Exploring Nevada's past and present: Archaeology education and Nevada public schools

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ABSTRACT

Exploring Nevada's Past and Present:
Archaeology Education And
Nevada Public Schools

by

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State mandated education concerning the first Nevadans begins in the fourth grade. A series of content standards, or guidelines which identify what students should know and be able to do by the end of each grade, has been developed by the state to assist teachers in meeting this requirement. Though Native Americans are covered in roughly a third of the content standards, there are very few materials available to meet these standards. While there are many materials that attempt to teach the "prehistory" of native Nevada, there are few that are designed to meet the standards that the state has delineated. Because anthropology is a science that studies culture through the use of many well-defined concepts such as ethnicity, beliefs, worldview and tradition (McNutt 1991) it is appropriate to use these concepts as a vehicle to teach about Nevada's Native American cultures. A basic assumption of
this research is that an archaeology-based curriculum will better meet these standards and be useful to educators in Nevada.

This research reviews and quantifies the existing materials available to teachers to meet Nevada state content goals related to Native American history, develops a new curriculum to meet these goals and tests the new curriculum to determine if archaeology education can be used to address state goals.
TABLE OF CONTENTS

ABSTRACT ...........................................................................................................................................iii

LIST OF TABLES ............................................................................................................................vii

ACKNOWLEDGEMENTS ...................................................................................................................viii

CHAPTER 1  INTRODUCTION ............................................................ 1
  Hypotheses ..................................................................................................................................... 5
  Concept-Based Learning and its Benefits ....................................................................................... 6
  The Chapters .................................................................................................................................. 8

CHAPTER 2 LITERATURE REVIEW ..................................................... 12
  Existing Curriculum Overview ...................................................................................................... 12
  Public Archaeology in Education .................................................................................................. 17
  Integrating Archaeology into Precollege Curriculum ................................................................. 19
  Current Research: Successful Programs ....................................................................................... 23
  Accountability and Assessment ...................................................................................................... 30

CHAPTER 3  RESEARCH DESIGN AND METHODOLOGY ........ 37
  Existing Curriculum Evaluation ...................................................................................................... 37
  Developing a New Curriculum ........................................................................................................ 40
  The Advisory Council and Peer Review ....................................................................................... 44
  Teacher Survey ............................................................................................................................... 46
  Professional Development Training ............................................................................................... 48
  Classroom Piloting and Assessment ............................................................................................... 48

CHAPTER 4  RESULTS ............................................................................ 51
  Existing Curriculum Evaluation ...................................................................................................... 51
  Developing a New Curriculum ........................................................................................................ 53
  The Advisory Council and Peer Review ....................................................................................... 61
  Teacher Survey ............................................................................................................................... 64
  Professional Development Training ............................................................................................... 69
  Classroom Piloting and Assessment ............................................................................................... 70

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LIST OF TABLES

TABLE 1  Nevada Course Syllabus Goals for Grade 7 ...................... 39
TABLE 2  Evaluation Results .................................................. 53
TABLE 3  Exploring Nevada’s Past and Present:
          Conceptual Lenses and Webbed Concepts ............... 54
TABLE 4  Exploring Nevada’s Past and Present:
          Essential Understandings ............................... 55
TABLE 5  Exploring Nevada’s Past and Present:
          Research Ideas or Tools .................................. 60
TABLE 6  Teacher Responses to Questions 10-12 ....................... 66
TABLE 7  Teacher Responses to Questions 15-18 ....................... 67
TABLE 8  Teacher Responses to Questions 19-24 ....................... 68
TABLE 9  Results of the Pre and Posttests and Statistics .......... 84
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CHAPTER 1

INTRODUCTION

The phrase "Native American education" usually suggests an office or program overseeing the education of Native American students in a given area by providing guidance and culturally relevant educational support. However, more and more "Native American education" is coming to mean educating non-Indians about Native American cultures, one piece in the larger movement of multicultural education. This growing trend is reflected in the hundreds of Internet websites devoted to offering teachers lesson plans on how to teach about Native Americans in the classroom and hundreds of museum-based initiatives to provide teacher assistance and support in curriculum planning. Additionally, several states including Nevada make incorporating Native American history in the curriculum mandatory (Nevada Department of Education 2001).

State mandated education concerning the first Nevadans begins in the fourth grade. A series of content standards, or guidelines that identify what students should know and be able to do by the end of each grade, has been developed to assist teachers in meeting this requirement.
As of August 2001, the Nevada content standards for the fourth grade concerning Native Americans are as follows:

- History: It is expected that the student will:
  - locate Nevada's earliest Native American inhabitants, known as the Desert Archaic People
  - identify Nevada's Native American cultures

(Clark County School District 2001:25).

Any reader would quickly note the ambiguity of the words "locate" and "identify" in this context.

A more in-depth view of Nevada history is covered in the seventh grade. Teachers are required to meet 19 performance objectives, or standards, over the course of the school year. The Clark County School District publishes a Course Syllabus on United States and Nevada History, which delineates these standards and gives teachers suggestions on how to meet them individually. Of these 19 state standards Nevada Native American history is included in six.

Though Native Americans are covered in roughly a third of the content standards, there are very few materials available to meet these standards. While there are many materials that attempt to teach the "prehistory" of native Nevada, there are few that are designed to meet the
standards that the state has delineated. Materials available to teachers often teach such surface culture concepts such as food, clothing, house styles, crafts and music, but there are few that go into deep cultural concepts such as beliefs, relationships between people and worldview. Surface culture concepts tend to reinforce stereotypical images of Native Americans as an antiquated people who existed only in the past and have not persisted into the present (Banks 1997:13). This presents several large problems for teachers attempting to meet the state standards as well as the students that are engaging in such fact-based curriculum. First, fact-based lessons rarely teach beyond the entertaining level, promoting and enduring stereotypes that Native Americans are curious and intriguing peoples of the past, but little more.

Second, it is well established that curriculum based on content memorization does little to promote life-long learning (Bebell 1998:32). Banks (1997) describes how anthropology and archaeology, as interdisciplinary studies, have the power to build upon previously learned material in varying subjects to promote “transfer of knowledge (20),” and promote such life-long learning.

Lastly, fact-based units on Native Americans do not meet the outlined content standards, causing teachers to fit them in along with the all other prescribed standards for performance. Teaching an entire curriculum unit that will only address a few goals is extremely time consuming, and teachers may find it easier to opt for lesson plans that
reach a more broad scope of goals. Materials that address a broad range of content goals will often leave prehistory out entirely, leaving students with a large gap in knowledge and prohibiting the understanding of the sequence of time and cultural development.

According to Banks (1997) and Sindell (1969) teachers may feel the concepts addressed in multicultural education are difficult and abstract for students, and moreover, feel unprepared to teach such high-level concepts as ethnicity, diversity and group identity. Using anthropology as an educational resource, and identifying how anthropological concepts are currently used would support the need for a statewide curriculum and professional development program in Native American education. Given the gap between required state standards and materials available to address these standards, a program is necessary to fill this need. By providing adequate multicultural curriculum that teaches many standards required at each grade level, teachers would easily be able to integrate Native American culture and anthropological concepts into the existing curriculum.

Nevada is a perfect example of a state that desperately needs a curriculum that will cover many standards and provide quality multicultural education concerning its Native American history. This thesis will:

(1) Investigate currently available resources

A) in terms of statewide content standards
B) in terms of use in the Clark County School District.

(2) Create a new archaeology/anthropology-based curriculum.

(3) Test the newly developed curriculum.

(4) Make recommendations for the future of Native American and archaeology education in Nevada.

Research Questions

The main question underlying this research is whether an anthropology curriculum based in local archaeology can be successfully integrated into Nevada schools, especially in the seventh grade, to fulfill state standards on Native American history. For the purpose of this study, successful will be defined as “accepted by schools in Nevada for current and sustained use.” Because anthropology is a science that studies culture through the use of many well-defined concepts such as ethnicity, beliefs, worldview and tradition (McNutt 1991) it is appropriate to use these concepts as a vehicle to teach about Nevada’s Native American cultures. Though little to no research has been conducted to test whether children will learn and retain conceptual information about multiculturalism, it is logical to think that the more children are exposed to different cultures, the more tolerant they will be of multicultural and multiethnic groups, as well as to act as stewards of archaeological materials. Therefore, it is the assumption of this research that if children
are exposed to anthropological concepts such as culture and diversity, they will be inclined to be more receptive to people of other cultures. In the same regard, if children are taught about the science of archaeology, they will be more respectful of those who do not share their own cultural past.

Before addressing the question of integrating an anthropology curriculum, it is necessary to show that such a program is necessary and beneficial to both teachers and students. Therefore, a second research question is if current resources available to teachers adequately meet existing state education standards on Nevada Native American history. A basic assumption of this question is that an archaeology-based curriculum will better meet these standards and be useful to educators in Nevada.

In addition to the benefits this research can provide to teachers, it must benefit students as well. Any program that is designed to teach about archaeology must be able to prove that it does, indeed, teach something. Because anthropology and archaeology rely heavily on high-level learning concepts (Wheat 2000:128), materials designed to fulfill state goals will naturally be based on conceptual learning, as opposed to traditional fact-based models. The final question addressed by this research is whether a concept-based anthropology curriculum will increase student knowledge retention.
Concept-Based Learning
And Its Benefits

Concept-based education refers to a pedagogical orientation that asserts that curricula that is organized around high-level concepts (i.e. group solidarity, ethnicity, innovation, diversity) rather than facts will encourage life-long learning and the ability to apply concepts in one discipline to many others (Erikson 2001). Traditionally, a fact-based curriculum focuses heavily on fact memorization and assumes that students (and teachers) will independently develop an understanding of the ideas inherent in the facts. In a concept-based lesson, facts are used to support the conceptual ideas that will transfer across time and cultures (Erikson 1998). Each lesson in a concept-based unit encompasses a set of essential understandings, in other words the "personal, emotional or value-driven component in the process of understanding (Erikson 1998:48)." Often times, teachers are expected to follow a set of objectives in curriculum and standards compliance that reads "student will understand...." but are not given the tools to assess this type of deep understanding. Essential understandings are constructed in a concept-based model both to help the teacher teach, but also to assess each student's level of conceptual understanding by answering a few short questions.

Many school districts across the United States are currently using concept-based curriculum models in their curriculum design. Marianne
Kroll, Curriculum and Instruction Supervisor for Palos District Schools in Palos Park, Illinois suggests that: “when teachers base their instruction on concepts, they can expect their students to learn more than just facts. During a concept-based unit of study, students are given many examples of concepts. Through these examples of concepts from the topic, students notice common elements. Discussion, guided by carefully planned and also spontaneous questions, helps students form generalizations (Kroll 1998, electronic document).” Concept-based curriculum has currently been accepted by many school districts in Illinois, Wisconsin, Montana, Virginia and Alaska, as well as many educational consulting groups.

The Chapters

The next chapter is a review of the currently available materials teachers have to meet Nevada state content goals related to Native Americans. Each textbook and curriculum program is examined according to what the concept attempts to teach, the tools and lesson plans that are suggested as well as the skills a student can be expected to gain through the material. In addition, the chapter outlines the current research in educational and public archeology programs. Several programs that use archeology as a learning tool are examined according to how successful they have been in meeting their goals, the research
plan implemented in the program and the accountability the program provided to its target community. Lastly, multicultural education is examined through current anthropological studies. There is a growing trend in anthropology toward research in educational programs that attempt to integrate a multicultural curriculum through anthropology. The most recent research literature is examined in order to place this research within the broader context of educational anthropology research.

Chapter Three outlines the research methodology utilized in this study. It describes whether or not the existing curriculum meets state goals and sets out a new plan to develop an anthropology-based curriculum. The program for reviewing the curriculum with appropriate sources, surveying teachers and finally testing the curriculum with students is then delineated.

Chapter Four focuses on the results of the research plan. A quantified study of the existing curriculum is presented, followed by the evaluation of the curriculum designed through this research. The results of the review process for the curriculum are then qualified through interviews and surveys, as well as the basal survey of teachers. Finally, the details of the classroom pilots of the curriculum are presented.

Chapter Five discusses what the results of the research mean relevant to the questions set out above. In addition, the strengths and weaknesses of the research design are examined in light of the positive
and negative correlations. Lastly, the reactions of the community to the new curriculum are discussed.

The last chapter addresses the conclusions of the study in terms of what it contributed to the larger goal of integrating anthropology into public education, as well as possible directions for further research. Also, the importance of public anthropology is explored through an examination of the goals of the American Anthropological Association as well as the Society for American Archeology.
CHAPTER 2

LITERATURE REVIEW

Existing Curriculum Overview

While the state of Nevada does not specify any text as a requirement for the seventh grade unit on Nevada history, there are many textbooks and curriculum guides that are available for use. The following materials were available through the school district directly, the University of Nevada Las Vegas Curriculum Materials library, or the Clark County Multicultural Education Office.

Generally, the text used by teachers in their Nevada history unit is Discovering Nevada: A Celebration of Nevada's Land and People by Gary Bedunah. This text was most recently published in 1994 and includes a comprehensive view of Nevada beginning with the Lovelock Cave inhabitants of roughly 7,000 years ago and continues to modern Nevada industry and economics. Chapter Three of the text is devoted to Nevada Native Americans and focuses heavily on the Paiute populations of Northern and Southern Nevada. The Shoshoni and Washo groups are identified but are not addressed in the text. Interactions between Native Americans and other groups are limited to meetings with trappers, which
are not addressed in the state standards anywhere. The information concerning the Native Americans of Nevada is factual; however the text is written for a fourth-grade audience and clearly beneath the reading level of the seventh grade population that many teachers use it for. The textbook itself offers no suggested activities but a teacher's guide is offered that links the content information to a few activity suggestions. The textbook and activities cover mostly the surface concepts of food gathering, shelter, and traditional crafts, and do not offer ways to use critical thinking.

*Celebrating Nevada Indians* is a collaboration between many educators and the Nevada Native American Education Association, which developed curricula and content information for teachers in 1992. There is only one copy available to Clark County teachers and it is located at the Curriculum Materials library at UNLV. The material presented is excellent, especially in dealing with specific tribal information. It is quite different from *Discovering Nevada* in that it deals more with the Washo and Northern Paiute groups, perhaps because it was developed in the northeastern part of Nevada. The content and activities with the Paiute and Washo languages are excellent, and the only lessons that were found that dealt with linguistics. There is also substantial information concerning the Mormon expansion which is often overlooked in Nevada history. The other lesson plans are somewhat superficial, again covering mostly at food, clothing, shelter and music. There are a few isolated
conceptual lessons that are geared at the higher level learner (grade 10 or higher), which could be rewritten at a seventh grade level. The lesson on the Washo Treaty of 1865 is especially good at addressing some difficult concepts that are suggested in the standards, such as group interactions and migration/settlement.

The Clark County Office of Multicultural Education published A Cultural Celebration in 1991 in an attempt to provide materials on Indians, African Americans, Hispanic Americans and Asian Americans. There are many activities suggested for Native Americans that provide teachers with no content background and no resources. There are no actual lesson plans, merely suggestions for how to work in Native American content into the classroom. Therefore, it is the teacher's responsibility to research the content for age-grade appropriateness as well as match the content to the standards.

Helen Dunn developed Indians of Nevada in 1973 for the Nevada Department of Education, Federal Relations & Programs Branch. It is a series of seven pamphlets that are designed to provide teachers with information about Native Americans. Each edition deals with a different subject area such as Tribes, Food and Shelter or Agriculture. The information is presented by listing facts under the subheading without detail; there is no depth to the material. For example, in the pamphlet entitled “Tribes,” the five cultural groups that are present in Nevada are listed with their corresponding geographic location. The drawings that

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accompany the content are line sketches of men and women that appear
Caucasian, holding baskets, farm tools, etc. There are no activities
suggested; once again it is the teacher's responsibility to develop
activities to support the content.

