

ABSTRACT

FIRE, NANCY H. A Contextual Perspective of Traditional Native American Distance Online Learning in a Tribal College. (Under the direction of Julia Storberg-Walker.)

When learning in natural settings, Native Americans for centuries have used their Native Ways of Knowing to access and process information. These Indigenous learners bring their social, cultural, and historical contexts with them to new learning situations. The process of learning through technology as told from the perspectives of Native American learners has been largely unknown (Tyro, 2004). Previous multi-cultural studies of online learning have found that online learning is not culturally neutral and often represents the worldview of the dominant culture and the instructional designer (Chen, Mashhadi, Ang, & Harkrider, 1999; Smith & Ayers, 2006).

This single-site descriptive case study conducted at one of the 34 U.S. Tribal colleges provides further understanding of distance online learning experiences of traditional Native American adult online learners as well as the experiences of the college in preparing and facilitating online learning for remote, rural Native learners. The study, conducted according to Indigenous research guidelines, found that Native American students learn effectively within online learning environments when they work with an instructor who models NWOK and courses that are designed to enable their Native Ways of Knowing. The study also found that success depends on adequate access to technology, computer literacy, an effective and user-friendly learning management system, support and mentoring.

The study raises new questions for additional research. This study indicated that the Native students experienced an emergence of empowerment and ability to express their own "voice" through participation in online coursework. Further, learning outside the walls of the classroom gave the learners the opportunity to integrate their learning with their heritage and day-to-day lives. Further research is required to fully understand these learner experiences.

This study provides evidence that distance online learning can increase access to education to a greater number of Native learners, therefore providing new educational paths towards economic recovery for Native communities and Tribes. There are implications for workforce development through online education for Native Americans living on remote reservations.

A Contextual Perspective of Traditional Native American Distance Online Learning
in a Tribal College

by
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DEDICATION

I dedicate this work to Native American people whom I deeply respect. It is my hope that this work can be another tool to assist in reaching those needing to access the kind of culturally enriched, nurturing education that I experienced from the Tribal college.

I also dedicate this work to my Native American family who've taught me so much through their lives. My husband, Michael Fire, and my daughter, Abby Fire, are my "first" teachers. This "family" includes my other Native American teachers: Christine Fire and Herbert Fire. And I specially dedicate this to the life work of "Lori" Lambert who taught me how to think "Native".

To my Chair and friend, Dr. Julia Storberg-Walker, I also dedicate this work. She enabled me to become a "scholar" as well as an activist for sound adult education and workforce development. She will always be my teacher. And to Dr. Colleen A. Wiessner, I am forever thankful for her teaching about methodology as well as her passion for adult education and her encouragement to "go to where they are doing it the best" that led me to this Tribal college experience. And to Dr. Diane Chapman and Dr. Kenneth Hill Brinson Jr., my thanks for helping guide me through this process.

And to my sister, Anne Boesch, whose life is an inspiration to me and her daughters Allison and Kelsey are the loves of my life, I dedicate this work. And my friend, Claudia Loveland, whose support, wisdom, and true friendship has seen me through this process.

BIOGRAPHY

I am passionate about the possibilities of online learning. I believe that online learning can take learners to new places and new visions for their studies that we cannot accomplish within the walls of a classroom. I do believe that much of online learning today is not living up to this vision. I have been an online learner and an instructional designer and a faculty member working with online learning. I have worked with subject matter experts and artifacts online. My vision for online learning is to “open windows” with learners to content that is limited only by their own imaginations. I am constructivist in both my learning and teaching and learner-centered in my philosophy towards teaching.

I am a lifelong learner and have gotten to this point in my doctoral work in Adult and Higher Education Training and Development late in life. After working with adults for over 25 years and being a learner right along with them, I believe that I can begin to understand what these learners will tell me. Although I have much life and educational experience, I continue to question all of what I see and hear, always allowing my curiosity and intuition and humility to guide me along with my cognitive queries.

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CHAPTER 1: INTRODUCTION

Background and Statement of the Problem

Traditional Native American learners login to a distance learning course from their homes or local libraries miles away from the Tribal college where they are enrolled as full time students. They are majoring in either associate or baccalaureate degree programs to become teachers, nurses, and social workers. These learners are working in their home communities on their reservation at home, work, or in other settings such as local libraries. No longer having to battle roads, weather, or childcare problems, these learners are accessing higher education provided by their Tribal college that is located miles away.

But perhaps even more importantly, these learners are free to learn in a way that is not suppressed by the dominant culture. Their education occurs within their own cultural context with meaningful cultural tools. They are able to learn, in a bicultural way, the Western Ways of Knowing without suppressing their own Native Ways of Knowing. But this didn't occur easily or willingly. The history informing this freedom is important to this study.

In framing this study, questions arose about their online learning experiences such as: What were their inner thoughts and actions while learning? Questions at the heart of this study are: How are they able to use their Native Ways of Knowing in what seems like such a Westernized technological system? How are they able to learn new concepts and apply them

to their world? What goes on around them while they are learning? What does it mean to be Indian and learning in this way?

Distance online learning is enabling greater access to higher education for traditional Native Americans and greater skill development for the workplace. By increasing access to education and training, these distance-learning opportunities provide another foundation for economic development in typically depressed Tribal locations. While access to technology and wireless Internet is increasing across Indian Country, determining effective pedagogy for these non-mainstream learners in this relatively Western online environment is a relatively new area for study.

