first learned how to weave. According to Bonar (1996), Wheat confirmed that Pueblo Indians went to live with Navajo to avoid Spanish rule during about 1640 and the Navajo became greatly influenced by the Pueblo’s way of life. Wheat continued, “Sometime during the middle of the seventeenth century, Navajos
began to use the ancient wide loom of the Pueblos and began to weave many of the same kinds of garments and blankets” (as cited in Bonar, 1996, p. 70). As the two tribes co-existed, the adaptation of the weaving trade for the Navajos would multiply in years to come. The exploration and experimentation of yarns, including the introduction of wool by the Spaniards, would later lead Navajo weaving into a very creative and profitable direction for the tribe.

As this union ensued, Dockstader (1987) explained, the Pueblo used mostly cotton fibers for weaving, but the Navajo soon discovered another material first introduced to the southwest by the Spaniards, the Spanish Churro sheep and its wool. The Pueblo continued to keep cotton as their main fiber, but the Navajo recognized the superior quality of wool. Wool was strong, easy to spin with its long fibers, and receptive to dye. Thus, they turned to sheep as their main source of fiber, as well as a source for food (Dockstader, 1987). Unlike the Pueblos where the weavers were mostly men, the Navajo weavers were mainly women. According to Dockstader (1987), “the position of the Navajo men as mobile hunters, warriors, and raiders caused the Navajo women to adopt the craft as their own” (p. 16).

As the Navajo women continued to explore the art of weaving by trying new dyes, new techniques, and varying designs, their skills for the craft naturally improved over time. With their improved skills came different technical approaches to the weaving than what they had learned from the Pueblo. A more refined weave began to emerge.
Wheat (as cited in Bonar, 1996) also discussed the development of the Navajo weaving and stated,

Early Navajo blankets were woven much the same as the Pueblos, but changes in the details of how they were woven began to occur in the 1700’s. The selvedge changed to two three-ply cords, instead of the Pueblo style of three two-ply cords. Navajos began to weave their textiles in segments, leaving diagonal joint lines between them. (p. 71)

Dockstader (1987) added,

Their first weaves were direct copies of the traditional banded wearing blankets favored by the Pueblos. The introductions by the Spaniards of new motifs gave rise to the beginning of an increasingly expansive art form, an influence that intensified after the Mexican Revolution, when the poncho and serape, which decorations characterized. (p. 16)

The Pueblos chose to continue with their cotton fibers as their main yarn even when wool was made available. Also, the exploration and openness to new weaving techniques and designs in weaving was not like that of the Navajo. In the mid-18th century, although the Pueblos continued to be an integral part of trading and selling of wool to the Navajos, the Pueblos did not begin to excel at weaving like that of their Navajo neighbors.

Four Transitional Periods of the Navajo Weave

Through the early-, mid-, and late-19th century, the Navajo became increasingly skilled with the craft of weaving, color, and design. The evident changes were divided
into four specific periods in the history of Navajo weaving. They included the Early Classic Period, the Classic Period, the Transitional Period, and the Rug to Regional Period. The Early Classic Period was evident from about 1700-1840. Hecht (1989) stated, “during this period the Navajo’s wove only for their own use: lightweight blankets worn around the shoulders and saddle throws and bedding” (p. 41). According to Getzwiller (1984), a native Arizonian who studied Anthropology at the University of Arizona and is an avid Navajo rug trader, during the Early Classic Period, the banded patterns were notable and woven in natural wool colors. These woven pieces were used for everyday hard use. The fabrics were often worn down completely or buried with the owners, thus, not leaving many examples of this era to remain for study.

The second period known as the Classic Period, Getzwiller (1984) claimed, existed from 1840-1863. During this time period the Navajo were at their peak with high quality and craftsmanship in their weaving. Their technical spinning and weaving abilities were unsurpassed by their neighbors the Pueblos and the Mexicans. This period of high point was partly due to the extensive use of red baize or bayeta yarns and the combining of these yarns with the already used indigo, natural wool, and vegetal colors into their weavings.

Hecht (1989) agreed, “Strong vivid colors were associated with the “classic” period of weaving” (p. 43). Hecht stated the major color sources used to dye the woolen yarns were indigo, imported by the Mexicans from Europe and the Mexican Cochineal. Both of the dyes were available for a price by the Pueblos. However, the most common
source of colored yarn was the bright red bayeta. It was a light-weight wool fabric dyed red with cochineal and then imported from Spain to Mexico to make military uniforms. The Navajos purchased this cloth, raveled it, and then, re-spun the fibers into a high twist yarn for use in their weavings (Hecht, 1989). The savvy use of this cloth being raveled and re-spun displayed the ingenuity of the Navajo.

Another important source of yarns during the Classic Period were yarns from Germany. In the later part of the 19th century the “Germantown” yarns were readily available, but were not a high quality fiber. Getzwiller (1984) mentioned the colorful three-ply yarns known as Saxony, named for their German origin. The yarns were available through trade and also contributed to the high quality and consistently fine weavings of the Navajos during the “classic period” (1984). The Saxony yarns from Germany may also have been referred to as “Germantown” yarns. Historically, the term has been used to describe both high quality and poor quality yarns. Hecht (1989) also discussed the use of the “Germantown” yarns, an American four-ply machine spun yarn dyed in many colors. These yarns were added to the weavings to supplement the bayeta red and achieved brightly colored and beautifully designed and rugs. Nevertheless, the Navajo Classic Period with its high quality fibers and innovative weaving ended abruptly.

According to Getzwiller (1984), in 1863 “The Navajo people were rounded up and incarcerated by the United States government at Bosque Redondo in central New Mexico in reprisal for their incessant raiding on the neighboring Mexican, American, and Pueblo settlements” (p. 44). He further concluded that while being held captive for five
years, the Navajo did not have access to their native wools; therefore, they only used machine made yarns that were supplied by their captors. When the Navajo were allowed to return to their homeland in 1868, the re-adjustment to reservation life was a continuing struggle (Getzwiller, 1984). The Navajo, with all of their innovative style in the development of weaving and craftsmanship, were still defending themselves and were volatile to many of their neighbors. The oppression of the Indian tribes was also evident, and the Navajos were forced to alter their daily lives as they stepped into the next period of the Navajo weave.