Another attempt to fulfill the need for Native American curriculum
materials is The People: Native American Legacy published by the Nevada
Humanities Committee, the Clark County School District and the Nevada
Gaming Foundation for Educational Excellence (no date provided). The
People is a compilation of facts and content that was developed with
input by the Las Vegas Paiute Council and several members of the
Navajo tribe. Some of the material is reprinted from other sources
outlined in this research including Dunn's Indians of Nevada. The
information presented is quite thorough and includes listing of
archaeological sites, tribal reservations, and resource information for
teachers. There are articles on the role of elders in Indian communities,
land use, climate and oral history. Some of the legends presented in the
text were used in developing Exploring Nevada's Past and Present, as
they were collected directly from Native Americans living in Nevada
today. Unfortunately, the editors developed the materials for elementary
students and thus the suggested activities are poor for a middle grade
audience. Mostly provided are games and craft activities, which once
again leaves the pressure on the teacher to develop appropriate lessons
to match the content provided.
Also produced by the Nevada Humanities Council as well as the University of Nevada Reno is the Native Nevada Classroom website, last updated in 2000. The website includes two different curriculum sets, one in environmental and science education, which is not addressed in this research, and a social studies curriculum. The social studies curriculum contains the same lessons as *Celebrating Nevada Indians*, and therefore has the same problems of containing only information on Northern Paiute and Washo groups as well as being written for a fourth-grade audience. The irony of using the same lessons is that they are not made available to Clark County (or Southern Nevada) teachers through the website, which might have improved the unit's chances of being used by teachers.

*Battle Born Nevada* was written by Don Lynch and David Thompson and published by The Grace Danberg Foundation in 1994. The text is written for seventh grade history courses and therefore, it is assumed that many teachers use this book to cover the standards addressed in this study. A problem with *Battle Born Nevada* is that it is all text and there are no activities suggested. Additionally, there is no teacher's manual that accompanies the text, again leaving lesson development in the hands of the teacher. The information presented is factual and accurate, with the exception of the repeated use of the term 'Anasazi' to refer to Ancestral Puebloans. The term 'Anasazi' derives from the Navajo word for 'Ancient Enemy,' which is considered offensive to
some Native Americans. The information on the cultures of Nevada Indian groups is minimal at best, and the title of the book certainly takes its name from the vast amount of information on wars between settlers and Native Americans. The problem with presenting content on wars is that it could encourage the stereotype of the warring Indian.

The final curriculum unit of any substance for review is Desert Indians by Dana Newmann, published in 1995 by the Center for Applied Research in Education. While this text does not address Nevada Native American groups, there is some quality information on the cultural spheres of the Southwest, Great Basin, and Plains. The text addresses some deep conceptual information such as the transmission of knowledge and how places are important to the expression of cultural identity. The text serves as a good teacher resource, but a problem again lies in the weakness of the suggested activities. Once again, the lesson plans represent the food, crafts and clothing of the desert culture, but there are no activities that go beyond simple learning to deeper cultural concepts.

While there are endless activity books on Native Americans, most are geared toward the younger audience and very few go beyond the observable surface concepts of food, shelter, clothing and crafts. Units that address the deeper cultural concepts that help students understand why the surface concepts are important to the group are difficult to find. Since most of the texts described above leave out the lesson
development, it is no surprise that most of the teachers in this research developed their own lessons. Therefore, there is no way to account for these lessons, as well as no way to determine if each individual lesson meets any of the state standards.

Public Archaeology in Education

Inclusion of archaeology education in precollegiate curriculum is not a new idea. Archaeological sites have long been destinations for countless school field trips, and teachers have long been using the prehistoric past as a teaching tool in classrooms. During the 1970s, archaeology education was little more than extracurricular, often involving a field trip to a site nearby. As teachers began to observe the links between the larger secondary curriculum and archaeological inquiry, they began to develop materials (Williams 2000) to teach with archaeology. During the 1980s, many East Coast school districts adopted anthropology courses as an elective for high schools, with archaeological excavations composing a large part of the course. However, these programs were a huge time burden on teachers, and since the excavation aspect often relied on students paying for their own materials and transportation, the underprivileged portion of the school districts were left out (Williams 2000:396). In 1986, as interest in public archaeology began to gain interest in the field, the first interest group for archaeology education was formed by the Society for Historic
Archaeology. In 1990, the Society for American Archaeology got on board and offered the first-ever teacher workshops for using archaeology in the classroom at the national conference. Today, each of the national organizations has a council committed to promoting public archaeology or anthropology in communities and schools.

However, considering the history of the archaeological profession, the direct involvement of archaeologists in educational endeavors is restricted to the last few decades. As the assertion that archaeological materials are indeed a public trust (Knudson 1991) gains acceptance within the archaeological community, more and more scholars are looking to public archaeology as a means of conservation. Justification for the need of archaeologists within archaeology education was recognized by the Society for American Archaeology in 1996 when public stewardship was made the first principle in its Principles of Archaeological Ethics (SAA 1996). It has not been until the last decade that professional archaeologists began taking their role as educators much more seriously. Within the larger movement of archaeological stewardship, there is a rapidly growing contingent of specialists that concern themselves with making archaeological education a consistent part of precollegiate education.
Integrating Archaeology Education
Into Precollege Curriculum

At some point in their career, almost every professional archaeologist will give a presentation to a group of eager schoolchildren, host a talk at a site, or give a presentation to a community group. Why then, should they concern themselves with the integration of an archaeology curriculum? Aren't they fulfilling their commitment to archaeological stewardship just by visiting a classroom or giving a talk over a partially excavated site? The answer is a resounding no.

Most excavations or cultural resource management programs are funded either by private endowments or direct federal monies (Smardz 1991). Often times when applying for these monies, researchers are asked what direct benefit the research will have to the community. After all, with politicians needing to look after the housing and healthcare of the living, why should they be concerned with the remains of the past? Karolyn Smardz asserts in her description of developing an archaeology education program in Toronto that this simply does not take place (1991:136). “Instead of using public archaeology as a means to publicize archaeological investigations, turn the wheels around and make it a direct vehicle for public education” (1991:136). The Toronto Archaeological Resource Centre (ARC) was the first institution of its kind to be a permanent part of a school district. The founders were able to do this by looking at the Toronto School Boards core concepts for social
this by looking at the Toronto School Boards core concepts for social studies and tailoring their program to meet curriculum goals (1991:137). Once the school board adopted the program, it marketed itself through teacher and parent acceptance, allowing ARC to serve over 50,000 students since its inception in 1985 (1991:142). In this way, heritage education becomes a community concern, not just top-down politics imposed by an academic elite.

Understanding the dialogue of education standards is not an added benefit to an archaeology education program, it is a requirement. A program that meets none of the standards for educational comprehension is unlikely to be used in a world where teachers are overwhelmed with preparing for standardized tests, dealing with students’ socioeconomic, emotional and behavioral problems and are underpaid on top of it all. But a program that fits the curricular needs of the teacher, provides prepared lesson plans as well as resources to expand the program is likely to be used over and over again (McNutt 1991). If we say that the goal of archaeology education is to work to preserve the past, then our classroom instruction has to focus on these concepts. But, “in order for the classroom to focus on the concerns of archaeology, archaeology must first address the concerns of the teacher” (McNutt 1991:145). However, archaeology is not part of most state standards legislation, and this reflects the overall irrelevance of the discipline in the public eye (Davis 2000:58).
Educational standards are controlled by the state. Each state determines what each student should be able to perform by each grade, and a set of core goals is prepared. How the goal is actually met is often left to the school district, as in this research, or sometimes it is left to the individual teacher. Deciding where to fit archaeology into this grand plan for education can be daunting, but luckily most State Department's of Education list the core goals on their website (Davis 2000). Because history and archaeology both seek to understand and interpret human past, using the history standards is a natural fit. However, because of the interdisciplinary nature of archaeology, there are many other likely fits: mathematics, science, and geography to name a few.

Given this interdisciplinary nature, wouldn't it then be more effective to use archaeology in different disciplines in schools as the opportunity arises? Elaine Davis, Curator of Education with the Crow Canyon Archaeological Center points out that this is "an extremely irresponsible way to teach archaeology. For example, we cannot speak of archaeological processes in science without addressing culture (in social studies)" (Davis 2000:62). Isolating concepts between disciplines will result in the fragmentation of archaeological knowledge. In the same way that archaeology educators are responsible for including standards in programs, "we must not allow the standards to fragment the discipline" (Davis 2000:63). Davis suggests using a holistic approach to archaeology. In other words, utilize the history standards as a guideline.
for what to include in the program but do not hesitate to include a section on the scientific method, the chemical makeup of pottery or dyes, or a reading on culture change (Davis 2000:63). After all, since the standards from English, math and science are all included on the same standardized test, students will still be able to meet the benchmarks of performance.

There are some cautionary notions that the archaeology educator should be aware of prior to designing a program. First of all, one of the strongest adversaries of archaeology in the classroom in the United States has been the perception that it leaves out most of the information on the foundation of this country (McNutt 1991:144) by focusing on first peoples. However, by teaching local history through archaeology there is the potential to "give an overall holistic view of history rather than the traditional white-elitism" (Pyburn 2000:277) that most history texts are based in. In the same regard there is the possibility of creating a sense of exoticism or admiration for Native Americans that could potentially lead to a justification of marginalization (Pyburn 2000:275). Focusing on archaeological processes and material culture first and then interweaving culture history may be one way of avoiding potential stereotyping.

With all of this to process before even beginning an archaeology education program, why would a professional archaeologist or anthropologist want to undertake such an endeavor? Because it is part of the ethical responsibility of the profession (see SAA Ethics, AAA
Standards of Ethics, or AIA Professional Ethics) as well as a civic responsibility to ensure that the proper information about past cultures makes it into the curriculum (McNutt 1991:144). Taking part in these types of programs avoids a romantic misconception of archaeology à la Indiana Jones. If archaeologists spent the same amount of time working with teachers to develop quality materials as they do speaking to a class, the efforts of public archaeology would be multiplied (see McNutt 1991) and they wouldn't have to make those same presentations over and over and over.

Current Research: Successful Programs

No discussion of archaeology education programs would be complete without the inclusion of the outreach programs conducted at the Crow Canyon Archaeology Center. The Learning Center conducts summer teacher institutes that introduce educators to field methods and help them develop tools for integrating archaeology of the southwest into their classrooms. Educators at Crow Canyon assist teachers in developing curriculum that will fit their classroom needs as well as align lesson plans with state goals. In addition, Crow Canyon also provides online information and lesson plans that teachers who cannot visit the center can download for use in their classrooms.

For students, Crow Canyon has a variety of online resources including suggested reading, Ask-an-Archaeologist chat room, and
interactive site excavations. The center also holds summer teen excavation programs for young archaeologists as well as school tour programs throughout the year. Crow Canyon is also one of the most endowed programs available, contributing almost $3 million dollars to outreach programs in 2002 (Crow Canyon Archaeological Center 2002). One of the drawbacks of the Crow Canyon program is its relative geographic isolation; situated within the four corners area in Southwestern Colorado. This allows for one-of-a-kind onsite activities, but the opportunities for students to visit the site is restricted to those who are nearby or who can afford the summer programs. Currently, there are no offsite programs offered by Crow Canyon.

The Bureau of Land Management offers the Project Archaeology program to teachers and museum educators through state designated officials. Project Archaeology is set up to be a teacher training program. Periodically, workshops are offered by the BLM during which *Intrigue of the Past*, a 28-lesson curriculum geared at grades 4-7 is offered to teachers. The curriculum is not available independent of the workshop. State specific information is available through an interpreter who will speak to the class. The program’s strength is in its conservation and anti-vandalism message and promotes respect for the past and artifacts through education. Its weakness lies in that the workshops are not offered consistently, mainly owing to the fact that teachers must approach the program coordinator and not the other way around.
Currently, Project Archaeology is undergoing a transformation in which the BLM will partner with private companies to broaden its scope and reach. This privatization partnership may result in a change to a fee-based program, which it currently is not, and may make availability to teachers in low-income schools difficult. Information on how the curriculum will change is not yet available (Bureau of Land Management 2003).

The Society for American Archaeology offers several ways for educators to bring archaeology into the classroom. Teachers can visit the SAA website to order History Beneath the Sea: Nautical Archaeology in the Classroom which includes classroom activities and background reading, The Path to Becoming An Archaeologist, a brochure for students who are interested in becoming an archaeologist and Experience Archaeology, a brochure that advocates public responsibility for archaeology. Of most interest to this study is the Teaching Archaeology: A Sampler for Grades 3 to 12 teacher guide. This publication consists of four sample lessons for introducing archaeology to students. The material covered consists of the effects of time on artifacts and how archaeologists use the scientific method, how to teach local culture history, the interdisciplinary nature of archaeology, and conservation. The publication also includes a resource section, as well as discussion points for bringing archaeology into the classroom everyday. The materials are of excellent quality; however, Maureen Malloy, Manager of
Education and Outreach at the SAA states they do not perform assessments on their outreach materials and do not track how many teachers use their resources (personal communication, February 2, 2004).

Northern Arizona University coordinates the Partnership for Public Archaeology that consists of over 30 professionals from Northern Arizona University's Anthropology Department, the Science and Mathematics Learning Center as well as contributors from the archaeological community. The Partnership coordinates five separate programs, one of which is Project Archaeology mentioned earlier. Northern Arizona University acts as statewide coordinator for the teacher workshops Project Archaeology conducts. The other programs include Interactive Archaeology of the Grand Canyon, Interactive Archaeology of Slavery, Elden Pueblo Project and Hopi Footprints. The first two programs develop interactive, CD-Rom curriculum for grades 4-6 and 7-12, respectively. The goals of the Grand Canyon and Slavery programs are to expose students to the multicultural nature of archaeology as well as to increase skills in math, science and technology (NAU 2001). Elden Pueblo provides students with archaeological experience by working with professionals at excavation sites, and the Hopi Footprints program works with elders and teachers on the Hopi reservation to develop meaningful cultural curriculum to help preserve traditional culture. According to Science Education Coordinator Joelle Clark, all of these programs are
currently seeking funding and because of this are not able to be as active
as the coordinators would like (personal communication, February 13,
2004).

In addition to large initiatives undertaken by national
organizations and state programs, there are numerous small programs
conducted by museums and archaeological groups that attempt to
integrate archaeology into public schools. A total review of these
programs would be beyond the scope of this research, but there are
several that have common goals and are similar in design that should be
addressed.

The McClung Museum at the University of Tennessee-Knoxville
developed their Archaeology Outreach Program for grades 8-12 in 2001.
The program was developed with three area high school teachers and
includes material on Early Tennessee Native Americans as taught
through the collections of the museum. "While presenting information
on Native Americans and other peoples, its activities also emphasize
process standards such as acquiring and evaluating information from a
variety of sources, including artifacts; testing hypotheses and analyzing
and interpreting data; and using archaeological information to document
historical change. The program has been used for art, interior design,
nutrition, sociology, world history, American history, world geography,
anthropology, and home economics classes" (Debbie Woodiel, personal
communication, January 15, 2004). A museum staff member (at
teacher's request) implements the outreach program. According to museum educator Debbie Woodiel, in the last two years there have been significantly less requests for the programs, perhaps owing to a reorganization of state social studies goals. The museum is currently rewriting their curriculum for the middle and elementary grades.

The Institute for History, Archaeology and Education (IHARE) is a private, not-for-profit organization that serves "to increase the public awareness of the benefits of history and archaeology through public programs, to promote the inclusion and development of history and archaeology in the k-12 curriculum, (and) to provide history and archaeology enrichment programs at the k-12 level..." (IHARE 2003). IHARE conducts classroom programs on archaeology of regional cultural systems in New York State, Ancient Egypt, and archaeological investigation techniques. Staff members at the Institute will also help a teacher or school system to develop a curriculum unit that is tailored to their needs and meets state content goals. Currently, the staff at IHARE does not conduct assessment on any of their programs and do not track how many programs are conducted or the efficacy of the programs.

There are countless other archaeology education programs conducted by a handful of dedicated professional archaeologists, graduate students, museum educators and avocational archaeologists. Some of these periodically receive nods from national professional organizations and committees such as the SAA's Public Education
Committee or the AAA's Anthropology in Education Task Force. The Next Step Education and Archaeology Program in Indianapolis received a $2,000 seed grant award in 2001 from the AAA for its work with low-income African-Americans in urban archaeology (AAA 2003).

The list goes on to include many programs that use anthropology as a teaching tool. The Anthropology Outreach Office at the National Museum of Natural History publishes AnthroNotes, a publication written for educators. AnthroNotes contains academic reports on physical and cultural anthropology, as well as archaeology, written with the classroom educator in mind. Each addition provides ideas for integrating anthropology into the classroom, differing from issue to issue. The mission of AnthroNotes is to "help those teaching anthropology utilize new materials, approaches and community resources, as well as integrate anthropology into a wide variety of subjects...particularly in schools" (Smithsonian Institution 2003).

All of the above programs are excellent sources of information for educators who are interested in incorporating archaeology into the classroom. There are however, a few problems to be addressed. First, few of these programs are aligned with state standards, and therefore teachers may be less likely to use it as an extra to their busy curriculum needs. Second, rarely do the programs provide continuous sponsorship of the program in any given school district. This problem points to a larger issue within public archaeology education initiatives: often without
the persistence of a program coordinator, the program gradually loses
interest among teachers. Lastly, few of the programs listed above provide
any assessment at this point. The ability for a program to meet the
needs of teachers and students can only be addressed through a solid
research approach similar to the testing phase of this study. Without
assessment, programs are less likely to be used consistently because if
school officials cannot be convinced of the benefits the program will
bring, they will not adopt it.

Accountability and Assessment

Imagine that an archaeologist conducting a field investigation
excavated their site, carefully recorded and mapped their data, cleaned
and cataloged their artifacts and then put their research on a shelf to
collect dust. No questions were posed regarding their findings, no tests
run on the data, and no articles published in scholarly journals. There
would be no way of knowing whether their hard work provided any
relevant information to the field. The only person who would know
anything about their experience would be the researcher. They might be
able to share some anecdotal accounts of their field experience, but other
than that there would be no information for which to broaden or deepen
the understanding of the collective past. Such is the case with most
archaeology education programs.
As the sub field of public archaeology gains more and more professional attention, it is important to realize that archaeology education projects should be research investigations in their own right, with carefully developed hypotheses and research designs that include assessment and accountability. Nan McNutt, an anthropologist and developer of archaeology curriculum projects in the Pacific Northwest states, “if archaeology is more than a dig, education is more than an activity or lecture” (2000:194). The goal of any curriculum is to ensure that students are making meaningful connections between the material presented and concepts already learned, and that they are able to apply these connections not just to their schoolwork, but to their lives (Erikson 2001). Students may be very excited about archaeology but “active engagement alone doesn’t guarantee that students have made the connections that are necessary for conceptual development, nor does it guarantee the concepts are being received” (McNutt 2000:193).

Archaeology educators are as responsible for testing the viability of their programs as are textbook writers and other curriculum developers.

Classroom assessment need not be a daunting task, and it will not require an archaeologist to take courses in education psychology. As a matter of fact, many of the skills that are used in educational assessment are the same that are used in anthropological research: observation and interviewing. Teachers are an invaluable resource to a program designer for help to develop appropriate performance
assessments. The main questions that the researcher should seek to answer from their project, according to McNutt are:

1. Is there a pattern to student responses?
2. Were the students applying the concepts, knowledge and skills used in the lesson?
3. To which concepts were they unable to respond?
4. Were the materials designed to elicit the kinds of information needed?

[2000:197]

In addition to assessing student performance, archaeology educators should also evaluate the instruction of the teacher (McNutt 2000:193). This is not to say that an archaeologist knows better how to be a classroom teacher, but they can address whether a teacher has the proper background to deliver the lesson plan in a way that makes sense to the student. The best way to perform this type of assessment is through observing the instruction of the lesson and interviewing the teacher afterward to gauge their reaction to the material.

The Society for American Archaeology offers "Guidelines for the Evaluation of Archaeology Education Materials" on its website. This site, mainly geared toward educators and not archaeologists, offers the key
concepts that a unit based in archaeology should address. The five components include:

A) Cultural systems are the focus of anthropological study.
B) Awareness of the past is a fundamental element of archaeological study.
C) Archaeology is the scientific study of cultures, based on their material remains.
D) Humans affect and are affected by cultural resources.
E) Stewardship of archaeological resources saves the past for the future.

[SAA 2000]

There are also nine suggested elements for an archaeology unit, which include but are not limited to: definitions of basic terminology, steps in the archaeological investigation, discussion of basic tools, discussion of spatial context, and ethical considerations. If these suggestions are taken into account with the previous discussion on standards, there are many opportunities for the inclusion of archaeology in the precollege curriculum.

Many of the above mentioned programs have not yet conducted assessment on their programs for various reasons. The Crow Canyon Archaeological Center is currently in the process of refining their
curriculum, at which point will be piloted and assessed with their onsite programs (Elaine Davis, personal communication, January 20, 2004). The Crow Canyon assessments will be formative in nature, in other words "limited in focus on a specific context" (McNutt 2000:194, quoting Patton 1990), which is aimed largely at program improvement.

Project Archaeology is also undergoing a formative curriculum revision, following an assessment by University of Leicester graduate student Diane Allison Rees. Rees's Master's thesis conducted a study of 50 teachers who had used the Project Archaeology program and evaluated, amongst many factors, how useful the program was in meeting state goals as well as feasibility of use for teachers. Her results showed that 18 teachers found the program "frequently helpful in meeting state goals" (Rees 1999:33), but that teachers who had not attended the professional development course found the material less helpful in meeting its goals (Rees 1999:58).

The McClung Museum curriculum was piloted in seven high schools and students completed evaluations of the lessons after the pilot. As of yet, this is the only type of assessment the program has (Woodiel 2004). As mentioned above, the SAA, IHARE and AnthroNotes do not perform assessments on their outreach materials (Malloy 2004, IHARE 2004, AnthroNotes 2004).

Summative assessments, or a plan for investigating the overall effectiveness of a program (McNutt 2000:194, quoting Patton 1990), are
harder to come by in archaeology education. However, in the current state of educational pedagogy “assessments tend to drive instruction in the public schools...so called ‘teaching to the test’” (Davis 2000:59). In other words, teachers are concerned with covering material that is included on statewide-standardized performance tests before they are concerned with beginning new programs. However, if archaeology education is to be considered valuable by the educational community, it must contain an analysis of program effectiveness.

The PALS (Placing Anthropology in Local Schools) program at Ball State University in Indiana was the 2002 recipient of the AAA Integrating Anthropology into Schools award. The PALS program, coordinated by Professor Luke Lassiter, was a response to an omission of all anthropology requirements for social studies in the state. Students in Professor Lassiter’s senior thesis class decided to develop a curriculum with local teachers that would continue to include anthropology while meeting state content goals and not taking extra time from the teachers. Graduate student William “Dusty” Cantrell, developed “an ethnographic study to evaluate more deeply, first, which components of anthropology the teachers valued most, and second, how the implementation of anthropology into local schools could be sustained” (Cantrell 2003:1).

Accountability is quite different from assessment in archaeology education. While assessment attempts to understand the effectiveness, accountability describes making the results of the
assessment available. In other words, the stewardship of archaeological stewardship programs. This is essentially the publication of the results of the study to the larger academic community so that the efforts of archaeology education can continue to grow, change and become better. However, the most important aspect of accountability is reporting the results of the assessment back to the teachers and the community where the research took place. By undertaking an archaeology education project in a school, a researcher creates a necessary liability to the school, the students and the parents to confer the results of their findings back to their target audience.
CHAPTER 3

RESEARCH DESIGN AND METHODOLOGY

The methods for researching the issues raised in Chapter One are outlined in this chapter. Different methods are used for each of the three components of the research. The first section describes how the existing curriculum presented in the previous chapter will be quantified; the next section explains the process of developing a new curriculum and the final sections relate to the testing of the new curriculum.

Existing Curriculum Evaluation

In order to determine if currently available teaching tools are meeting state standards they will be critiqued and scored. Fifteen goals were identified in the Nevada State Social Studies Content Standards and Course Syllabus for history and geography in the seventh grade that address both Native Americans and the culture and prehistory of Nevada (see Table 1). The eight available curriculum units and the unit developed through this research will be evaluated on how well they meet state content goals. The materials will be examined according to how
recent they were published, if the content was age-grade appropriate, and how useful the activities are with regard to the state standards. Each will be evaluated according to whether or not the suggested goal can be met with the materials that are provided or suggested in the curriculum.

Most curriculum units consist of informational text that is then supported by suggested activities or lesson plans. Unfortunately, there is no standard system for evaluating curriculum against state standards. Most likely, this is due to the numerous different formats that curriculum can be developed through. Therefore, to generalize the available curriculum to Nevada teachers, a score of one will be tallied if, from the material and activities suggested, the corresponding standard can be met. If either the material or activities address part of the standard, but not the entire content of the standard, a score of 0.5 will be entered. Because teachers are more likely to use curriculum that address several standards at one, the curriculum sets with the lower scores will be considered those that least meet the state content goals and are therefore less useful to teachers. Those with the higher scores will be considered those that most meet the state content goals and are therefore more useful to teachers.
Table 1. Nevada Course Syllabus Goals for Grade 7

<table>
<thead>
<tr>
<th>HISTORY</th>
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<tbody>
<tr>
<td>2.5</td>
<td>Identify occupations related to framing historical questions</td>
</tr>
<tr>
<td>3.1</td>
<td>Explain the characteristics of a hunter-gatherer</td>
</tr>
<tr>
<td>3.2</td>
<td>Identify significant characteristics of early agricultural societies</td>
</tr>
<tr>
<td>3.5</td>
<td>Describe the lifestyles of Nevada’s Desert Archaic people</td>
</tr>
<tr>
<td>5.5</td>
<td>Describe the lifestyles of Nevada’s Native American cultures, including: Northern Paiute, Southern Paiute, Washo, Western Shoshoni</td>
</tr>
<tr>
<td>5.6</td>
<td>Describe Native North American cultural regions such as: Southwest, Great Basin, and Plains</td>
</tr>
<tr>
<td>5.8</td>
<td>Explain interactions among Native Americans, Europeans and Africans</td>
</tr>
<tr>
<td>5.9</td>
<td>Compare the lifestyles of Native Americans with those of the colonists</td>
</tr>
<tr>
<td>7.3</td>
<td>Discuss interactions between Native Americans and settlers during the Westward Expansion including: the Ghost Dance/Wounded Knee</td>
</tr>
<tr>
<td>7.4</td>
<td>Describe the contributions of Sarah Winnemucca Hopkins to Native Americans in Nevada and the United States.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>GEOGRAPHY</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>2.2</td>
<td>Relate how places and regions are important to the expression of cultural identity</td>
</tr>
<tr>
<td>2.3</td>
<td>Compare how cultural characteristics affect different points of view with regard to places and regions.</td>
</tr>
<tr>
<td>2.4</td>
<td>Describe ways in which technology affects how cultural groups use places and regions.</td>
</tr>
<tr>
<td>4.2</td>
<td>Define the reasons for human migration and settlement and explain the effects on places and cultures.</td>
</tr>
<tr>
<td>4.3</td>
<td>Describe how history has been affected by the movement of people, goods, and ideas.</td>
</tr>
</tbody>
</table>
Developing a New Curriculum

As mentioned above, one of the assumptions of this research is that anthropology is ideally suited to better address the concepts that are used in Native American studies. Therefore, the themes studied in the curriculum developed as part of this research will be arranged not only around anthropological concepts, but use many of the same anthropological research skills in the lesson plan as well. The platform of the new curriculum will be local archaeology, taught mainly from the collections of the UNLV Anthropology Department as well as state museum collections and library research.

The plan for developing a concept-based curriculum is modeled after H. Lynn Erikson's *Concept-Based Curriculum and Instruction*, with the exception that this research is being developed by an individual rather than a team. In so doing, the researcher has changed the format of the unit development to suit the scope of this research. Instead of using topics and concepts that could be taught in several disciplines, concepts from anthropology that would be useful in teaching social studies but that contained knowledge useful in other subjects were selected. For example, the concept *observation* could be used in science to teach the scientific method, but can also be used to teach about ethnographic studies.

There are essentially ten steps in designing a concept-based lesson plan. The first is to choose a unit theme, or an overarching topic or issue
under study (Erikson 1998). Since the state standards that focus on Native Americans are for the most part included under social studies, the focus of the new curriculum will be on the Native American cultural groups in Nevada beginning in prehistory and continuing into the present. The unit will follow a logical pattern of development, beginning with a basic introduction to the study of culture, addressing the specific cultural groups that are in Nevada, and finally studying specific information about these groups through an anthropological lens.

The second step is to select the conceptual lens, or a “focus concept” (Erikson 1998:75) that each lesson is to address. The conceptual lens answers the question ‘what is this lesson about?’ and directs the students thinking from a factual level, to a higher level of learning. In other words, learning moves from memorization to synthesis. Next, concepts that can be utilized to teach through this conceptual lens are identified. This step in the process is what Erikson calls “webbing the topics for study” (Erikson 1998:77) meaning that the concepts chosen do not necessarily come from the same discipline. For example, a conceptual lens of Human Evolution could be taught using science concepts (biological evolution) as well as social studies (group dynamics) or English (teaching oral histories of how a group view’s their evolution).

Fourth, essential understandings for each lesson are composed. These are broad statements that encompass the knowledge that should
be gained through using the lesson. The essential understandings should generalize the relationship between the concepts used in the lesson, and are "exemplified through the fact base but transcend singular examples" (Erikson 1998:83). The essential understandings can also assist the teacher in assessing student learning by serving as the generalizations that each student should be able to comprehend at the end of the lesson.

Next, a set of guiding questions for the lessons are developed. The guiding questions should be answered by the essential understandings. The teacher uses the guiding questions to deepen the learning process by using the questions to discuss the factual material in the lesson, thereby moving the content from factual to conceptual (Erikson 2001). The guiding questions used in the new curriculum will address the what? and when? (facts) as well as the why? and how? (analysis) in order to deepen the learning through time. In other words, analysis questions can be answered by the specific content in the lesson, but also teach the student to think beyond the facts and be able to apply the concepts to other disciplines.

The next two steps in the curriculum development process are a combined effort to summarize the material encompassed in the lesson. First, the critical content of the lesson is condensed into a few sentences that sum up the concepts, essential understandings and skills that the lesson will teach. The critical content takes into consideration the prior
knowledge that each student should bring to the lesson (Erikson 2001: 171) as well as the knowledge gained through the lesson. The critical content is the outcome of the skills taught through the lesson activities. The skills learned in each lesson are the state standards that each lesson plan meets. The state standards are listed for the teacher according to the Nevada State Content Standards published for each grade level.

The eighth and ninth steps are the instructional activities and methods that are used to teach the concepts. The instructional activities are step-by-step suggestions for the teacher to use. Each lesson will include these activities as well as supporting audiovisual aids: a film clip, a sound byte and a slide show. This format will allow the teacher to address every type of learning style, from the visual to the tactile. The culminating performance activity is the last part of the instructional activity, and asks the student to relate all of the content and concepts into one larger project. The student demonstrates their knowledge of the information not through testing but through synthesis, in other words, validating their comprehension of the essential understandings and answering the guiding questions. This type of activity allows the teacher to assess what the students are able to comprehend as a result of the lesson (Erikson 2001).

The final step is providing assessment suggestions for the teacher to score each individual student's performance. Since classes vary and teachers know their students better than an outside party, the teacher
should decide which way is best to assess performance. However, based on the instructional activities, assessment codes are provided at the end of each lesson. The assessment codes are O (observation), SA (student self-assessment), CP (class participation), P (presentation) or WS (writing sample).

The format for delivering the new curriculum will be a professional development CD-ROM. The CD-ROM will have each lesson as well as the supporting audiovisual documents in one concise package and provide additional resources for teacher and student learning.