The Transitional Period, according to Getzwiller (1984), was from 1863-1890. This was a time of changes for the Navajo people. Adjustments to the increasing Anglo-Saxon presence in the west occurred. Making Navajo blankets transitioned to creating rugs because of consumer demand. In addition, the quality of the Navajo weaving declined partly due to the use inferior fibers. The industrial revolution was well on its way. With this Anglo-Saxon presence came even more of an increased demand for the Navajo weavings. Color combinations and weaving patterns began to become more complex and interesting. Dockstader (1987) claimed,

by the beginning of the 19th century the Navajo women had established themselves in the mastery of weaving textiles. Blankets, saddle pads, and bed covers were the main objects. Later in the 19th century rugs were included in their repertories. Toward the end of the century white settlers and traders from the eastern states further strengthened the growth of the textile arts. (pp. 16-17)
He also discussed that the increased demand for woven products led to new design elements and the involvement of traders as entrepreneurs. Names such as Juan Lorenzo Hubbell, John Bradford Moore, Clinton N. Cotton, and Thomas Varker Keam were among the most influential traders in establishing a level of quality and initiating a design or style that has become “traditional” Navajo weaving today. These traders described their ideas of what they thought Navajo weaving should look like. The Navajo women took these descriptions and collaborated to create a style and form that eventually evolved into what is traditional Navajo weaving today (Dockstader, 1987).

However, Getzwiller (1984) explained, “by the mid 1880’s the finer imported Saxony and bayeta wools were being replaced with a coarser three and four ply yarn called Germantown. The yarn was less expensive and more readily available because it was manufactured in Pennsylvania” (p. 45). Getzwiller stated that quantity had become more desired than quality, thus, unfortunately, the superiority of the Navajo weaving deteriorated. But innovative traders began to see new opportunities for Navajo weaving. By the late 19th century, due to the demands of industrial revolution and needs and desires of consumers, Navajo weavers more fully transitioned from blankets to rugs.

Getzwiller (1984) explained that the Navajo blankets were becoming less profitable due to the introduction of commercial fabrics, as well as the Pendleton blanket. The weaving designs of the Navajo blankets were no longer true representations of the Navajo people, but rather in accord with the traders’ desires. With the blanket becoming less and less profitable and of lower quality, savvy traders began seeking new and
profitable avenues for themselves and the Navajo. This is when the era of the Navajo rug began to evolve. This period in Navajo weaving was known as the Rug to Regional Period from 1890-1940 (Getzwiller, 1984).

With the assistance of knowledgeable traders, this period was an opportunity for the Navajo weavers to adjust to the trends of the quickly growing modernism that lay before them. But, rug construction required some different elements than did blanket making. Dockstader (1987) stated that the Navajo adjusted in order to produce rugs. Rugs were thicker and larger textiles. They would require yarn changes and larger looms. According to Getzwiller (1984), “weavers were encouraged to work in larger sizes with a heavier weave and to incorporate borders into the pattern. Also, high quality aniline dyes had become readily available in a wide range of colors from traders throughout the reservation” (p. 46). He continued by saying that combined with the homespun wool, the dyes helped to create colorful and long-lasting rugs. With the exception of the Germantown yarns, other pre-spun wools were not used due to price and availability. From this time forward the standards for the larger looms, dying, and techniques in rug weaving have remained mostly the same.

Dockstader (1987) stated,

Today, the Navajo are the largest Indian tribe in the United States. With a 1985 population estimated at over 170,000 individuals, inhabiting a reservation of approximately 160 million acres in Arizona and New Mexico. In 1973 a census of weavers recorded 28,000 women who knew how to weave. (p. 19)
The importance of keeping traditions in Navajo weaving strong has been handed down from generation to generation. Today’s Navajo weavers are women who have become as important as their grandmothers in keeping the tradition of weaving alive and establishing a connection to their ancestors and to each other. They have strongly embraced the art of weaving as an integral part of their heritage, religion, and being.

Spirituality in Navajo Weaving

The importance of symbolism in reference to the number four was threaded throughout the Navajo culture. The Navajo (Dine taa: Navajoland) had lived surrounded by four sacred mountains that represented the north, south, east, and west. The mountains included Blanca Peak, in the east; San Louis Valley, Colorado; Mount Taylor, north of Laguna, New Mexico in the west; San Francisco Peak near Flagstaff, Arizona; and in the North, La Plata Mountains, Colorado. In Bonar’s book, Woven by the Grandmothers, Begay (1996) reflected on the importance of symbolism in the use of “four.” Her great grandfather’s story described their clan, the Ta’chii’ni, and where they were from. The name of the clan designated where they lived. He told the story:

The hills had red streaked clay deposited in the earth. The people from nearby Dook o’ oosliid (San Francisco Peak) saw fire off in the distance toward the north, about where Tachee is located in the mountain ranges. This happened three times and each time the people went to find the fire, but having no luck, they returned to Dook’ o’ oosliid. The fourth time, the people searched for fire again. They stopped where they thought they saw it, but they still did not see any sign of
fire. There was a man sitting in the shade sewing moccasins. He said, “We are Ta’ chi’nii and we live here.” He folded up his skin and behind it was a cave, and inside there were many elders, women, men, and children working. He explained that they were the real people, Ta’ chi’nii. (p. 28)

The Navajo legends had been many and varied. Storytelling continued throughout the different families of the Navajo tribes.

From the four sacred mountains also came four sacred directional colors. Begay (as cited in Bonar, 1996) talked about these sacred directional colors in reference to nature. White represented dawn and the east where the sun had risen. Blue represented day and was south. Yellow represented sunset and the west where the sun had set; black represented night when all was dark in the north. The nature aspect in Navajo symbolized great worth because every facet connected to Navajo was directly in tune with nature.