The Advisory Council and Peer Review

In consideration of the varying interests of educators, professional historians, anthropologists and archaeologists, and Native Americans it is important that the proposed curriculum is adequately reviewed and revised. Prior to the release of the curriculum, a board of advisors who will critique and evaluate the CD-ROM will be established (see Appendix 1). The advisory committee will be sought from all of the Native American tribes in Nevada, teachers from Clark County, humanities scholars from Nevada’s universities, community colleges and research centers, museum professionals, the Las Vegas Indian Center and the Clark County Multicultural Education Office. The researcher will coordinate the advisory effort through the use of questionnaires and key-informant interviews.
Each member of the advisory council (N=41) will receive a copy of the CD-ROM and a questionnaire in a self-stamped return envelope. The questionnaire will contain questions regarding the usability of the program format as well as open-ended response prompts on the individual lesson content (see Appendix 1). The responses to these surveys will be used to edit the CD-ROM so that it is as user-friendly as possible, and also to change any content that users may feel is inappropriate and/or inaccurate. Suggestions for changes will be considered in relation to the mission of the curriculum and will be used unless they interfere with its objectives.

As part of the necessary relationship that will exist as this research progresses, a peer review session will be held with the Director of Social Studies Curriculum for the Clark County School District and the Social Studies department chairs for the district's middle schools. During this session, the new curriculum will be demonstrated and teachers and curriculum specialists will have an opportunity to provide feedback on its suitability. Again, unless suggestions interfere with the research design and mission, they will be implemented to insure that the program is acceptable by the school district. It is hoped that during this session, potential contacts for testing the curriculum on students can also be made.
Teacher Survey

There are no data available to assess how teachers are meeting the state standards for Nevada Native American history. In order to research the whether or not current resources available to teachers meet state standards on Native American education the researcher will develop the Nevada History Survey for Social Studies (see Appendix 2), which will quantify how and when Native American history is taught. The survey will first address whether the teacher has been exposed to any anthropological training through college or professional development. This information will address if such programs exist and are useful. Second, the teacher will be asked to define the concepts culture and multicultural education in order to determine how these concepts are understood and used by teachers. Next, teachers will be surveyed on how they currently teach about Nevada Native Americans. The survey will also capture data that can be used to create a link between available materials and the need for a better program in cultural education.

Since every seventh grader in Nevada is assumed to be learning the same basic material set forth by the mandated content standards, the target population for the study is every seventh grade teacher in the state of Nevada. However, because of the obvious constraints of funding and time, a convenience sample of teachers in the state will be taken. The survey will be administered to teachers in Clark County via an online
survey program. The survey will be emailed to all history teachers in Clark County (N=76).

The questions on the survey are all multiple choice in order to facilitate coding as well as to increase the potential for item response since multiple choice questions take less time to complete than open-ended questions. All data collected from the survey will be coded and entered into SPSS software by the researcher. The questions on the survey will be grouped to answer three category questions that are posed by the hypothesis:

(1) How do teachers define multicultural education and culture?  
(Questions 10 – 12)

(2) How is Nevada Native American history currently taught?  
(Questions 15 – 18)

(3) How useful will a unit on Nevada Native Americans/archaeology be to teachers? (Questions 19 – 24)

The frequencies for each question in all categories will be reported. This will be used to determine the broadest definition of culture and multicultural education, the most frequently used method of teaching about Nevada Native Americans, and the need for a new curriculum, as reported by Nevada teachers.
Additionally, teachers that complete the survey will be asked if they are interested in piloting materials that teach about Nevada Native Americans and if so, may they be contacted. Those teachers that answer yes to both of these questions will be contacted for participation in the classroom piloting phase of this research.

Professional Development Training

Up to ten of the teachers that agree to pilot the new curriculum will be selected. After the curriculum has been evaluated and revised per the recommendations of the advisory council and peer review, the researcher will implement a professional development workshop. The workshop will be held at the Clark County Professional Development Center under the supervision of the Director of Social Studies Curriculum. The intent of the workshops is to provide participating teachers with a thorough understanding of the content as well as pedagogical skills to implement the curriculum into their classrooms.

Classroom Piloting and Assessment

Prior to the pilot stage of this research, a Human Subjects Protocol will be presented both to the UNLV Behavioral Science Institutional Review Board and the Clark County School District Committee to Review Cooperative Research Requests. The purpose of this protocol is to outline how this research will protect the identity of the teachers and
students that will participate in the pilot. Included in the protocol will be the purposes, methods and procedures of the research as well as the risks and benefit to the students and teachers. The protocol will also include copies of letters to students and parents of involved students and principals of invited schools that will serve as the informed consent of the individuals participating.

Once the teachers that agree to pilot the new curriculum have been trained on proper usage of the unit, they will pilot, or use the unit for the first time in their seventh grade Nevada history class(es). Currently, students in Nevada are taught a small unit on Native Americans but they are not independently tested on their knowledge. Consequently there is no baseline for which to judge growth in knowledge retention after exposure to the new curriculum. In order to establish basal knowledge, students involved in the pilot of the curriculum will be administered a conceptual inventory prior to using the unit. The conceptual inventory is a test concerning not only Native Americans in Nevada, but also cultural concepts typically used in anthropology. The test will ask questions that are aligned with the mandated state standards so that change in knowledge retention can be observed. After exposure to the curriculum, the same cohort of students will be administered the same conceptual inventory. The 'test' contains 23- true/false questions (see Appendix 3); the scores will be calculated according to how many responses are correct.
The changes in knowledge growth will be quantified through the use of a paired samples t-test. The mean of scores of the student population sample will be calculated both before and after exposure to the curriculum and the two means will be compared to determine the amount of change in the student’s mean scores. An alpha of $p=.05$ will be used to determine significance. If $p$ is less than or equal to .05, the change in knowledge growth will be considered significant. If students score higher on the post-test as compared to the pretest, it will be concluded that a concept-based anthropology curriculum will increase student knowledge retention (hypothesis three).

In addition to testing, the researcher will be present during piloting of the materials. Through observation it will be noted how the students respond to the curriculum, as well as any significant changes that the teacher makes to the activities in order to adapt the lessons to fit the classroom. These observations will be used to inform further research for potential changes that should be made to the curriculum. The teachers will also be interviewed after the pilots are completed to ascertain their opinions on the utility of the new curriculum.
CHAPTER 4

RESULTS

Existing Curriculum Evaluation

From a preliminary look at the curriculum available to Nevada educators to teach about Native Americans, the materials seemed to be lacking in depth. As discussed in Chapter 2, many of the textbooks and activity guides covered the surface culture concepts of food, clothing and shelter but left out the material that the state of Nevada has outlined in its curriculum goals. In order to place value on the ability for available curriculum to meet state goals, the units were evaluated and quantified through a simple evaluation. The figures in Table 2 show the standardized scores for the curriculum evaluated in this study. The correlating state standard is listed numerically down the left and the letters across the top correspond to the curriculum sets as follows:

A = Discovering Nevada
B = Celebrating Nevada Indians
C = A Cultural Celebration
D = Indians of Nevada
E = The People: Native American Legacy
According to the evaluation results in Table 2.0, all eight of the sets critiqued in this study met fewer than half of the standards. The curriculum developed as part of this research meets 12 of the 15 standards used in this research, and can therefore be considered more useful than the other eight. The total scores of the nine curriculum sets appear across the bottom row of Table 2.

<table>
<thead>
<tr>
<th>GOAL</th>
<th>HISTORY</th>
<th>GEOGRAPHY</th>
<th>SCORE</th>
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<tbody>
<tr>
<td></td>
<td>A  B  C</td>
<td>D  E  F  G  H  I</td>
<td></td>
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<tr>
<td></td>
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<td>0.5 1 0 0 0 0 0 0 0</td>
<td>5 7.5 2.5 5 5.5 4 4 5 12.5</td>
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<td>1 1 1 0 1 0 1 1 1</td>
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<td></td>
<td>3.2 0 0 0 0 0.5 0 0 1</td>
<td>0 1 1 0 1 0 1 0.5 1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3.5 0 0 0 1 0 0.5 0 0</td>
<td>0 0 1 0 0 0 0 1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>5.5 0.5 1 0.5 0.5 1 0.5 0.5 0</td>
<td>0.5 1 0 0 1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>5.6 0 1 1 0 1 0 0 1</td>
<td>0 1 0 0 0 0 0 5</td>
<td></td>
</tr>
<tr>
<td></td>
<td>5.8 0 1 0 0 0 0.5 1 0</td>
<td>0 0 0 0 0 0 0 1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>5.9 0 1 0 1 1 0 0 0</td>
<td>0 0 0 0 0 0 0 0</td>
<td></td>
</tr>
<tr>
<td></td>
<td>7.3 0.5 0.5 0 1 0.5 0 0.5 0</td>
<td>0 0 0 0 0 0 0 0</td>
<td></td>
</tr>
<tr>
<td></td>
<td>7.4 1 1 1 0 1 0 1 0</td>
<td>1 1 0 1 0 0 1 0</td>
<td></td>
</tr>
</tbody>
</table>

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Developing a New Curriculum

As mentioned in Chapter 3, the first step in developing a concept-based curriculum is to decide on a unit theme. The new unit will be entitled "Exploring Nevada's Past and Present." Because of the previously stated lack of materials, the unit theme of the Exploring Nevada's Past and Present curriculum is the Native American cultural groups of Nevada beginning in prehistory and continuing to the present. After deciding on the unit theme, a list of concepts that were inherent to the study of this theme was compiled. These concepts formed the basis for the second step in developing the curriculum: selecting the focus concept for each lesson. In consideration of the average length a teacher would spend on Nevada prehistory (Sara Gardner, personal communication, May 17, 2003), seven focus concepts were selected that would address the breadth of Nevada prehistory. The third step in developing the new curriculum was to web the topics (Erikson 1998) for each lesson under its corresponding focus concept. In other words, the concepts that could be taught under the umbrella of the focus concept were listed, regardless of discipline. The focus concepts with the resultant webbed concepts are listed in Table 3.
Table 3. Exploring Nevada’s Past and Present: Conceptual Lenses and Webbed Concepts

<table>
<thead>
<tr>
<th>LESSON NUMBER AND TITLE</th>
<th>CONCEPTUAL LENS: WEBBED CONCEPTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1: Classroom Culture</td>
<td>Material Culture:</td>
</tr>
<tr>
<td></td>
<td>Culture, Observation, Investigation, Prediction</td>
</tr>
<tr>
<td>2: Nevada’s Desert Culture</td>
<td>Adaptation:</td>
</tr>
<tr>
<td></td>
<td>Diversity, Innovation, Belief, Continuity</td>
</tr>
<tr>
<td>3: Classifying Culture</td>
<td>Interpretation:</td>
</tr>
<tr>
<td></td>
<td>Characteristics, Assemblage, Group, Context</td>
</tr>
<tr>
<td>4: Stories that Speak</td>
<td>Transmission of Culture:</td>
</tr>
<tr>
<td></td>
<td>Interconnections, Family, Cause/Effect, Replication</td>
</tr>
<tr>
<td>5: Color Culture</td>
<td>Cultural Identity:</td>
</tr>
<tr>
<td></td>
<td>Identity, Symbolism, Tradition, Environmental Resources</td>
</tr>
<tr>
<td>6: Personal Pictograms</td>
<td>Communication:</td>
</tr>
<tr>
<td></td>
<td>Theory, Preservation, Symbolism</td>
</tr>
<tr>
<td>7: Tracking the Sun</td>
<td>Cycles:</td>
</tr>
<tr>
<td></td>
<td>Prediction, Movement, Interaction, Belief</td>
</tr>
</tbody>
</table>

Table 4 contains the fourth step in the curriculum development process, composing the essential understandings. The essential understandings are the generalized relationships between the concepts that are taught in the lesson. As many as six essential understandings are provided in each lesson in order to allow the teacher to assess each student’s comprehension of the material, as many children may have different ways of drawing concepts together into a generalized understanding. The essential understandings listed in Table 4 are the most general selections provided in the curriculum, in order to show the broadest relationship derived from the concepts.
Table 4. Exploring Nevada’s Past and Present: Essential Understandings

<table>
<thead>
<tr>
<th>LESSON NUMBER AND TITLE</th>
<th>ESSENTIAL UNDERSTANDINGS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1: Classroom Culture</td>
<td>Archaeologists make predictions about how past people lived based on the material remains they left behind.</td>
</tr>
<tr>
<td></td>
<td>Culture is the beliefs, ideas, concepts and tools that help us understand and adapt to our world.</td>
</tr>
<tr>
<td>2: Nevada’s Desert Culture</td>
<td>People who are part of the desert culture lived in Nevada before anyone else.</td>
</tr>
<tr>
<td></td>
<td>People that share similar beliefs, values, land and ideas make up a cultural group.</td>
</tr>
<tr>
<td>3: Classifying Culture</td>
<td>Archaeologists classify objects into categories based on their attributes, or characteristics.</td>
</tr>
<tr>
<td></td>
<td>Characteristics of a group can help answer research questions about how the object was made or used.</td>
</tr>
<tr>
<td>4: Stories that Speak</td>
<td>Every group of people has stories that tell about who they are.</td>
</tr>
<tr>
<td></td>
<td>Retelling these stories is a way of teaching about culture to children and newcomers, as well as a way to remind people of their history.</td>
</tr>
<tr>
<td>5: Color Culture</td>
<td>Group identity can be expressed through traditions.</td>
</tr>
<tr>
<td></td>
<td>Symbols may reflect a culture’s identity.</td>
</tr>
<tr>
<td>6: Personal Pictograms</td>
<td>Ideas can be communicated in ways other than writing.</td>
</tr>
<tr>
<td></td>
<td>Rock art symbols carry meaning about what the artists thought about their world.</td>
</tr>
<tr>
<td>7: Tracking the Sun</td>
<td>We can measure the sun’s movement by noting where the sun is in the sky, or how a shadow touches a particular place.</td>
</tr>
<tr>
<td></td>
<td>Some petroglyphs may correspond to the earth’s movements around the sun as a type of calendar.</td>
</tr>
</tbody>
</table>

The guiding questions are written after the essential understandings and serve to move the lesson from the factual to the conceptual level of thinking. In other words, the guiding questions are written to help the teacher use the factual material and pose broader questions to the students so that they may apply the concepts learned in
the lesson to the larger concepts and create a meaningful, emotional connection to the material. The guiding questions are used during the lesson delivery but can also be used as a form of assessment. The proper responses to the guiding questions would be the essential understandings. The guiding questions to Lesson One are as follows:

1. Why do archaeologists study artifacts?
2. What kinds of observations do archaeologists make about artifacts?
3. What might the objects that we use everyday tell others about our lives?
4. How is culture represented in an archaeological assemblage?
5. Why would some materials survive burial for 1,000 years while others would not?
6. Is studying past cultures through archaeology important?
7. What kinds of ideas, beliefs or tools are represented in our class culture?
8. If someone who did not know our class saw this collection, what might they think about us?
9. Why is it important not to disturb archaeological sites or pick up artifacts?
From these questions the teacher can make the students create the link between the unit concept *material culture* and the webbed concepts *culture, observation, investigation and prediction* just by posing the guiding questions.

The next two steps in developing the Exploring Nevada curriculum were to summarize all the concepts in each lesson into a few sentences called the critical content, and link the critical content to the appropriate state standards. These two steps serve to assist the teacher in deciphering which state goals are met by the lesson as well as to gauge what each student should know prior to the lesson and learn from the lesson. The critical content for Lesson One is:

Archaeologists are scientists that investigate past cultures by looking at the things they left behind. Artifacts can tell us many things about how past people lived everyday. It is important not to disturb archaeological sites or artifacts in order to preserve information.

The critical content is, at most, four to five sentences that summarize the outcome of what each lesson will teach the students. At this point, the corresponding state standards were also listed for the teacher's use. The standards were chosen using the same criteria used to critique the existing curriculum above: From the material and activities suggested,
can the corresponding standard be met? The same standards used to
critique the available curriculum were also used in the lessons, however,
for the benefit of the teacher using the Exploring Nevada curriculum,
standards that apply in all disciplines, not just history, were listed in the
lesson plan. The standards are listed in the state format of Standard
Number. Content Goal. In other words, history standard 3.4 is
interpreted as the third standard in the discipline history and the fourth
piece of content that should be met under that standard. The standards
for Lesson One are as follows:

**English:**

9.2: Speaking – select and use appropriate public speaking
techniques, give organized presentations that demonstrate a clear
viewpoint

10.1: Discussion – contribute to and listen attentively in
conversations in group discussions; share ideas, opinions and
information clearly and effectively

**History:**

2.5: Identify occupations related to framing historical
questions
Since teachers are very well versed in using the standards and their published guides, only the standard number is provided in the lesson plan.

The eighth and ninth steps in developing the new curriculum were to actualize the conceptual material in the lessons by providing instructional activities and methods for teaching the lesson. Because many of the concepts in archaeology are difficult to explain verbally, it was necessary to include as many visual and tactile activities as possible in the lesson activities. While each lesson has a unit theme, each lesson also focuses in on a particular aspect of archaeological research as a form of delivering the material. The lessons and their corresponding research idea or tool are presented in Table 5.

Table 5. Exploring Nevada’s Past and Present: Research Ideas or Tools

<table>
<thead>
<tr>
<th>LESSON</th>
<th>IDEA OR RESEARCH TOOL</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Archaeological Assemblages</td>
</tr>
<tr>
<td>2</td>
<td>Ethnohistorical Research</td>
</tr>
<tr>
<td>3</td>
<td>Artifact Classification</td>
</tr>
<tr>
<td>4</td>
<td>Oral History</td>
</tr>
<tr>
<td>5</td>
<td>Basketry Tradition and Technology</td>
</tr>
<tr>
<td>6</td>
<td>Rock Art Investigation/Interpretation</td>
</tr>
<tr>
<td>7</td>
<td>Solar Phenomenon</td>
</tr>
</tbody>
</table>

Also, because each student in a class may have a different cognitive learning style (i.e. auditory learners, visual learners, tactile learners) using various types of presentations in each lesson will allow the material to be absorbed by students in ways that are the most
meaningful to them. For this reason, a video clip, sound byte, and slide show are provided for each lesson as part of the lesson in addition to class discussion and group activities.

The final step in developing the new curriculum was to provide the teacher with assessment suggestions to evaluate student performance. As mentioned in Chapter 3, the teacher knows the students much better than any outside party ever could and therefore should be the final judge in determining which methods are best to evaluate student knowledge. However, the assessment codes outlined in Chapter Three were provided based on the lesson plan that may provide the best feedback for the teacher.

Once of the lesson materials were written, a CD-ROM was created by a technical developer, with the assistance of the researcher that will provide the teacher with all the lesson plans, audiovisual materials, additional resources for their own preparation and suggested further reading for the students, if desired. For the audiovisual materials used, whenever possible, a member of the professional archaeological community spoke on a topic that was relevant to their own research. When a professional was not available to participate, the researcher covered the topic. The CD-ROM allows the teacher to print all necessary lesson plans, worksheets, handouts and slides, or they can project the video and audio clips directly from the CD to a projection screen with the use of an LCR monitor.
The complete lesson plans on the Exploring Nevada’s Past and Present CD-ROM are compiled in Appendix 4.

The Advisory Council and Peer Review

The curriculum survey in Appendix 1 was mailed to the 41 members of the advisory council in May 2003. Of the 41 surveys mailed, two were returned marked address unknown (Elko Band Tribal Council and Fallon Tribe Business Council) and two were completed and returned (Battle Mountain Band Council and Eugene Hattori, Curator of Anthropology, Nevada State Museum).

The Education Coordinator for the Elko Band, Te-Moak Tribe of Western Shoshone, Janet Holley returned the completed survey with a letter of support and encouragement for this research. Most of her comments on the survey were positive with the exception of Question #9. Ms. Holley felt the dark colors of the background made the lesson menu on the CD-ROM too difficult to read. There were also a few technical difficulties with the CD-ROM that Ms. Holley pointed out: maps and timeline on Lesson Two would not print and there was no file for Nevada Content Standards on Lesson Three. As far as the content of the lessons were concerned, Ms. Holley suggested that more specific tribal information should be included on Lesson Two. She states “students don’t really realize the many different tribes that make Nevada their
home” (Holley, personal communication). Ms. Holley commended the CD-ROM on a job well done.

Mr. Hattori also returned the completed survey, but with fewer comments. He stated that the movie clips did not have sound after playing the first one. Other than that, there were no specific problems or concerns with any of the material. Mr. Hattori offered his congratulations “on a great product” (Hattori, personal communication).

On August 21 of 2003 this research was presented to the Clark County Social Studies Department chairs end-of-year meeting. The Department Chairs evaluated the not only the CD-ROM, but also the appropriateness of the student knowledge inventory and the teacher survey. The committee had very little concerns with the material in the CD-ROM with the exception of the film clip on Lesson Three, which includes Dr. Margaret Lyneis’s discussion of pottery classification and what can be learned from artifact typologies. The committee felt that the vocabulary might be too advanced for a seventh grade audience. They also commented that many of the worksheets and maps were not printing from the CD, and this would be very frustrating to their teachers. The biggest concern of the committee was that the standards be re-written to only include the standard number strand and no explanation. They cited that there are many different interpretations of the standards based on the county, but the numbers were consistent enough to suffice.
Another concern of the committee was the methodology for surveying teachers discussed in Chapter Three. The Department Chairs informed the researcher of the amount of unsolicited mail that teachers receive and that they were very likely to throw it away as junk mail. The suggestion was made that the survey be put online and emailed to each Department Chair who would then distribute the survey to the history teachers in their school. All of the Department Chairs commented that they truly needed a Nevada History curriculum that is up-to-date and exciting for the students and they all wished to have a copy of Exploring Nevada’s Past and Present sent to their school.

All of the above suggestions were incorporated into the research presented here. The technical changes were all made to the CD-ROM before it was redistributed with the exception of the unprintable maps and timeline mentioned by Ms. Holley. This was an unidentified glitch that could not be fixed by the technical developer who assisted in the creation of the CD-ROM.

Lesson Two was changed to reflect the specific content suggestions, however this was included as part of a student-driven research project so it is inevitably the student's own research abilities that will provide tribal information. The comments on the pottery classification video were taken very seriously, but it was decided that this section would be left on the CD-ROM but moved to the Teacher’s
Resource Area in order to give the teacher using the curriculum more information on the uses of artifact classification.

Teacher Survey

Following the recommendations of the Social Studies Chairs, the teacher survey was revised in order to be posted on the internet as opposed to direct mailing. Also, given the poor response rate to the advisory council surveys, it was the hope of the researcher that a more accessible online survey would greatly increase the response rate.

At the time of the Department Chairs meeting, the Clark County School District had recently begun surveying its teachers with an online polling service entitled Zoomerang. The service posts your survey, emails the survey to an address list you provide and then tallies the response data for the researcher in real time. The data is then held in the system's memory for 10 days after the launch of the survey before it is cleared. At the advice of Sara Gardner, Head of K-12 Social Studies for Clark County, the researcher decided to use the Zoomerang system to conduct the online teacher survey.

The survey was launched in September of 2003 and sent to all seventh grade history teachers in Clark County. Of the 76 teachers that were invited to complete the survey, 30 responded (a response rate of 39.4%). As was mentioned in Chapter 3, the questions on the survey were grouped in order to answer three category questions:
(1) How do teachers define multicultural education and culture? 

(Questions 10 – 12)

(2) How is Nevada Native American history currently taught? 

(Questions 15 – 18)

(3) How useful will a unit on Nevada Native Americans/archaeology be to teachers? (Questions 19 – 24)

It is important to remember when viewing the response ratios that teachers did have the option of marking more than one answer, and in many cases they did. However, if the highest response ratios from each question are combined, the majority answer to the category (1) question is:

*Teaching about others (groups of people that share similar values, customs, and worldviews) to help children understand others by discussing famous people from different cultures when applicable, or discussing different cultures or ethnic groups during social studies.*

The frequencies for the answers to the questions for the first question category are reported in Tables 6.
Table 6. Teacher Responses to Questions 10-12

<table>
<thead>
<tr>
<th>10. Multicultural Education is best defined as?</th>
<th>Number of Responses</th>
<th>Response Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teaching about other cultures to help children understand others</td>
<td>24</td>
<td>80%</td>
</tr>
<tr>
<td>Making sure that each child is educated in a way that best fits their ethnic background</td>
<td>6</td>
<td>20%</td>
</tr>
<tr>
<td>Using teaching materials that represent more than the dominant culture</td>
<td>16</td>
<td>53%</td>
</tr>
<tr>
<td>Other</td>
<td>2</td>
<td>7%</td>
</tr>
</tbody>
</table>

11. How do you use multiculturalism in your classroom?

| During designated months such as African American heritage month | 15 | 50% |
| Discussing famous people from different cultures when applicable | 28 | 93% |
| Reading books by authors of different cultures | 6 | 20% |
| During social studies I discuss different cultures or ethnic groups | 29 | 97% |
| I teach a unit on anthropology/culture | 2 | 7% |
| I show films about different cultures or events in history | 23 | 77% |
| Other | 4 | 13% |

12. The best definition of culture is?

| A group of people that share similar values, customs and worldviews | 16 | 53% |
| Culture is represented by ancestry, clothing, food, religious practices and geography | 14 | 47% |
| The skills and concepts that make you who you are and teach you how to survive in the world | 3 | 10% |
| A set of beliefs that bind a group of people together | 12 | 40% |
| Other | 1 | 3% |

The response ratios to the second question posed above are presented in Table 7. Question 18 allowed teachers to write in other resources they used to teach Nevada Native American history. For the purposes of the existing curriculum evaluation mentioned above, it is interesting to note that the "other" sources cited by teachers were either Battle Born Nevada or internet lesson plans.
16. **What kinds of lessons do you use to teach about Nevada Native Americans?**

<table>
<thead>
<tr>
<th>Method</th>
<th>Count</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>I use my own lesson plan</td>
<td>27</td>
<td>90%</td>
</tr>
<tr>
<td>I use another teacher’s lesson</td>
<td>5</td>
<td>17%</td>
</tr>
<tr>
<td>I find lessons on the Internet</td>
<td>14</td>
<td>47%</td>
</tr>
<tr>
<td>I use the textbook activities</td>
<td>20</td>
<td>67%</td>
</tr>
<tr>
<td>I invite a guest speaker</td>
<td>5</td>
<td>17%</td>
</tr>
<tr>
<td>I take students on field trips</td>
<td>3</td>
<td>10%</td>
</tr>
<tr>
<td>Other</td>
<td>5</td>
<td>17%</td>
</tr>
</tbody>
</table>

17. **Which of the following, if any, Nevada cultures do you teach about?**

<table>
<thead>
<tr>
<th>Culture</th>
<th>Count</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Southern Paiute</td>
<td>22</td>
<td>81%</td>
</tr>
<tr>
<td>Northern Paiute</td>
<td>15</td>
<td>56%</td>
</tr>
<tr>
<td>Western Shoshone</td>
<td>18</td>
<td>67%</td>
</tr>
<tr>
<td>Washoe</td>
<td>20</td>
<td>74%</td>
</tr>
<tr>
<td>Other</td>
<td>3</td>
<td>11%</td>
</tr>
</tbody>
</table>

18. **Which of the following resources have you used?**

<table>
<thead>
<tr>
<th>Resource</th>
<th>Count</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Discovering Nevada by Gary Bedunnah</td>
<td>16</td>
<td>55%</td>
</tr>
<tr>
<td>“Celebrating Nevada Indians” from the UNLV Curriculum Library</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Teacher activities from the Lost City Museum</td>
<td>2</td>
<td>7%</td>
</tr>
<tr>
<td>“Nevada Indians: A Kids Look at our State”</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>None of the above</td>
<td>9</td>
<td>31%</td>
</tr>
<tr>
<td>Other</td>
<td>8</td>
<td>28%</td>
</tr>
</tbody>
</table>

After compiling the response ratios to questions 15-18, the majority answers to category question (2) are:

*About 90% (N=27) of history teachers in Clark County teach about Nevada Native Americans, mainly the Southern Paiute, by using either the Discovering Nevada textbook and activities or their own lesson plans.*

The response rates to questions 19-24 are presented in Table 8. For the purposes of the next section, note that 20 teachers cited that they would be interested in piloting new curriculum materials that are designed to teach about Native Americans and archaeology.
The response rates to questions 19-24 are presented in Table 8.

For the purposes of the next section, note that 20 teachers cited that they would be interested in piloting new curriculum materials that are designed to teach about Native Americans and archaeology.

Table 8. Teacher Responses to Questions 19-24

<table>
<thead>
<tr>
<th>19. Have you ever used anthropology or archaeology in your class?</th>
<th>Number of Responses</th>
<th>Response Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>16</td>
<td>53%</td>
</tr>
<tr>
<td>No</td>
<td>14</td>
<td>47%</td>
</tr>
</tbody>
</table>

20. How have you used anthropology/archaeology in your class?

<table>
<thead>
<tr>
<th>Method</th>
<th>Number of Responses</th>
<th>Response Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>I invited a guest speaker</td>
<td>2</td>
<td>9%</td>
</tr>
<tr>
<td>I taught about an archaeological site such as Egypt, the Lost City or Stonehenge</td>
<td>9</td>
<td>41%</td>
</tr>
<tr>
<td>I took my students on a field trip to an archaeological site or museum</td>
<td>3</td>
<td>14%</td>
</tr>
<tr>
<td>We recreated a mock archaeological dig</td>
<td>2</td>
<td>9%</td>
</tr>
<tr>
<td>Other</td>
<td>11</td>
<td>50%</td>
</tr>
</tbody>
</table>

21. How useful would a unit on anthropology/archaeology be, in general, to Nevada teachers?

<table>
<thead>
<tr>
<th>Level</th>
<th>Number of Responses</th>
<th>Response Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extremely useful</td>
<td>10</td>
<td>36%</td>
</tr>
<tr>
<td>Somewhat useful</td>
<td>18</td>
<td>64%</td>
</tr>
</tbody>
</table>

22. How useful would a unit on Nevada Native Americans be, in general, to Nevada teachers?

<table>
<thead>
<tr>
<th>Level</th>
<th>Number of Responses</th>
<th>Response Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extremely useful</td>
<td>18</td>
<td>62%</td>
</tr>
<tr>
<td>Somewhat useful</td>
<td>10</td>
<td>34%</td>
</tr>
<tr>
<td>Not very useful</td>
<td>1</td>
<td>3%</td>
</tr>
</tbody>
</table>

23. Would you use a unit designed to teach about Nevada Native Americans in your classroom?

| Yes | 27 | 93% |
| No  | 2  | 7%  |

24. Would you be interested in piloting materials designed to teach about Nevada Native Americans using archaeology?

| Yes | 20 | 67% |
| No  | 10 | 33% |
From the responses noted in the above table, the majority answer to category question (3) would be:

*Given that more than half of Nevada history teacher have taught about archaeology in their classrooms by discussing archaeology, and that 62% (N=18) feel a unit on Nevada Native Americans would be extremely useful, a unit on Nevada Native Americans taught through archaeology should be extremely useful as well.*

It is also important to note the direct frequency of question 23; 93% (N=27) of teachers surveyed would use a unit designed to teach about Nevada Native Americans.

**Professional Development Training**

It was noted in Chapter 3 that teachers that responded “yes” to questions 23 and 24 on the survey would be contacted for participation in the classroom field testing phase of this research. Twenty teachers responded to both these questions positively and were contacted through email regarding their interest to pilot the materials. However, of the twenty teachers that were contacted only two agreed to meet the researcher to discuss their ability to pilot the curriculum within a reasonable timeframe. Of these two teachers, one felt the time commitment was too much.
The second teacher was a Department Chair from a Las Vegas middle school that wished to have the researcher present the program for the pilot testing to all of the history teachers at her school. After this presentation, it was decided that only one of the teachers had the time available to devote to piloting the new curriculum, though all were very interested. In light of this, the planned professional development was not necessary. It was decided that the researcher and the pilot teacher would work together on the best way to implement the curriculum.

The teacher took several weeks to review the CD-ROM and then scheduled a two-week block of time in January to teach the materials. The researcher met with the teacher prior to each lesson to clarify any questions or concerns with the lesson, as well as to give ideas on how to best integrate the various sections of the lesson plan into a cohesive whole. Some sections of the lessons were identified as not appropriate for the class, and therefore were changed to suit as the teacher saw fit. After each lesson was conducted, the researcher also gave the teacher immediate feedback on the lesson delivery. These discussions will be discussed in further detail in the next section.