For Navajo weaving, spirituality was embedded in nature and carried significance. Harry Walters (as cited in Bonar, 1996) stated, “Navajo weaving is directly related to nature-dawn, day, twilight, and night: mountains, trees, animals, and insects; earth, air, and water. All of these are holy elements and they are all present in Navajo weaving” (p. 29). Based on a natural order, all plants, animals, insects, and humans have a natural order of day-to-day processes and interactions. When a weaver was in tune with the natural aspect of the earth’s processes and energy, her weaving was at peace and thoughtfully constructed. Thus, Navajo weaving is deeply embedded in the core of the
Navajo people. Walters (as cited in Bonar, 1996) reflected, “when everything a weaver uses is in balance, harmony prevails” (p. 10).

The Navajo believed that weaving was an act of creation. The act of “simply weaving” did not exist. Weaving was much more soulful and powerful in spirit. The art of Navajo weaving embodied healing powers. Weaving extended not only to a person’s work, but also the way a person conducted his/her life. This was true for all Navajo cultural components. Begay (as cited in Bonar, 1996) stated, “The Navajo did not have a word for ‘art.’ To study Navajo art one must study the whole culture” (p. 29). Also, according to Kalley Keams (as cited in Bonar, 1996),

weaving is a form of communication that links families together: rugs also link Navajo people to the weavers of the past. Weaving then is both a base for and means of transmission of Navajo culture, as well as a personal expression of the weaver” (p. 10)

The Navajo’s belief in creation and harmony through weaving arose with their creation myth and the beginning of their world. Like other creation myths of various North American tribes including the Pueblos and the Aztecs, the Navajo believed they emerged from three previous underworlds into the fourth current world. Again, the theory of life having occurred in a series of four surfaced. The first people were not like people of today; they were animals, insects, or masked spirits as depicted in Navajo ceremonies. The first man was made in the East with the meeting of white and black clouds. The first woman was made in the west from the joining of the yellow and blue clouds. As the
creation myth continued, a deity known as Spider woman emerged from the third world into the fourth or current physical world. According to Crystal Links website,

Spider Woman possessed supernatural powers at the time of creation, when Dine (Navajo) emerged from the third world into this fourth world - the world of time and physicality. At that time, monsters roamed the land and killed many people. Since Spider Woman loved the people, she gave power for Monster-Slayer and Child-Born-of-Water to search for the Sun-God who was their father. When they found him, Sun-God showed them how to destroy all the monsters on land and in the water. Because she preserved their people, Dine (Navajo) established Spider Woman among their most important and honored Deities. It was Spider Woman who taught Navajo ancestors of long ago the art of weaving upon a loom. She told them, "My husband, Spider Man, constructed the weaving loom making the cross poles of sky and earth cords to support the structure; the warp sticks of sun rays, lengthwise to cross the woof; the healds of rock crystal and sheet lightning, to maintain original condition of fibers. For the batten, he chose a sun halo to seal joints, and for the comb he chose a white shell to clean strands in a combing manner. Through many generations, the Dine (Navajo) had always been accomplished weavers. (Crystal Links, n.d., ¶ 58)

As suggested, Spider woman along with Spider Man represented the origin of weaving according to Navajo myth. There were different versions of this storytelling, but all established Spider woman as the creator of weaving and the loom. Wesley Thomas (as
cited in Bonar, 1996) stated, “The power, strength, and endurance of Spider Woman are ever-present in the weaving tools and in the community that surrounds the weaver” (p. 36). Thomas added, “My grandmother constantly tells me that my weaving tools are my defenders, my weapons against hunger or any form of ‘hard times.’ Weaving tools provide for and protect life. They are nurturing tools, mothers” (p. 36). The weaver and her tools had a spiritually bound connectedness. According to Begay (as cited in Bonar, 1996), “in Navajo there is no precise word for loom. Weaving terms are descriptive of how space is filled, of how parts of a loom occupy space rather than the parts themselves” (p. 20). Keam (as cited in Bonar, 1996) resonated, “I was told the loom is like a child, that my tools are an extension of me, that the weft strings are parts of my life, and the warp represented the foundation of my soul” (p. 10). Finally, Thomas (as cited in Bonar, 1996) stated,

through the actual construction of the loom and the process of weaving, I learned about one form of Navajo spirituality. A weaver must have clear and positive thoughts while weaving, thereby creating a “sacred space” around the loom. Negative thoughts or bad words are not to be spoken around or near the loom and when it is in use. (p. 36)
The weavers’ building of blankets and rugs traditionalized Navajo families and maintained a spiritual history of the Navajo people. Weaving, through the powerful myths, laid a foundation of strength, vision, and oneness with the earth and its inhabitants and had become an integral part of the daily Navajo life.

Conclusion

In this literature review, the author probed the importance of theories and practices in the arts of education and connected that with the exploration of the history of Navajo weaving along with the spiritual aspects of the Navajo tradition. The introduction of historical facts through the venue of an arts education can secure grounds of importance for the students receiving the information and learning the art of a significant group of people and the evolution of their artistic trade. The moving saga and rise of an integral part of American history was reflected in the migration of the Navajo nation and their evolution in the fine art of weaving. It was illustrated from the hunter-gatherer beginnings to cohabitating with the Pueblos and learning the weaving trade, to facing realities of modern technology at the turn of the century that hindered their blanket production. Later strengthened by a newer rug construction, the Navajos established themselves as an innovative group that held on to their sacred beliefs and art forms throughout the centuries.
Chapter 3

THE PROJECT

This project is an Alternative Culminating Experience for a Master of Arts in Education: Curriculum and Instruction with an Elective Emphasis on Arts in Education. It follows Pathway I: Artist as Educator. This cumulative, narrative research project is the study of Navajo weaving, its history and its relation to the development of the artist researcher.