Classroom Field Testing and Assessment

The Exploring Nevada's Past and Present curriculum was piloted at Harney Middle School in Las Vegas in January of 2004. One teacher conducted the pilot phase on five, seventh-grade U.S. history classes.
superior to many other Clark County Schools. The classroom was equipped with an LCR projector, overhead and the teacher had a personal laptop computer. In terms of ethnic makeup, the school is approximately 50% Hispanic, 40% white and 10% African or Asian American or Pacific Islander. Harney Middle School is on the city’s east side, near Sunrise Mountain, in a middle-class suburban area.

The classes were administered the pretest for this research in November of 2003 by the teacher. They were told that they would be participating in a graduate student’s research and that they were going to learn about archaeology and Native Americans. The students were informed that their grades would not be affected should they choose not to participate. (No students opted to not participate). Letters with the project description were given to the students to take home to their parents in accordance with the Human Subjects protocol.

**Summative Assessments.** Due to scheduling conflicts and pressures to cover enough materials before the end of the winter semester, the teacher was not able to begin the curriculum instruction until two months after the pretest. This may have been beneficial to this research, as the students may have remembered questions on the test if it had been administered too close together. Once the pilots began, the researcher was present to observe instruction for a total of six days (12 hours). The presence of another adult in the classroom (especially one who is on many of the videos that the students were viewing) was at
times very distracting to the students and the teacher, and therefore the researcher did not attend the remedial class (4th period) or the class that was scheduled around lunch (5th period), at the request of the teacher. These seemed to be the classes that would have been the most aware of a researcher observing their learning. Where the observations of the researcher were not possible, the observations of the teacher were substituted.

Each lesson took one day to complete. Each lesson began with a small meeting between the researcher and the teacher to cover what the most important parts of the lesson were and to clear up any misunderstandings or questions. Since each lesson is different from the next, it is best to report the observations of each lesson separately.

*Lesson One.* Being the introduction to the unit, and one of the most physically active, Lesson One was very well received by all classes. Every student seemed to fully grasp what an artifact is and could be considered over time. The teacher led a thorough discussion on artifact preservation using the guiding questions. Afterwards, students were asked to choose an “artifact” from a pile in the center of the room, which the teacher had provided, draw it, and then write a few sentences describing its possible use. Because of the 52 minutes allotted for each period, individual presentations were not feasible. However, each student worked diligently on the assignment and appeared to be very engaged by it.
Lessons Two and Three were switched in order. While this began as a miscommunication between the teacher and the researcher, it turned out that Lesson Three logically should follow Lesson One as it builds on the material culture concepts.

Lesson Three. The classes all began with review questions from the day before (what is an artifact?). The teacher urged the students to look up the definition in their textbooks, and many do so. Others guessed aloud. The essential question for the day was written on the blackboard along with the homework assignment for that evening. This is school policy, so that the students are able to track their homework and review using the essential question. The essential question for this lesson is: how are artifacts classified? The teacher began a discussion of context by using the example from Lesson One: what would survive in this room if it were covered for 1,000 years? The class voted on the things that would survive and then they proceeded to discuss whether an archaeologist could tell if it was a classroom or not. This was an ideal way to segway from Lesson One and build upon the concepts of investigation and prediction. One student in sixth period gave the example that you need more than one artifact to be able to tell what it means. The teacher explained that this is context and the talks about word association. She asked the students if they could define the word *vituprity* without seeing it used in a sentence. They agreed they could not but using the context clues from the surrounding words in a
sentence they were able to determine the words meaning. The teacher related this to archaeological context and association, which all the students seemed to understand. The teacher then moved to a discussion of traits using the guiding questions provided. In three classes students practiced dividing themselves into classifications based on eye color, hair color or size. This was a great example of hands-on learning and teaching to the student's common knowledge. At this point, roughly 80% of the class appeared engaged in the activity but settling them into the next activity proved difficult. Moving to the slides, students were asked to guess why the artifacts were grouped together. The classes all began to lose interest at this point. After the slides, the video clip was shown and students began to show less and less interest the longer it went on. This is the clip that the Department Chairs wanted removed, but the teacher thought it contained some good information. Afterward, the class began the homework assignment of classifying pre-grouped "artifacts" that the teacher provided into categories. The students had ten minutes to work on this in class and then had to finish it at home. Almost all of the classes were able to finish during the allotted time.

Overall, Lesson Three moved along very well and the concepts seemed to be well accepted by the students. The slides are a bit confusing to the students and the teacher seemed unsure of how to elaborate on their meaning. The movie clip is also very long, and only about 30% of students in all classes paid careful attention to it. Others
were very shifty in their seats and looked sleepy. The active parts of this lesson certainly work better than the static. The grouping of students based on traits seemed to be the most essential part of this lesson, and helped convey the core concepts: characteristics, assemblage and context.

Lesson Two. Classes again began with a review of the previous day's essential questions: how do you classify artifacts and what are some ways you can classify artifacts? Students easily responded to these questions with answers such as size, material, weight, use, etc. The essential question for this lesson was: Which Native American tribes lived in Nevada? The students guessed aloud many suggesting the Cherokee, Pawnee, and Navajo. The teacher put up the modeling map from the CD-ROM to show where the various groups were before European contact. The teacher asked the researcher to clarify why the Mojave are not part of the map. (This has to do with the Mojave being recognized as a California tribe, not a Nevada tribe.) The students were then asked to define culture, first from the text and then from their own lives. Students were asked to raise their hands if they thought they were part of a culture (on average, only 5 per class responded to this). In the first period, the teacher asked students to list things the people of the Desert Culture had in common, but after the first class changed this question to asking what kinds of things the environment would produce for prehistoric Native Americans to live off of. The answers were similar
none the less. The teacher then had the class read aloud "the First Nevadans," (a narrative written for the CD-ROM by the researcher) and afterwards plotted the events in the reading on their timelines. Since the timeline did not print from the CD-ROM, the teacher made her own version. The teacher modeled for the students how to convert 9,400 years ago into an actual date by subtracting this from the year 2004 to equal the year 7396 B.C. The teacher felt that the students would understand this better. The video was played at the end of the class, but the slides were not used. The teacher explained that it was because she had used them in Lesson Three on accident and didn't want to repeat them. The classes were assigned the "What would I need" worksheet as homework.

Overall, the students seemed confused by Lesson Two. Perhaps there was too much information, or the information was vague. The lesson would have been greatly enhanced if the research aspect of lesson two were conducted prior to the classroom activities. However, the teacher felt that this would take too much time and offered it only as extra credit to students. This may have contributed to their not understanding the video or the timeline, as they were unsure of whom any of these Nevada groups were. This also spoke to the concern of Ms. Holley, who wanted more tribal information in the lessons. Without conducting the research project, students have no way of understanding the cultures of any of the Nevada tribes.
Lesson Four. For review, the students named the four groups that controlled land in historic Nevada. There were many hands in the air, and all the groups were named quickly. The essential question for lesson four was: How did Native Americans keep track of their history? The teacher began with a discussion of the definition of history. Students talked about the different kinds of historical data, including myth, legend and story. Many of the students recalled the stories of the Lewis and Clark expedition that they had learned earlier that year. Most of the classes agreed that this is a form of oral history. The students were asked if they like these types of stories, many said yes citing that they were more interesting than a book or that their minds didn’t wander during a story. The teacher then asked what would happen to oral history if it wasn’t written down. The students discussed how people may exaggerate, or that only one side of the story may be told, or that it could be forgotten totally. Students then listened to both the audio and video readings of the Southern Paiute legends from the CD-ROM. During the audio readings nearly all the students were very attentive, but during the video storytelling they were restless and many said out loud that the story was way too long. After the stories, the students were asked to recount what they learned about the Southern Paiute worldview from these stories. Then the oral history homework was given. The students seemed very eager to complete the assignment and talk with their parents about their personal origin story. In order to explain what
kinds of questions to ask, the teacher recounted her personal history of how she came to Las Vegas and allowed the students to question her.

This lesson seemed to be the best accepted so far by the students, but some concerns were raised by the class discussion. There was a general sense in all the classes that oral histories were just legends or myths. It was not until a student suggested that all history was originally just someone's interpretation of an event that the teacher began addressing this idea to the other classes. Also, while the concepts of replication and interconnections were addressed, the cause and effect relationship that the two stories read aloud had to the Paiute world view was not. After the class I discussed this with the teacher who stated that she herself had not thought of those connections, probably because she had not worked with oral history much on her own.

Lesson Five. The daily review questions were: (1) what is oral history? and (2) give two examples of oral history? These suggestions created a very engaging discussion as students shared their experiences in interviewing their parents. There was the sense with a few students that the parent(s) did not welcome this assignment. Several students mumbled about how either their mom or dad did not like to talk about it, or they were hard to get to sit down. About half the students said they learned new things and about 10% said they liked doing it. The essential question for lesson five was: how can symbolism express Native American culture? This lesson had to be changed a great deal in order to
accommodate the needs of the class. The dye experiment could not be done due to time and space, however the teacher did offer this as extra credit. Instead, the lesson focused on discussing symbolism in Native basketry as representative of culture. This was the teacher's idea for changing the lesson and it worked quite well given the time frame allowed. The class time focused on discussing symbolism with many students talking about the cross, the Christmas tree, the Mormon shield, or the coins many wear of St. Mary. The class decided on the definition that symbolism is something you do or show to relate yourself to a culture. The teacher then handed out a reading on Dat-So-La-Lee that she found off the teacher resource area on the CD-ROM and had the classes read this aloud. The reading was well chosen and appropriate; it discussed the importance of basketry to maintaining the Washoe identity. After, the classes looked at the slides of the baskets but did not discuss the symbolism in them. Rather, they talked about function, which was not part of this lesson. The sound bytes by Dr. Cassman helped to get the students back on track. After the explanations Dr. Cassman gave of symbolism and use of color the students reworded the answers to the questions and wrote their definitions down. The homework was to create four basket designs in color, but the students were not asked to explain why they chose the symbols they created on their basket designs. Therefore, the concepts of identity and tradition were not emphasized in the homework. While changing this lesson
meant losing a few of the standards that this lesson was designed to touch upon, adding the reading created a few new links to other standards. The prescribed delivery of lesson five better fits a younger audience but the slides and sound bytes work very well to address the concepts.

Lesson Six. For review, the students discussed how color and symbols relate to culture. Many more examples were brought up, probably because as students completed their homework, the concepts created an emotional link to the symbols they chose. School colors, nationalism, religion, gang affiliation and wedding colors were all part of the discussion. The essential question for Lesson Six was to identify and describe two types of rock art. One student in seventh period repeatedly maintained that there were hieroglyphs in Nevada. Thankfully, the teacher used this as a way to begin the discussion on communication and ways to communicate without writing. Movement, color, sign, symbols and pictures were all pointed out as possible answers. The teacher asked the classes if art was a way to communicate, and many students responded yes- because it reflects your mood. The teacher stated that Native Americans also used pictures to communicate their thought or feelings as well. The sound bytes were played and the video was shown and students discussed possible ways that rock art could be preserved and studied. Thankfully, almost all the students agreed that this was a very important type of conservation- possibly because most of
them have seen petroglyphs in Southern Nevada. After this discussion
the researcher was invited to join the class in a game. The slides were
shown and the students guessed what the glyphs and pictograms meant
and then the researcher gave the common understanding of the
drawings. The students really enjoyed this part of the lesson and nearly
all were very actively engaged. The homework assignment was given to
draw your own piece of rock art and write two to three paragraphs about
the chosen symbol and what it meant to them.

Once again, this lesson builds upon the concept of symbolism.
The students seemed to enjoy this lesson much more than the lesson
that involved the baskets perhaps because they are all familiar with rock
art. During the slide presentation students were theorizing their ideas
about the rock art, but since the teacher or the researcher did not
identify this, the concept of theory was probably not grasped very well.
However, the students responded very well to questions of preservation
and were able to create ways of help to conserve and maintain rock art
spaces.

Lesson Seven. This lesson created some problems for the teacher.
First of all, the format does not work in a middle school class where the
class time is 52 minutes and students change classes all day. To post
pictograms and have students monitor change would be too time
consuming. This activity would work better in a self-contained
classroom. Also, the teacher felt uncomfortable addressing questions
about solar phenomenon, and, without the direct experience of the experiment, it is difficult to explain. She decided the best way to address this issue would be to play the video, sound bytes and slides and then attempt to lead an analytical discussion of why early Nevadans may have drawn the sun on rock walls. This tactic worked very well. The students were able to articulate their thoughts into organized responses. Some guesses were to show direction, to explain that it was hot at that spot, to guide them (like the North Star), or to note hunting grounds. The teacher then talked about a sundial and asked if students had ever tried guessing the time based on where the sun was. Many of the boys had, citing the Boy Scouts as a reason. Wholly, the concepts of solar movement and marking spots to show time were lost for this lesson without the experiment. The students listened to the Paiute legend of “Why the Sun Rises Cautiously” but the teacher did not preface the story and did not discuss the potential ideas that were transmitted during the legend, therefore it ended up being quite meaningless to the students. All the classes seemed frustrated with these concepts. If the experiment cannot be completed, it seems best to drop the lesson entirely.

After the pilot, the students were encouraged to write their comments on the program. The majority of the comments that were turned in indicated that they enjoyed the program because it was fun and different (i.e. didn’t use textbooks, liked the videos and slides, and enjoyed seeing the artifacts). The most highly regarded of the activities
involved the petroglyphs. Students responded that this was their favorite part of the unit. Many students also said they enjoyed learning about Nevada, and that they were surprised to learn how long Native Americans had been living here. However, a few students also commented that the movie clips and stories were boring, but admitted that they just don't learn very well that way. Following the unit, the all the students took a small course in career education, and a few said they wanted to be archaeologists.

**Formative Assessments.** A total of 143 students were given the Student Knowledge inventory prior to and after the curriculum. The tests were administered 12 weeks apart in order to discourage students from memorizing the questions. Due to absences, only 122 complete sets of scores were submitted to statistical testing. The first, sixth and seventh periods are AP classes, the fourth period is remedial and the fifth period is a normal history class.

Table 9 presents the results of the student knowledge pre and posttests, as well as the statistical analysis. The class period and which test is reported are shown in the first column and the number of students in each class period is listed in the second column. The third column reports the mean scores of the pretests and posttests for each period and the combined scores of all students, and the fourth column is the average change in mean for that class period. The T-score associated with the change in mean score for each class is listed in the column six.
Because all the T-scores had a significance of .001 or less, these values are not listed. The last column in Table 9 lists the standard deviations around the mean for both the pre and posttest scores for each class.