After learning basic weaving on a variety of looms and researching the Navajo style weaving and its history, the researcher taught these to children in a primary education setting. Through a series of lessons, the students were introduced to the history of the Navajo, their art form of weaving, and weaving itself. The methodology of research was Narrative Inquiry. Using narrative Inquiry in research was important, particularly for a public school setting. Andrews (1991) stated, “if we ignore social context, we deprive ourselves and our collaborators of meaning and understanding” (p. 13). She continued, “Masking the limits of individualism, such accounts often present isolation, estrangement, and loneliness…as autonomy, independence, and self-reliance (p.13). The above statements reflect students in classrooms today that are not taught to be individual thinkers and problem solvers. As an arts educator, it was important the researcher encourage students to connect American history to their own ancestry (predominantly Hispanic), and through an arts connection establish their own actual autonomy, independence, and self-reliance. Chapters 3 and 4 are written in first person.
Methodology

The research project specifically involved learning the craft of basic weaving techniques along with the research of the Navajo people and how important weaving is to their culture. Throughout this narrative inquiry, I attended workshops, kept journals, made observations, accessed teachers, and explored weaving through a range of experiences.

Personal Background

I do not remember exploring my artistic side in a consistent manner while growing up. I do remember, in elementary school, having access to a variety of art projects in a public school setting. Outside of school, I was mainly motivated by sports. Competitive swimming and cross-country running were among my favorites. By the time I left high school, I was interested in modern dance and eventually lived in Los Angeles. There I became part of small dance ensembles that specialized in performance art in small venues. While in Los Angeles, I also took acting classes and belonged to a local theater group. As life continued, I had two children, and the performing aspect of my life ceased.

I continued a college education and received an Associate of Arts degree in visual Display and Space Design from the Fashion Institute of Design and Merchandising. Still unable to make enough money to support my two children and myself, I put aside my artistic ambitions and continued educating myself. In due course, I received a Bachelor of Science degree in Social Work from California State University, Sacramento (CSUS). I
thought choosing that major was a “practical” choice. During my time attending the four-year university, I had an Arts Coordinator position with the Children’s Museum of Stockton. It did not pay well, but it did assist in changing my life’s course.

As an Arts Coordinator, I was in charge of all art-related events for the museum. I also was in charge of planning and implementing all the summer camps offered through the museum. Thus, I received ample experience with planning events and ordering supplies and materials for multiple happenings. I gained many hands-on experiences teaching art to “mini people,” as I call them, students in grades pre-school through third grade. While employed there, I also was able to bring two traveling exhibits to the museum. After I graduated from CSUS, I had to make a professional choice. The Arts Coordinator position was wonderful, but it did not pay well. I did not live in a city that offered a variety of interesting job positions. I was not excited about social work, and I felt out of place and unfulfilled educationally. I decided to take a management position with Target Corporation. As much as I did not like the hours of retail, I was now making enough money with benefits to provide comfortably for my two children and me. After three long years, I chose to complete a teaching credential program, started substitute teaching, and, in the end, left Target. Taking a slight cut in pay, I began my teaching career.

The first year of teaching was a seventh- and eighth-grade science class. The second year was a sixth-grade class that almost made me re-think teaching as a profession. Then, I had the opportunity to teach the Gifted and Talented Education
summer school program, and I loved it. I began re-assessing my talents and personal needs. I aggressively applied for a Visual and Performing Arts position and was able to start my seventh- and eighth-grade art teacher career four years ago. Luckily, during these last four years I have been at the same school teaching Visual Arts in the Stockton Unified School District. I have a good rapport with students, staff, and administration and enjoy my teaching position. Our school is small, only 600 students in Kindergarten through eighth grade, and the students I teach are predominantly of Hispanic descent.

My Project

As a part of the Pathway I, my goals for this project included a research narrative with an investigative approach to the subject of weaving. My first objective was finding an experienced weaver. After locating and visiting the weaver, my interest turned to learning about the construction of different types of looms. From there, I attended workshops for beginning weavers, and I started to understand the beginning techniques of warping, dressing a loom. Finally, I began weaving and making finished projects. As I continued my inquiries through the beginning stages of learning, I found I still lacked the much-desired spiritual growth I was seeking as I developed skill in this art form. As an Art Educator, I understood the importance of a continued self-exploration while learning a new art form or applications of an already familiar art form. I continued to take workshops outside of basic weaving that sounded interesting to me. I soon discovered Navajo weaving. Through the Navajo weaving, I was able to establish a sense of spiritual purpose along with the application of weaving. With this new information and
application, I guided a group of primary students through a lesson to activate their own study and application of an art form new to them.

Introduction to Looms

Weaving has always been a subtly lit background of interest for me as an artist. My grandmother was a weaver, but the tradition was never passed down. Today my study of hands-on weaving has been a journey through the teaching skills of three master weavers and self-mastery through mostly books and journal articles. I explored a variety of looms and basic weaving techniques. The looms included the lap or Frame loom, Inkle loom, four-shaft loom, and the Navajo loom. All four of the looms were different in their construction and possibilities in weaving. The techniques I studied were for basic weavers. The most varied techniques were on the four-shaft loom.

I began my introduction to weaving through a garage sale purchase of an Inkle loom constructed by Gilmore Looms, in Stockton, California, as noted with a wood burned stamp on the bottom of the loom (see Figure 1). I was excited to find out there was actually a loom business locally where I lived. I found the business on the Internet and noted the information about Gilmore Looms. According to Bob and Judy Allen, Gilmore looms was originally started by Mr. E. Gilmore in the 1930s. He designed the original “jack loom” (popular in the 1970s) and obtained his first loom system patent in 1933. Mr. Gilmore started his loom business in downtown Stockton in 1936. In 1956, the company moved to its present location just outside of the Stockton city limits. The Allens purchased the loom business in 1999. The looms are made to order and not sold in retail
establishments. Bob Allen is a retired teacher and wood worker. Judy Allen is a crafter and has been working with fiber arts for several years. She works on a variety of looms and has good knowledge and experience of the craft (J. & B. Allen, personal communication, June 21, 2009).

Figure 1. Inkle table loom.

I made an appointment to receive a lesson on how to use the Inkle loom I acquired. During my visit, I quickly decided to sign up for a beginning-weaving lesson on a four-shaft table loom. This was a standard loom for learning beginning weaving. I left
my Inkle loom with the Allens to have a “heddle tower” permanently attached to it to replace the need for me to tie on the looped string heddle system. Thus, I placed instruction on how to weave with the Inkle loom on hold.

The Four-Shaft Loom

The four-shaft table loom became my first loom for weaving instruction. Four-shaft table looms are a smaller version of a floor loom and can be transported more easily. Widths and shafts vary on these looms as they do on floor looms. The four-shaft table loom has four shafts that rise up and down using either hand levers or foot pedals. These shafts manipulate the threads to create a desired pattern. The construction of the loom as shown in the picture has several parts. The main frame has a front beam and a back beam. Either of these beams is where one warps the thread. The beater lies to the back of the front beam. Within the beater is the reed. The reed is a metal rectangular piece with a lot of slots. These slots are called dents. The reed determines how close together the warp threads are and keeps them straight when weaving. Depending on the yarn being used and the width of the beater, there are different sized reeds and dents. The beater and the reed together are used to beat the weft into place (see Figure 2).
The shafts are rectangular structures that hang or rest inside the major frame of the loom called a castle. They are behind the beater. Within each shaft, there are four or eight shafts on a loom. Heddles, strips of metal or string with eyes in the middle, hang within the shafts. Warp yarns are threaded through the eyes of these heddles. Along with the shafts are two large rotating beams across the front and back of the loom. The back beam has the warp threads rolled around it before starting weaving. This beam is called the warp beam. The front beam is called the cloth beam, since the cloth will wrap around
this beam as it is woven. These rotating beams allow for longer lengths of cloth to be woven as opposed to frame looms that are limited to the size of the frame. After learning the structure of the frame, the next step was learning how to warp or dress the loom. This, in my opinion, was the hardest part about learning weaving.

The four-shaft loom uses four shafts that raise and lower the warp (vertical) threads, while the weft (horizontal) threads are passed through warp threads with a wound shuttle of chosen yarn. The desired woven item has to be planned ahead of time using mathematical calculations to decide how much yarn is needed and also what type of yarn should be used.

The warp yarn length is first calculated using a basic formula by adding 20% to the project length for shrinkage and take up of yarn. Also, one needs to include a percentage of loom waste. The amount of loom waste depends on the expertise of the weaver. Next, is the need to calculate “ends per inch.” Ends per inch is the thickness of the yarn. It is measured around a ruler and the amount of times it wraps around the length of one inch is the ends per inch or warp sett. Then, the total calculated length is multiplied by the ends per inch and then divided by 36 inches. This will give the total yards needed for the warp.

Once one has the warp measurement, the next step is to wrap the yarn onto a warping board to specifically measure and organize the yarn for exact yardage and easier application onto the loom. A guide string in a different color is helpful to determine how much yarn to wrap. For example, if one and a half yards of yarn is needed for a project,
then choose a contrasting colored piece of string that is the same length and tie and wrap it onto the pegs of the warping board. Then wind the yarn along the same path making the yarn cross at one end until the correct amount of yardage is established. Next, secure sections of the warp thread with several short pieces of string. Take the warp off and begin placing the threads correctly on the front beam so each yarn piece can be threaded into the correct sized reed slots. For example, with 10 ends per inch (EPI) yarn, one would want to use a 10-dent reed.

“Dressing” the loom is the next step and is not a simple task. Applying the warped yarn to the loom easily took me two to three hours. The table loom I worked on was 15 inches in width. I centered the yarn and threaded each piece of yarn through each reed slot. Once I threaded the yarn through the reed, I then threaded the yarn again through the heddles. Heddles are metal or string loops that are connected to the shafts. They keep the yarn in place when the shafts are raised and lowered and assist in the actual weaving process. After the yarn is threaded through the heddles, it is then tied onto the back beam.

Once the warp yarn is secured onto the back beam (there are several methods of tying on the yarn) the back beam is then turned to tighten the yarn accordingly. Then it is time to begin weaving. The weft yarn is wound onto a shuttle. There are several types of shuttles, and I used a boat shuttle. With each opening of a shed (shaft) the weft yarn is passed through. The first five or so passes are usually woven with a plain weave. A chosen pattern will determine which of the sheds will be raised at any given time. This process is continued until the desired project is completed. In my case it was a sampler
weave with a variety of different weaves on one panel of warp threads. At the end of the project I finished with the same amount of plain weaves with which I began in order to secure the ends.

When removing the project from the loom, the ends need to be secured so the yarn does not unravel. This can be done in different ways. One of the simplest ways is to hemstitch both ends of the project piece. If the project has fringe, overhand knots can be used to secure the piece ends. I secured my sample weave with knots. The final step in completing the project was to wash and dry it. The yarn content determines how the piece is washed and dried. The project is now complete and ready to use or be displayed.

The Lap or Frame Loom

The next loom I explored with was the lap loom (see Figure 3). It had simplicity in structure and mobility to travel well. The construction is a simple rectangular wood frame with a specific number of pegs attached at either end of the shorter, horizontal bars. The lap loom comes in a variety of sizes. I wove on both a smaller model and larger model.
This loom allowed for spontaneity in interesting patterns and designs while using a variety of media in the weft and the warp from twigs and ribbons to beads. Ideally, it is a good loom for testing yarns in sample pieces, unusual creative patterns, and uncommon media for the warp and weft. I have continued to explore with this loom because of the freedom it allows with materials. I have woven two wall hangings with it.
The Inkle Loom

This loom was designed for specific weaving of narrow width pieces of cloth and created items such as belts, guitar straps, and wall hangings. The pieces could also be sewn together to construct larger items such as purses, pieces of clothing, or other desired wovens. This loom created woven pieces with interesting patterns and color combinations very quickly. The loom was fairly simple to use. After one lesson on threading the loom, along with reading patterns to create a desired warp, I completed a belt and bracelet along with sample pattern weaves.