Table 9. Results of the Pre and Posttests and Statistics (by class period)

<table>
<thead>
<tr>
<th>CLASS PERIOD</th>
<th>NUMBER of STUDENTS</th>
<th>MEAN</th>
<th>CHANGE</th>
<th>T-SCORE</th>
<th>STANDARD DEVIATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>PRETEST 1</td>
<td>29</td>
<td>15.03</td>
<td></td>
<td></td>
<td>2.652</td>
</tr>
<tr>
<td>POSTTEST 1</td>
<td>29</td>
<td>17.72</td>
<td>2.69</td>
<td>-6.382</td>
<td>1.623</td>
</tr>
<tr>
<td>PRETEST 4</td>
<td>17</td>
<td>12.71</td>
<td></td>
<td></td>
<td>4.150</td>
</tr>
<tr>
<td>POSTTEST 4</td>
<td>17</td>
<td>15.94</td>
<td>3.24</td>
<td>-3.422*</td>
<td>3.230</td>
</tr>
<tr>
<td>PRETEST 5</td>
<td>24</td>
<td>14.58</td>
<td></td>
<td></td>
<td>2.733</td>
</tr>
<tr>
<td>POSTTEST 5</td>
<td>24</td>
<td>17.33</td>
<td>2.75</td>
<td>-5.412</td>
<td>2.426</td>
</tr>
<tr>
<td>PRETEST 6</td>
<td>23</td>
<td>14.57</td>
<td></td>
<td></td>
<td>3.287</td>
</tr>
<tr>
<td>POSTTEST 6</td>
<td>23</td>
<td>17.61</td>
<td>3.04</td>
<td>-4.903</td>
<td>2.950</td>
</tr>
<tr>
<td>PRETEST 7</td>
<td>29</td>
<td>15.17</td>
<td></td>
<td></td>
<td>1.891</td>
</tr>
<tr>
<td>POSTTEST 7</td>
<td>29</td>
<td>17.17</td>
<td>2.00</td>
<td>-3.971</td>
<td>2.578</td>
</tr>
<tr>
<td>COMBINED PRE</td>
<td>122</td>
<td>14.57</td>
<td></td>
<td></td>
<td>2.957</td>
</tr>
<tr>
<td>COMBINED POST</td>
<td>122</td>
<td>17.25</td>
<td>2.68</td>
<td>-10.552</td>
<td>2.559</td>
</tr>
</tbody>
</table>

* T-score significance value was .003

All but 12 of the 122 students achieved equal or higher scores on the posttests. Students in all classes except fifth period display less variability in their posttest scores than they did in the pretest scores, showing that most students raised their scores consistently. The students in fifth period display more variability in scores, but by less than one whole point. The combined variability of all the classes dropped by about one-half of a point, while the average mean of the combined scores was raised by almost three points. Interestingly, the largest growth in means was from the fourth period, the remedial class.
In addition to reporting the mean scores for all the classes, it was necessary to determine if these changes were at all significant. A paired-samples T-test was applied to each of the class period's pre and posttest scores as well as to the combined classes' scores. A significance of less than $p = .05$ means that the change in scores cannot be attributed to chance variation in the population. With the exception of fourth period, which has the highest change in average scores, the probability of obtaining the same scores in any similar set of data is .001 or less. In other words, the change in means is unlikely to be attributable to chance variation, and most likely results from the treatment, in this case, the curriculum.
CHAPTER 5

DISCUSSION

The results presented in the previous chapter offer many different insights for this research. Each phase in the research design was implemented to investigate more than one issue. Therefore, in order to understand the breadth and depth of the results, each step in the research was a part of a larger whole. Also due to the multi-faceted nature of this research, the results will be discussed correlating to the three research questions outlined in Chapter one.

*Do current resources available to teachers meet educational standards for Nevada Native American history?*

Units on Native Americans that do not meet more than a few content standards may cause teachers to "fit them in" along with the all other prescribed standards for performance. However, if the concept-based curriculum is designed to touch on several standards-based goals such as literature comprehension, oral presentation and creative writing,
the unit will be interdisciplinary (Erikson 2001) and the teacher can use the same unit to teach many topical areas.

Curriculum materials currently available to teachers do not meet all of the standards that address Nevada Native American history and culture. The highest score on the standardized test developed through this research was a 7.5, achieved by the Celebrating Nevada Indians textbook. Even though the text scored the high in terms of standards, it met only 50% of the educational goals that address Native Americans or culture. While a curriculum of this sort is certainly better than nothing, it may be frustrating to teachers in that it will require them to use additional materials to reach the goals not addressed. Perhaps because only one copy of this curriculum is available to teachers through loan at the Curriculum Materials library, it was not cited on the teacher survey as used to meet state standards. The Discovering Nevada textbook, written by Gary Bedunnah, met 7 out of the 15 goals; less than 50% of the standards identified in this study. The other curriculum units critiqued in this portion of the research met less than 25% of the standards for Native Americans and culture.

Interestingly, the results of the teacher survey show the most frequently used resources by teachers to meet goals on Native Americans were Discovering Nevada and Battle Born Nevada, which met only 4 of the standards (from question 18). Also, none of the teachers that wrote in answers to question 18 identified the other units critiqued in this
research. This may be either because they were unaware the units existed or did not find them suitable materials. As C. Mauritz Lindvall points out, "the most widely used (curriculum) package is not necessarily the best" (1998:25), and that "frequency is not an appropriate predictor of effectiveness" (1998:26). In addition, the two most frequently cited curriculum units used are also the ones that have little to no suggested activities. This lack of teacher support may be a burden on teachers. Studies by Smith and Smardz have shown that "the easier a curriculum package is to use and the better it fits educational requirements, the more likely it is to be used and reused..." (2000:29). From the data captured by the curriculum critique as well as the usability of the available curriculum identified in question 18 of the teacher survey, it is clear that the available curriculum does not meet current standards.

It is perhaps important at this point to elaborate on the performance of the Exploring Nevada’s Past and Present curriculum against the other units that were evaluated. Exploring Nevada scored a 12.5 out of the possible 15 points on the existing curriculum critique. This means the new curriculum has the ability to meet more than 83% of the standards that address Nevada Native Americans. In addition to meeting more goals than any other unit in this study, Exploring Nevada also meets 18 other state standards in other disciplines including math, language arts, and science. Though it is true that the curriculum was designed with many of the state goals in mind, several of the goals could
not be met within a reasonable unit length, as well as keeping the overall unit theme of archaeology at the forefront. For instance, standard 5.9 addresses the lifestyles comparisons between Native Americans and colonists. Because the Exploring Nevada curriculum focuses on archaeological evidence from prehistory and therefore precontact, involving the colonists would redirect the theme of the unit. However, because the lifestyles of Nevada Native Americans are covered well, these comparisons could be drawn at a late time once the student has learned of Euro-American contact.

Will a concept-based archaeology curriculum increase student knowledge retention of Nevada Native American history and culture?

This question specifically addresses the formative assessment of the classroom field testing. As was mentioned in the last chapter, the students at Harney Middle School were given the Student Knowledge Inventory (Appendix 3) in November of 2003. Out of a possible 23 points on the pretest, the mean score of the 122 admissible scores in the study was 14.57 points (see Table 9, previous chapter), roughly 63% if it were scored on a traditional bell-curve. While it is important to remember that students in Clark County did receive some Nevada history in the fourth grade, students approach this test with a wide range of prior knowledge that cannot be accounted for. For this reason, it is interesting to look at
the pretest scores of the individual classes. The three advanced classes (first, sixth and seventh periods) all had mean scores that were tightly clustered around the overall mean (Table 9). The fourth period, which is the remedial class, showed the lowest mean score of 12.71 and the fifth period (average class) was almost exactly average with a score of 14.58.

These scores become even more exciting when compared to the posttest scores, which were taken after the curriculum field test in January of 2004. Here, the mean score of the combined 122 scores was 17.25, a positive change of 2.68 points (see Table 9, previous chapter). To translate this into average percentiles, the posttests scores were a 75%, showing a positive change in the scores of 12% (equivalent to more than a whole letter grade). Examining each class independently, the advanced and average classes scored the highest on the posttest, again tightly clustered around the mean. The most interesting of the posttest scores was the fourth period remedial class whose mean was 15.94, a change of 3.24 points above the pretest, and the largest change in scores of the entire testing group! Perhaps in future research, an investigation into the effects of concept-based education on basic or remedial students would be important.

The students that participated in the field pilot did not receive more or less material than was provided by the Exploring Nevada CD-ROM. For this reason, the variation in the scores cannot be attributed to outside influences. Furthermore, to support this idea, the statistics from
the paired samples t-test were reported in Table 9. The results give the probability that the same scores in any similar set of data could be achieved, or in other words, can be attributed to random variation in student responses. All of the t-score statistics were 0, with the exception of fourth period. Even this score of .003 is still within the acceptable range of significance, and may perhaps be attributed to a larger change in posttest scores.

Given that each class, and all students combined, raised their scores between the pretest and posttest, it can be safely assumed that the Exploring Nevada curriculum did in fact teach the standards that it sought to address. Also because all students consistently raised their scores it can be assumed that a concept-based archaeology curriculum will increase student knowledge retention.

*Can a curriculum based in local archaeology be successfully integrated into Nevada schools to fulfill state standards on Native American history?*

This question raises the more difficult issue of how to define successful integration. Many of the programs that are similar to this research were outlined in Chapter Two and may be considered successful because they have gained notoriety through wide public exposure. These programs reach hundreds of students each year either directly or through their teachers and, in some cases, make a good deal of money.
through sales of materials and program fees. It was the initial hope of this research that Exploring Nevada's Past and Present would gain the same public exposure through the surveys and public presentations that were conducted. However, the response rate of the advisory council surveys and the teacher surveys showed that there clearly was not a demand for this type of program currently. If success in this case is not defined as commercial marketability, but rather the general acceptance and enthusiasm for a program, an important distinction is made. For programs like Exploring Nevada, there are many factors beyond commercial marketability that point to the successful integration of a local archaeology curriculum. For instance, each class period that piloted the program did better on the posttest than they had on the pretest, pointing for the potential for Exploring Nevada's Past and Present to increase knowledge retention of core standards. Additionally, the enthusiasm that the pilot teacher showed for the new curriculum encouraged other teachers in the school to adopt the curriculum.

Reaction of the Community

During the approval process for the Human Subjects Protocol required by the Clark County School District this research was supervised by the Director of Social Studies curriculum, Sara Gardner. Upon first meeting with Ms. Gardner, she expressed overwhelming acceptance and enthusiasm for the integration of this type of curriculum.
Through her office, several important teacher contacts were made, most notably the Social Studies Department Chairs for the Clark County Middle Schools. As was mentioned in Chapter 4, all of the Department Chairs agreed with the lack of quality materials available to teach about Nevada Native Americans and many expressed their enthusiasm for using archaeology as a platform for study. Why then, were teachers not lining up to volunteer for the field testing?

During a post-pilot interview with the teacher at Harney Middle School, the question was addressed. First of all, the pilot program was set to begin in January; however, most seventh graders are taught Nevada history in the beginning of the school year. The timing for a pilot was simply not very good. Secondly, about 80% of the teachers included in the survey reported that they had been teaching for more than 10 years. According to the pilot teacher, most educators rely on the same lesson plans year after year and the longer a teacher has been in the same position, the less likely they are to change their lesson plans. Lastly, teachers receive a daunting amount of unsolicited mail every year, including emails. Many teachers who might have been interested in the pilot may have deleted the emailed survey because it did not come from a familiar source.

The pilot teacher chose to pilot the program because she stated, "the program had very general concepts that could be carried over into other subjects, not just history" (Kelly Schmidt, personal communication,
February 11, 2004). Also, the length of the curriculum was appropriate for her classes. It is important to note that Ms. Schmidt is a fairly new teacher, this being her fourth year in the profession. She stated that she enjoyed trying new ideas and changing her lesson plans every year. She was also impressed with the CD-ROM and found it easy to use.

Ms. Schmidt observed that her students really enjoyed the unit. An observation that was reinforced by the student response letters and the impressions I had as the researcher observing the students during the lessons. Ms. Schmidt has decided that she will continue to use the Exploring Nevada curriculum in future years, and many of her team teachers at Harney have decided to use the curriculum as well. The curriculum will be duplicated and given to the teachers at Harney Middle School at cost.

To answer whether or not a local archaeology curriculum can be integrated into Nevada schools, one needs only to talk to Ms. Schmidt at Harney Middle School. There, the program was successful in teaching the students about Nevada Native American history, as exemplified through the test scores, achieved its goal of meeting several state content goals, and was accepted enthusiastically by both the teachers and the students of the school. There definitely was not a monetary success attached to this program, and it would have been less interesting if there were. There may not even be commercial success currently attached to Exploring Nevada, but because one teacher and 122 students now know
that it's available, there will soon be many more. By this definition, the Exploring Nevada's Past and Present curriculum was successfully integrated into Harney Middle School in Clark County, Nevada.

Strengths and Weaknesses of the Thesis

As with any new research design, mistakes will be made that are corrected in future research. I try and view the weaknesses in this research not as mistakes that I could have foreseen, but things I would have done differently if I had known then what I know now. For instance, the idea of an advisory council is something that I consider to be a keystone in curriculum development projects. However, by designing the curriculum prior to contacting the advisory council, the research took on a top-down format rather than the grassroots approach that it should have had. If done again, the advisory council would be formed prior to developing the curriculum to guide and assist in the objectives of the new unit. Also, because of the poor response rate to the teacher surveys, there were no professional development workshops. Ms. Schmidt and I were able to work this out together, but the importance of teaching teachers to teach the material cannot be stressed enough. There were many times during the field test where Ms. Schmidt remarked that she would not have known what to say if I were not there. This may also point to a lack of textual information for the teacher.
While the CD-ROM provides many resources for the teacher to learn on their own, it may have been more beneficial to outline the basic tenets of archaeological research and current thoughts regarding Great Basin research in a booklet or text that accompanies the CD-ROM. This way, teachers have everything they need to conduct meaningful lessons right in their hands. However, this research did not have a staff that could accommodate such an undertaking. The amount of work required to provide a companion text would have demanded more than the time and dedication of one researcher and one technical developer.

With the shortcomings aside, there are tremendous strengths to this research. First and foremost, the gap in the available curriculum to teach about Nevada Native American culture and history has been significantly filled. The Exploring Nevada CD-ROM has been sent to over 200 people in the state and copies will be available off my personal website to any teacher that requests them at any time. Next, in addition to meeting over 80% of the goals the state has for Native American history, the Exploring Nevada’s Past and Present curriculum meets more than 18 other state content goals, making it perhaps the most interdisciplinary unit available on Nevada Native Americans. Sara Gardner, the Clark County Director of Social Studies, tells me that the unit can be used from fourth grade to ninth grade, a testament to its versatility. Lastly, this thesis project successfully identified and researched a major educational deficit, designed and implemented an
experimental research design, and assessed the outcome of an archaeology-based curriculum unit. Furthermore, this research is one of a very few that have used both formative and summative results in order to determine the ability that archaeology has as a teaching tool. In addition, all the hypotheses regarding the usefulness of the new curriculum were positively supported! Perhaps the most important of all the strengths of this thesis was the 122 students that were exposed to the excitement of archaeology, introduced to their state's cultural history, and truly demonstrated the seeds for long-term conservation of both material and spiritual remains of Nevada's past and present inhabitants.
CHAPTER 6

CONCLUSIONS

Contributions of the Research

"Teaching archaeology is an intentionally political act." – Smith and Smardz (2000:33).

Entering into this research, I knew the biggest weakness I was facing was the lack of data on previous Nevada Native American history lessons. There was no evidence to either support or refute the quality of available curriculum. Assessment and accountability are now a large part of all school programs, and the Clark County School system posts this type of information on its website in terms of standardized test scores. Therefore, the greatest strength of this research and the Exploring Nevada curriculum is (without a doubt) the accumulation of assessment data on student performance. This empirical data can be used as a baseline for further studies in archaeology education. This information is crucial to the field of public archaeology because it provides groundwork for formative accountability of archaeology as a viable educational tool, rather than as extracurricular entertainment.
However, while all of the data that has been contributed as a result of this research is indeed the most viable scientifically, the insights into the politics of archaeology education programs are perhaps the most interesting. For example, the very concept of teaching about Native Americans to the general public requires informed guidance and approval by the Native American community. In terms of this research, attempts were made to communicate with the Native American community, but the response was poor. Using a curriculum that had not been carefully evaluated by the cultural groups that it taught about was a concern for me, and it should be for any person attempting to undertake such a project. The first step in developing such a curriculum should always be to include as much Native American input as possible at every step in the process. The repercussions of excluding this step could be the demise of the program, if perchance any of the information in the curriculum is historically inaccurate, or, by mistake or oversight, ethnocentric. Cultural consultation should be a requirement of any archaeology education program.

Working directly with the school district on this research was both a requirement of the Human Subjects panel and my own ethics. The quickest route to acceptance of a supplemental education program is the backing of the school district or adoption by the Board of Education. I was fortunate to have an ally in the Social Studies Curriculum Department without whom there would have no entrée into the schools.
Identifying the structure of the school system that a program is going to be involved with is another crucial point in a successful archaeology education program.

Locating a person to support the curriculum initiative within the overall political structure of a school system is only a small piece of the puzzle. Working with schools means making your program work for them; this research used standardization as a platform. Because of the No Child Left Behind Act reformed and rewritten in 2003 by President George Bush, schools are required to meet certain elemental goals which are reported in terms of standardized test scores (NCLB 2003). Whether the project developer agrees with this educational structure is irrelevant; if you want your program to succeed, you must be willing to adhere to the policies and procedure of the educational system. Standards are an issue that every teacher in every school must deal with, and fitting an archaeology education program to suit such mandates is the best way to show that you have at least considered the teacher's time as a factor. This is not to say that archaeologists should be concerned with writing or interpreting curriculum goals; we should just regularly include them for the benefit of the teacher. These standards are posted on nearly every state board of education's website or can be obtained by calling the local school district.