The Navajo Loom

The Navajo loom was similar in construction to the lap loom, but with varied complexities of construction, making it unique in its features and abilities. Dependent on the size of the loom, rugs, blankets, and clothing were woven most often. Beautiful traditional and non-traditional patterns became the focal point of these weavings. While taking traditional weaving lessons, I kept noticing a loom with a half-woven beautiful pattern at the weaver’s studio. It was very unique from the other looms and weaves. I asked what kind of weaving it was, and she told me it was Navajo (see Figure 4).
Figure 4. Navajo loom.

In the beginning, while pursuing the weaving endeavor, I was finding little about the tradition of the craft; and, as an artist, I was not feeling spiritually connected to the process of weaving. Through the continued exploration of weaving classes and workshops, I came upon the weaving practices and traditions of the Navajo people. Intrigued with the spiritual aspects of Navajo weaving, including the symbolism and tradition, I found an aspect of weaving to explore fully.
Navajo textiles had always been created on vertical looms, unlike the treadle or horizontal looms used by Europeans and the Mexican weavers and their Rio Grande descendents (Dockstader, 1987). The loom itself was simply designed. Hecht (1989) described the construction of the traditional loom: two posts were established vertically while the top and bottom horizontal beams were securely fixed to the two vertical posts. When tied together at right angles the four posts stabilized a strong weaving frame. The weaving frame consisted of two cross bars, one that was tied to the top and one that was tied to the bottom horizontal bars. These crossbars ultimately secured the vertical warp threads. The Navajo loom I wove on was a smaller version constructed with a moving bar that allowed the loom to rest on a table while I was weaving.

I signed up for a three-day Navajo weaving workshop with Marilyn Greaves and Mel Silva. They were both long-time weavers of the Navajo style who resided in the Sacramento area. Included in the workshop was a handmade Navajo style loom that Mel constructed, one for each student. The loom was able to sit upright on a table because of a resting frame that was built as part of the structure. The approach to Navajo weaving was different than conventional loom weaving.

Unlike more traditional weaving, according to Mel Silva and Marilyn Greaves, technique wise, the Navajo did not draw out their designs or calculate the amounts of yarn needed for a particular project. They would see what they had available and adjust their rugs to fit. After several generations, the process was repetitious and the weavers became very good at it. Their designs came from the inspiration of the landscapes or the
ceremonies and myths passed down through their beginning-of-time stories. This information was also confirmed in my book research (Dockstader, 1987; Greaves & Silva, 2009).

The workshop took place on a weaver’s ranch in Auburn, California. There were five of us. After sharing our interests and why we were there, we began the lesson. Throughout the three days, Mel and Marilyn displayed their own work of the Navajo style weaving and discussed their pieces. We were introduced to and given our own looms. These looms were ours to keep and the first thing we had to accomplish was the warping of the loom. Again, this is a very tedious process if one is a beginner.

For learning’s sake, we calculated our warp accordingly, as in Anglo-traditional weaving techniques. We were weaving a small rug that was 9 inches in width and 13 inches in length. The total number of square inches needed to be known in advance. So, we multiplied width by length. For the weft I could have used whatever wool yarn I had and created the color visual of the piece as I wove. However, since we were a class, we calculated the weft so the instructors knew how much wool yarn to give us and to send home with us. The weft was calculated by number of square inches of the rug. If the rug is to be less than 1000 square inches, it is divided by 25. If the rug is more than 1000 square inches, it is divided by 30. The ending number in the calculation is the amount of ounces of yarn needed. The formula for the warp is the width of the rug multiplied by the number of individual warps per inch.
The warping procedure was done on the loom itself with the help of two dowels secured on either end of the Navajo table loom. Winding the warp was done in a figure eight pattern directly onto the two dowels. After warping the yarn, twining the ends of the project was next step. A three-ply twine about eight times the width of the project is used. Starting at one end, take the two ends of the twine and begin intertwining them through the warp at the edge of the dowel on the loom. This is continued until the end of the warp is reached. The twining helps to space the warp evenly on the dowels. The remaining twine is cut and the same process is repeated on the other end of the warp. This entire process also establishes a stabilizing stitch to the weaving project on either end of the warp. At this point the warp can be removed from the existing dowels or the dowels can be left in place to prevent the warp from twisting.

Next, with an additional one-inch dowel the same length as the project width, one must bind the project onto a new dowel, using heavy cotton thread and a tapestry needle. Wrapping the thread around the dowel several times is first, then sewing between the warp threads to secure the dowel to the project is the next step. This needs to be continued until the end of the project is complete. The process is repeated at both ends of the piece.

It was now time to tie onto the loom by attaching the dowels and the warp piece to the loom frame. Bailing wire was used to secure the top dowel to the center beam. Three turnbuckles hang from the inside of the tip beam. A piece of bailing wire was secured in the center turnbuckle and onto the dowel and then twisted tight. The same was
done with the two outer turnbuckles and the bottom part of the weaving piece. Once the warp was securely tied onto the loom frame, it was time to weave. A “batten,” a flattened smooth, long wooden tool, was used to keep the shed, or front and back weft strings, open. Next, a dowel or heddle rod was threaded onto the warp to act as a pull shed. The pull shed pulls the shed open. A “lazy shed,” created by use of a shed stick, is placed near the top of the weaving piece and is used to keep the shed open as the weaving progresses.

When the weaving began, the first step was to create a basket weave horizontally across my project for two rows. This step secured the edge of the project and assured that the warp ends would be covered. The pattern we used was color Xeroxed. We simply used a soft tape measure and also counted weaves to see when it was time to change the dyed colored wool and what direction to weave the wool. I learned that in Navajo weaving one should not cut the yarn being used. It should be untwisted and torn or pulled apart. This is partly done so the thread ends are not blunt and will lay flatter when woven into the pattern.

The weaving started at both the bottom and the top of the loom. This established a more balanced pattern in the design and an equal tautness in the warp and weft threads. The weaving was continued until no more weft could fit into the framed weaving piece. The piece was removed from the loom by carefully cutting through the binding strings on the top and bottom poles, being extremely careful not to cut any of the binding on the ends of the rug or the end tassels.
During the process of weaving the rug pattern, I began to feel a connectedness to the piece. Each step in the weave took careful consideration and concentration. As each row began to unfold, my excitement of experiencing and gaining knowledge of a new craft began to emerge. The focused attention on each weave became a new relaxation technique for me. The quiet of the process along with the feel and texture of the natural fibers on my fingers was grounding and satisfying. I was looking forward to sharing the Navajo weaving art with my students in my K-8 public school setting. I wanted the students to experience learning in a setting of close observations, thoughtful inquiries, applications of craft, construction of their art, and, finally, their own analytical approach to what they learned and accomplished.

First, I introduced the Navajo culture to a group of third graders. Third grade students learn about other Indian cultures of California but not the Navajo. Most of the student body at my school was of Hispanic descent, so I connected weaving to the Hispanic culture via backstrap looming when the project was introduced. I selected parts of a book called *Songs from the Loom: A Navajo Girl Learns to Weave* (Roessel, 1995), for the introduction. I used my Navajo loom and weaving to show as examples. As the lesson continued, I introduced several patterns woven into Navajo rugs and discussed the pattern meanings in each of the rugs based on the different Navajo tribes. We also explored the design symmetries and pointed out the fact that they were mainly geometric in nature.
Due to the age group and the intricacy of the weaving patterns, I had the students design patterns using simple symmetry drawings on the fold of a thick piece of paper. This paper fold when designed and cut created a stencil. After the students made their own Navajo design pattern stencils they used paint and stenciled their patterns onto a piece of burlap. Next, students were introduced to warp and weft. They de-threaded some of the burlap areas around their painted designs and used a large eye plastic needle and yarn to thread those areas. This was the actual weaving portion of the project. Students studied handouts of Navajo rug designs that would help them weave their threads in a way they thought would be visually pleasing. After the lesson was completed students discussed and reflected on the processes and outcomes. Overall, the lesson was successful and students learned in a meaningful and valuable way.

Chapter 3 described the processes underlying this project of researching and learning Navajo weaving and then teaching it to third grade students. Chapter 4 contains my reflections on my journey of learning Navajo weaving and incorporating it into the public school classroom.
Chapter 4

REFLECTIONS AND RECOMMENDATIONS

The project completed was the cumulative research of Navajo weaving and its history. The research began with a general interest in weaving and then became focused on the Navajo style of weaving. From the beginning of this research project I was interested in exploring weaving by means of what patterns and looms attracted me. My interest in weaving varied as I journeyed through applications on a variety of looms until, finally, reaching a more particular level of interest when discovering the Navajo loom and its associated patterns and designs.

The process of exploration was pivotal for me in learning the art-craft of weaving, particularly Navajo weaving. Throughout this progression I was able to acquire new knowledge and discover different weaving methods along with their application on various looms. In my approach to this process of discovering a new art form I was unaware that there would be such a choice in looms and applications. Also, the actual procedures for weaving were very specific and required some careful focus, comparable to becoming skilled on how to operate a new piece of machinery and/or examine and understand an unfamiliar math equation.

The initial introduction to the Inkle loom and the four-shaft loom was slightly overwhelming. I was not prepared for the many technicalities involved with the looms and the actual weaving. Weaving on the Inkle loom was a fairly simple process once it was threaded. Reading the patterns, when explained, came to me easily, and I was able to
apply what I was taught and began to weave quickly on my own. But the warping of the loom required some skill. The most difficult part was the actual threading onto the loom. It seems, even now, that it takes two people. It was a lot of work for a thin strap-like woven piece. By the time the teacher and I had warped the loom, I was mentally exhausted.

The four-shaft loom was a similar scenario. Although one person could warp it, specific complex knowledge was required to start and complete the process. It also took quite a long time, two to three hours. Again, this was very challenging and mentally draining. There were many steps in “dressing the loom,” and one could only become an expert at this process by practicing it again and again. Once the loom was dressed, the simple four-shaft weaves were easily grasped, and the actual weaving was not so difficult. It was exciting to watch the weaving come to life and see the finished product.

The lap loom allowed a casual approach in terms of the freedom of design that the other looms did not. The lap loom was easily warped, and the weaving could be very freeform if one desired. It was easy to get started on a project, complete it without too much frustration, and gain a feeling of satisfaction when finishing a piece of work. While weaving on the lap loom, I found it in some ways to be similar to the Navajo loom. I was enjoying the process and feeling a connection to the art that I was not experiencing with the other two looms. It was a more organic progression in exploration.

The Navajo loom was mildly complex in warping and dressing. It also would take practice in order to repeat the process successfully again and again. At this point, I
understood that weaving in general was an art that required consistent application and study in order to remember the technical aspects of each step in the process of dressing the loom. Once the loom was dressed, the application of design began. This process was not as complicated, and I began to feel a rhythm in the weaving as the pattern started to emerge. As I continued with the process, I began to think about arts instruction and the development of a possible unit in weaving for my seventh and eighth grade groups.

As I reflected on the processes involved with all the looms, my practicality gave way to considerations of teaching weaving within a classroom environment that included five periods and 130 students. Dressing looms (with the exception of the lap loom) took much time and was a fairly complicated process, especially if someone was not familiar with looms or weaving. I knew that this particular process would not work for my teaching experience. Also, looms of any kind were expensive. With the state funding for the Arts eliminated in my district, I needed to be financially savvy. I decided to consider the seventh and eighth grade students for a possible unit using homemade lap looms for the next school year. This would allow me the summer break to develop the unit and make the frames. A second option might include an arts grant proposal to purchase Inkle looms or another simpler type of loom and then develop an afterschool project for interested students.