The final practical contribution of this research would include the accountability to those teachers and students that directly worked with
the Exploring Nevada curriculum. As part of the agreement to work within the Clark County Schools, any researcher is required to submit a final report to be housed in the district Office of Testing and Accountability. To take this one step further, I believe it is my professional obligation to Harney Middle School and the Social Studies Curriculum Department to furnish the results of this study. Not only do they have a right to know the outcomes of this research, but I hope that I will not be the only archaeologist who wishes to work with the Clark County Schools. Having this information publicly available for the next researcher, as well as for the school to use and publish at its will, making the study available to informants which are important ethical duties as anthropologists.

Further Research: Where to Go...

It is not my intention to allow this curriculum to be forgotten, forever lost amongst the other theses and gray literature in the library. Creating Exploring Nevada's Past and Present is more than a means to achieve a degree, it is a tool that, as shown by this research, can be used to help students appreciate the cultural history of Nevada. Because of my direct involvement with the Clark County Schools, there is already built-in marketing for this curriculum. However, to ensure the continued success of Exploring Nevada, a website is under construction.
that will hopefully be linked to the Nevada Board of Education, the Clark County School District and the UNLV Department of Anthropology, in order to disseminate the unit and provide ongoing support for teachers at a minimal cost. Also, because the Anthropology Department does conduct outreach to schools throughout Southern Nevada, I would hope that this curriculum could be used as the standard for our outreach in order to be consistent with the different concepts taught in archaeology. Because this research has shown the lessons reach several curriculum goals, the department would know its outreach was making a real educational connection with its students, and not just a brief educationally specious talk supplemented by a few artifacts for students to hold.

Because this research makes several strides in accountability for archaeology education programs, I intend to publish the results in academic journals and hopefully as a text for teachers. In addition to the value of this research to furthering the study of archaeology and anthropology in the schools, it is also important to reach out nationally to educators. As was mentioned above, many teachers are already using archaeology in their classrooms. It is crucial that they know that there are programs out there to help them align with educational standards, as well as teach archaeology from a practical point of view. This can be done through publishing in teacher's journals and websites, as well as speaking at conferences and teacher in-services.
Currently, I am working with the American Anthropology Association's Anthropology in Education Committee (AEC) to compile a database of programs that use archaeology and anthropology in schools. A system such as this will help future researchers not feel as though they need to reinvent the wheel and focus more on the political and educational implications of their programs. Personally, I have become obsessed with identifying what exactly it takes to make a successful supplemental education program. My professional goal is to take what I have learned through developing and coordinating this research and apply this knowledge to the further study of programs of cultural literacy into precollege classrooms.

A Final Thought on Public Archaeology...

Throughout my graduate program, I have been asked at meeting and conferences, "what is your area of specialty?" While my friends and colleagues stated "bioarchaeology," "ceramic analysis," or "DISH," it was always a struggle to explain what it was that I did. I started out identifying with Cultural Resource Management, until people would ask "you can get a degree in that?" Then I figured I actually work more in the realm of public anthropology. But again, everyone wanted to know where I did my fieldwork. "Haven't enough people done fieldwork here?" I would reply, "Isn't it about time somebody did something with all that
stuff for someone other than us archaeologists?" Again, I would be definitively told that what I did was neither archaeology, nor anthropology but some obscure form of education research. When it was clear that the people in the school of education wanted little to do with me, I found myself feeling quite marginalized and much unappreciated.

And then I read the Principles of Archaeology Ethics written by the Society for American Archaeology. The first of these principles is "to act as stewards. Stewards are both caretakers of and advocates for the archaeological record for the benefit of all people; as they investigate and interpret the record, they should use the specialized knowledge they gain to promote public understanding and support for its long-term preservation" (SAA 2002) Then, in 2000, Francis P. McManamon, chief archaeologist for the National Park Service, wrote the "Justification for Public Archaeology Education" in Smardz and Smith's "The Archaeology and Education Handbook." In his statement, McManamon says public archaeology education must be a part of professional archaeology in order to:

1. Provide a return for public support (in order to maintain funding, etc).
2. Correct public misunderstandings about the past, as uninformed interpretations can be used as political power (ex. Nazi propaganda posters).

3. Increase support for proper investigations.

4. Touch individuals, as they are often the ones who decide if a site is going to be protected

[McManamon 2000:20].

I finally realized that my ideas and research has a place in archaeology. While I may not be the one conducting excavations, hypothesizing about use-wear patterns on lithics, or getting published in American Antiquity, my work will help to fulfill our collective professional obligation to educate the public.

Education cannot be separated from archaeology anymore than culture can. The common fears that teaching the public about archaeology is dangerous because it promotes amateur investigations and looting is skeptical and unfounded. Ignorance of proper conservation efforts is the only thing to fear in terms of site and artifact preservation. Archaeology education also helps to dispel any glamorous ideas people may have about archaeology being the life-long quest for the Holy Grail. Children are a conduit to their families and friends, and teaching them about proper preservation in turn teaches many others. Education is our best shot at dissuading looters and Indiana Jones types.
In no way do I condemn professional archaeologists that feel they cannot teach to young children. Kids are scary - more so than adults in some ways. And some people really should not be teaching if they do not love it, and care about the students’ learning. But if archaeology education is to be left to those who love it and want to promote it, then those professionals should not suffer the marginalization of their colleagues who disagree or are too scared or busy to deal with it. Imagine where the entire field of anthropology would be if someone told Margaret Mead that studying adolescence really was not anthropology, or berated Laura Nader for studying the cultural implications of law.

In the end, I do not feel I have created a new discipline with this research. As a matter of fact, there are many other professionals that are researching the same problems that I encountered in Nevada. They work in schools, museums, universities and in the field. They call themselves Educational Anthropologists and professional Archaeology Educators. I am proud to say that I am both.
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Society for American Archaeology


United States, Office of the President
Wheat, Patricia

Williams, Martha
APPENDIX 1

ADVISORY COUNCIL MEMBERS
AND QUESTIONNAIRE
1) Greta Peay, Literacy Specialist, CCSD
2) Sara Gardner, Head of K-12 Social Studies, CCSD
3) Lillie Englund, Principal, Imprints Day School
4) Tara Speaker, Teacher, Doris French Elementary
5) Ron James, State Historic Preservation Officer
6) Martha Knack, Professor of Anthropology, UNLV
7) Battle Mountain Band Council, Chairperson
8) Duckwater Tribal Council, Chairperson
9) Elko Band Council, Chairperson
10) Ely Colony Council, Chairperson
11) Shoshone-Paiute Council, Chairperson
12) South Fork Band Council, Chairperson
13) TeMoak Western Shoshone Council, Chairperson
14) Wells Indian Colony Band, Chairperson
15) Fallon Business Council, Chairperson
16) Fort McDermitt Tribal Council, Chairperson
17) Lovelock Tribal Council, Chairperson
18) Pyramid Lake Paiute Tribal Council, Chairperson
19) Reno/Sparks Colony Tribal Council, Chairperson
20) Walker River Paiute Council, Chairperson
21) Washoe Tribe of Nevada and California, Chairperson
22) Winnemucca Colony Council, Chairperson
23) Yerington Paiute Tribal Council, Chairperson
24) Yomba Tribal Council, Chairperson
25) Las Vegas Tribal Council, Chairperson
26) Moapa Tribal Council, Irene Damoda, Chairperson
27) Clark County Heritage Museum, Christie Leavitt, Curator of Education
28) Las Vegas Natural History Museum, Curator of Education
29) Nevada State Museum and Historical Society, Barbara Slivac, Curator of Education
30) Lost City Museum of Archaeology, Eva Jensen, Curator of Education
31) Nevada State Museum, Eugene Hattori, Curator of Anthropology
32) Nevada Historical Society, Curator of Education
33) Northeastern Nevada Museum, Education Director
34) Humboldt County Museum, Education Director
35) Las Vegas Indian Center, Richard Arnold, Director
36) Clark County Project MCE, Sharon Blackmon, CCSD
37) Norma Naranjo, Indian Education Office, CCSD
38) Mrs. Ingram, Teacher, Paradise Elementary
39) Mrs. Brooks, Principal, Watson Elementary
40) Red Rock Canyon Interpretive Association
41) Society for American Archaeology, Public Education Committee
Exploring Nevada's Past and Present
PreTest Survey

1. What type of PC were you using to view the CD-ROM?

[ ] Megahurtz (processor speed)
[ ] Ram (memory)
[ ] CD-ROM speed

If using Windows, what version _______________

2. Did the program run automatically or did you have to prompt it through the CD-ROM drive?

________________________________________

3. Once the program began playing, were you satisfied with the speed that it played through your PC?

________________________________________

4. Was the main menu easy to navigate? Could you find all of the lessons?

________________________________________

5. Did you have any trouble moving between the main menu and the lesson plan menus?

________________________________________

6. Did you find the lesson menus easy to navigate? Were you able to find all the available materials?

________________________________________

7. Did you have any problems printing any of the materials and methods or slides from the lesson menus?

________________________________________
8. Did you find the glossary and help sections useful?


9. Overall, were you pleased with the aesthetics of the CD-ROM (buttons, colors, etc.)?


10. Did the illustrated guide give you enough information about the program without explaining in too much detail?


Please provide lesson-specific feedback below. Please include any concerns, comments or questions that you may have.

Lesson 1: Classroom Culture


Lesson 2: Nevada's Desert Culture


Lesson 3: Classifying Culture


Lesson 4: Stories that Speak


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Lesson 5: Color Culture

Lesson 6: Personal Pictograms

Lesson 7: Capturing the Sun

Thank you for taking the time to complete this survey. Please return it in the envelope provided. If you have additional concerns or comments, please contact Victoria Fisher at (702) 219-2056 or vfisher@interact.ccsd.net.
EDUCATOR AND CLASSROOM INFORMATION

1. Please provide your school name, address, and the grade level and subjects you teach:

2. Are you currently
   A full-time teacher
   Part-time
   Non-contract full-time
   Non-contract part-time

3. How long have you been an educator?
   0-1 years
   2-5 years
   5-10 years
   10 or more years

PROFESSIONAL DEVELOPMENT

4. In the last year, how many professional development workshops have you attended?
   0
   1-2
   3-4
   4 or more

5. Why did you attend the workshops?
   Personal interest
   Wanted to build skills in the area(s)
   Urged by principal
   Needed the credits

6. Did any of your workshops focus on multicultural education?
   Yes
   No

7. Have you ever had a professional development workshop in anthropology or archaeology?
   Yes
   No
TEACHER ORIENTATION & CURRICULUM USE

8. Do you typically (check all that apply)
   Use your own lesson plans
   Borrow lesson plans from other teachers
   Download lesson plans from the internet
   Brainstorm lesson plans with a group
   Use lesson plans from books

9. Would you consider your lessons or classroom activities to be (check all that apply)
   Fact-based
   Hands-on
   Concept-based
   Independent learning
   Cooperative or group learning

10. Multicultural education is best defined as?
    Teaching about other cultures to help children understand and appreciate others
    Making sure that each child is educated in a way that best fits their ethnic background
    Using teaching materials that represent more than the dominant culture
    All of the above

11. How do you use multiculturalism in your classroom? (check all that apply)
    During designated months such as African American Heritage month
    Discussing famous people from different cultures when applicable
    Reading books by authors from different cultures
    During social studies I discuss different cultures or ethnic groups
    I teach a unit on anthropology/culture
    I show films about different cultures or events in history
    Other (please explain)

12. The best definition of culture is?
    A group of people that share similar values, customs and worldviews
    Culture is represented by ancestry, clothing, food, religious practices and geography
    The skills and concepts that make you who you are and teach you how to survive in the world
    A set of beliefs that bind a group of people together
    Other

13. How often do you use the concept “culture” as an instructional tool?
    Not at all
Once a month
About once a week
Several times a week
On a daily basis

14. In what subjects do you teach multiculturalism?
   Literature/ Writing
   Social Studies
   Science
   Math
   Other

NEVADA NATIVE AMERICANS

15. Do you teach about Nevada’s Native American cultures in your classroom?
   Yes
   No

16. What kinds of lessons do you use to teach about Nevada Native Americans?
   I use my own lesson plan
   I use another teacher’s lesson
   I find lessons on the Internet
   I use the textbook activities
   I invite a guest speaker
   I take students on field trips
   Other (please specify)

17. Which of the following, if any, Nevada cultures do you teach about?
   Southern Paiute
   Northern Paiute
   Western Shoshoni
   Washoe
   Other

18. Which of the following resources have you used?
   Discovering Nevada by Gary Bedunnah
   “Celebrating Nevada Indians” from the UNLV Curriculum Library
   Teacher activities from the Lost City Museum
   “Nevada Indians: A Kids Look at our State”
   None of the above

19. Have you ever taught about anthropology and/or archaeology in your class?
   Yes
   No
20. How have you used anthropology and/or archaeology in your class?
   I invited a guest speaker
   I taught about an archaeological site such as Egypt, The Lost City or Stonehenge
   I took my students on a field trip to an archaeological site or museum
   We recreated a mock archaeological dig
   Other

21. How useful would a unit on anthropology and/or archaeology be, in general, to Nevada teachers?
   Extremely useful
   Somewhat useful
   Not very useful
   Not useful at all

22. How useful would a unit on Nevada Native Americans be, in general, to Nevada teachers?
   Extremely useful
   Somewhat useful
   Not very useful
   Not useful at all

23. Would you use a unit designed to teach about Nevada Native Americans in your classroom?
   Yes
   No

24. Would you be interested in piloting materials designed to teach about Nevada’s Native Americans using archaeology?
   Yes
   No

25. May I contact you regarding your interest to pilot materials?
   Yes
   No
APPENDIX III

STUDENT KNOWLEDGE INVENTORY
Exploring Nevada’s Past & Present
Student Knowledge Inventory

Instructions: Read the statement and circle true or false. You will not be graded on this assignment, but it is important that you try and answer every question.

1. The term “Native American” means people that lived in the United States before White settlers came to live here.
   True    False

2. Native Americans have lived in Nevada for over 10,000 years.
   True    False

3. There are still Native Americans living in Nevada today.
   True    False

4. The first inhabitants known in the state of Nevada were a group of people called the Desert Archaic.
   True    False

5. Some Nevada Native Americans lived in pit houses and farmed, while others were nomadic hunter-gatherers.
   True    False

6. The groups that are Nevada Indians are the Southern Paiute, the Cherokee, the Washo, the Northern Paiute and the Western Shoshoni.
   True    False

7. The Native American group that lived most closely to Carson City, NV is the Washo.
   True    False

8. The Western Shoshoni people lived at the Lost City about 800 years ago.
   True    False

9. Native Americans continue to live the same way they did 200 years ago.
   True    False
10. Baskets are traditional crafts that only the Southern Paiute made.
   True False

11. Archaeology is the study of past cultures by studying the material they left behind.
   True False

12. Culture is the beliefs, ideas, concepts and tools that help a group of people understand and adapt to their world.
   True False

13. All Indians that live in Nevada are part of the same ethnic group.
   True False

14. An artifact is an object that was created by humans and that can give information about the way past peoples lived.
   True False

15. Oral history is a way of handing down information through stories, myths or legends to people in order to teach about their culture.
   True False

16. Prehistory refers to the time before there are written documents.
   True False

17. Symbols are an instrument that you play in music class.
   True False

18. Early Nevada Native Americans got all of their resources from the natural environment.
   True False

19. Talking and written language are the only ways that people communicate.
   True False
20. Preservation means taking special care of items or places so that they can be used and enjoyed in the future.

   True   False

21. Petroglyphs and pictograms probably don’t mean anything; they are just decorations.

   True   False

22. Books, maps, artifacts and photographs are all sources for historical information.

   True   False

23. I think I know what cultural group my family belongs to.

   True   False
VITA

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