For the present, I decided to plan a simple project with a third grade group introducing the Navajos and their contribution to the west in the skillful art of weaving. The project went well as it usually did for third grade. The students were always
interested in art and looked forward to me teaching them anything new. Not only did the students learn about the Navajo culture, they also learned a variety of art application techniques including stenciling, simple weaving and stitchery, painting, and cutting and drawing skills. Overall, most of the students finished with an intrinsic satisfaction of what they had just completed along with new knowledge of a culture they would not have normally learned about.

In general, as an arts educator, the choice to introduce and connect students to the visual arts and problem solving skills related to their assigned unit or lesson is an ongoing journey of both failures and successes. In the K-6 classrooms, the students are much more receptive and willing to participate. The successes far outweigh the failures. I am sure some of this has to do with the fact that I was not their homeroom teacher, and I went only for arts related lessons. On the other hand, the middle school seventh and eighth grades are not always so receptive.

Within my homeroom class walls, the quickening of multiple ethnicities along with language barriers intertwined with difficult home environments that lead to behavior issues in the classroom all have a ubiquitous impact on teaching. Student issues coupled with the oppressive environment of continuing changes in district, state, and national education mandates, expectations, policies, and funding make it nearly impossible to establish a successful learning situation on a consistent basis. Finally, there is no arts education budget to replenish even the basic needed supplies, let alone items such as clay
or other three-dimensional materials or special materials that might allow a student to explore beyond pencil and paper.

For myself, the remembrance of arts education in the seventh and eighth grade environment consisted of specific elective classes to choose from and might have included, per semester, woodshop, lost wax jewelry casting, ceramics, or leather crafts. The demand for the arts classroom educators to prove that they were successful in meeting student test score achievement in collaboration with the core classes was non-existent.

Today, the expectation for the arts educator is ideally to establish lessons and projects that correlate specifically with English Language Arts, Science, or Mathematics state standards to better improve student test score achievement. The development of an actual arts curriculum for the purpose of assisting in the growth of a whole child through exploration and problem solving is virtually non-existent. To allow a student to be a complete individual in how he/she views the world or expresses him/herself through imagination, exploration, creativity, self-critiques, and meaningful dialogue is not seen as practical or worthy compared to test-taking scores. Sadly, young people not willing to take chances on their talents, ability to problem solve, or excite the world with their imaginations are being formed in our school districts all across the country.

The creativity in exploration through imagination, trial and error, and through the process of investigating various media has lost its appeal. For myself, this loss of appeal dulled the spontaneity of my own work as an arts educator, in general. This lull in
spontaneity led me to re-examine new possibilities in art and refresh personal meaning, while focusing diligently to ignore the select groups who do not see art as a necessary part education, or life for that matter. Through this personal exploration I have developed new and fresh ideas about creative exploration. The translation of this learning development to the classroom has been evident in the expectations I have for all of my students.

In conclusion, throughout this process the goal was to re-establish a contemporary approach to learning and developing knowledge of a new art form. Another objective was to introduce the art form to my classrooms and to re-instate the importance of art in general both to teachers and students. Today’s students have an escalating diminishment of diverse interests, imagination, and creative problem solving skills. As these students mature, encouraging them to display their own individualism in a thoughtful and stimulating manner can be highly difficult and challenging.

Kindergarten through eighth grade general education teachers often weaken the mindfulness of the student partly by the dictatorship of districts and the pressure of test scores and partly by not choosing to incorporate experiences of exploration through artistic playfulness in their classrooms. It seems they are unaware of the importance of the whole child and the development of individual meaningful experiences to strengthen a student’s overall critical thinking skills, not to mention self-esteem.

Over many years, arts education philosophers have discussed the importance of meaningful experiences and how these experiences are necessary for a well-developed
mind. Individual meaningful experiences of students include the social relevance of the student. Social relevance plays an important role in the student’s eagerness to learn. Encompassed in self-esteem and curiosity, prior experiences become building blocks for inquisitiveness that develop new building blocks and the cycle continues. In essence, without the enthusiasm and interest of the child, the learning and application inside the classroom is diluted and limited.

The Navajo and their weaving captured my interest both aesthetically and expressively. A people full of passion and determination, they experienced many hardships but continued to thrive and flourish in their quest to learn new skills and then take those skills and perfect them as their own. The challenges of being repressed and manipulated by different groups of people did not keep them from their path of mind travel and existence. Their spirituality and connectedness as a people over many years has held strong even in the most adverse of circumstances.

The story of the Navajo is represented in the Navajo art of weaving. The beautiful and descriptive wovens produced by the different sects of the Navajo tribes tell narratives of their history and religion, describe the elements of the environment, and pay homage to ancestors of long ago. In the actual weavings, Navajos recognize imperfection as a part of life and will represent this with a misplaced stitch or purposely woven thread that does not belong in the applied design. An abstract singularly threaded area can also represent an opening for a spirit to pass through. The homage and acceptance of themselves is strong and represented through their weaving.
My journey of weaving began with an interest based on a grandmother I did not know very well. She wove, but did not pass down the passion. Through my own curiosity and exploration, I was able to investigate several looms and their basic weaves before discovering the Navajo loom. For me, the Navajo represented how many people “walk” through life facing burdens and challenges. But unlike the Navajo, “many people” do not chronicle their stories through artistic means.

My exploration of a variety of looms, finally focusing on the Navajo loom reflected the openness of my teaching style in art. I believed the exploration process of the task, in this case weaving as an art form, was important in thoroughly understanding the evolution of the practice of art in general. Just as it is in my classroom, regardless of the assignment, I expect the students to always question and wonder and explore the “what if” aspect of the assignment. I do not want them to just complete the assignment. I want them to attempt to see the assignment as a stepping-stone to the next level of whatever it is they might be curious about. With curiosity and openness, my students and I will continue to explore, grow, and develop as whole persons.
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