This study examines the cultural and historical influences inherent within the online learning experiences of Native American adult learners in order to enable the inclusion of Indigenous pedagogy within the online environment. The results of this study will advise instructional design, faculty-learner interaction, and learner support services for "culturally connected" distance online learning.

Most importantly, this study can contribute towards improving the economic well being of Tribal areas through more effective online workforce development and learning opportunities. There have been other reports of providing distance online learning to Native Americans living vast distances from a college or university. However, they have not

addressed the issue of using Native American pedagogy within the online learning coursework.

Economic and Educational Challenges to Native American Online Learners

The economic and educational issues facing Native American people in the United States are difficult. There are now over 4.3 million Native Americans in this country. More than one-third of Native Americans live on reservation lands or other American Indian areas. Those who live on reservations are likely to face poverty and geographic isolation. Developing more effective online courses and programs may alleviate some of these endemic problems.

Native American economic issues. Today, in 2009, twenty-six percent of Native Americans live below the poverty level (U.S. Census, 2000). They are not only isolated geographically, they have few opportunities for upward mobility and have low participation in the workforce. “This poverty is often accompanied by a range of social problems – injuries and violence, depression, substance abuse, inadequate health care and prenatal health care, unhealthy or insufficient diets, and high rates of diabetes – that can greatly affect the ability and desire to pursue education” (IHEP, 2007)

Providing emotional and financial support and training for jobs on and off the reservation, many Tribal colleges are addressing the high unemployment of Native Americans. Graduation rates are similar to those in mainstream community colleges

(McClellan, 2005). These colleges, in many ways, are preparing graduates for jobs that don't yet exist on the reservation even though there is a need. In some cases, these graduates are able to take over positions that formerly belonged to non-Tribal members. They are increasing the viability of reservation life (Fogarty, 2007).

With unemployment rates ranging from 50-75%, many Indian reservations have provided their Tribal colleges with wireless access to address the educational needs of their members. According to Monette (2004):

If we can close the technology, or 'digital,' gap in our communities, we have a powerful tool for closing all of the other 'gaps' we face: the achievement gap in our schools; the economic development gap on our reservations; the access to commerce gap among would-be Indian entrepreneurs; the banking/finance gap that exists throughout Indian Country; and the gap Indian people face in health status and health care (p. 26).

The Internet to the Hogan Project in New Mexico is one example of closing the technology gap for Native American people. They are in the first phase of building 31 chapter houses to build wireless connections from Albuquerque to Navajo Technical College in Crownpoint, NM. These chapter houses will be hubs for social and political activity. The technology will radiate from the houses to schools, clinics, hospitals, and other public facilities. "With this project, enterprises in remote education communities could compete in niche and national

markets. This would allow Navajo people to become leaders in diverse fields ranging from arts and crafts to technological and scientific innovation” (Grey, 2007, p. 39).

Native American educational issues: In addition to facing poverty at home on the reservation, attainment of higher education degrees is low for Native Americans. According to 2004 figures representing all Native Americans over 25 years of age, 28 percent were not high school graduates and only 42 % sought higher education, with only a 13 % graduation rate. For those living on reservations or other American Indian areas, a third had not graduated from high school and only 35 percent had attended higher education. The majority of Native American students in higher education live off campus and many have dependent children (IHEP, 2007).

Some presidents say one-third or more of their students need academic remediation; Lac Courte Oreille Ojibwa College President Jasjit Minhas said many arrive reading at the third grade level. All Tribal colleges enroll students who bring with them evidence of larger social ills: alcoholism, drug abuse, and domestic violence. This is a heavy load for a small college to carry (Boyer, 1997, p. 38).

This study can contribute towards knowledge needed to address the poverty and educational attainment issues of Native Americans. In many instances traditional Native American adult learners have had difficult experiences with early school experiences and have lacked access to learning from a perspective that is similar to their own. The Tribal

colleges have experienced much success in graduating students who can find jobs and therefore improve lives for others on the reservations (Champagne, 2006).

By incorporating the successes of the Tribal colleges that provide coursework from a Native perspective using Native pedagogy, and translating these successes to distance online learning, there is the potential of providing true access to education to an even greater number of Native learners and providing educational paths towards economic recovery. Many of these learners currently assume non-professional job roles on the reservations because they do not have access to bachelor degree programs for preparing professional job roles. Others do not have access to basic higher education that is meaningful from a Native perspective. Many of these learners live too far from the Tribal colleges and have families, making it difficult to move and attend classes as resident students.

Context of Study

The college that is the site for this study sits in a valley surrounded by high mountains of a Western State, nestled in between expansive forests, lakes, and small communities. Horses and other livestock roam the ranges along with bison, bears and other wildlife.

The college offers approximately 120 courses online per annum. These courses provide a cost effective way to provide education for those who are isolated geographically (O'Donnell, Mitchell, Anderson, Lambert, Burland, and Barber, 2003). The college

received its charter as a Tribally controlled college in 1977. It is now a four-year land grant institution accredited by the Northwest Commission on Colleges and Universities. Over 1000 students attend the college that employs approximately 200 people. Since 1977, the college has had over 2000 graduates with baccalaureate degrees, associate degrees and certificates of completion. Since 2000, they have placed 86 per cent of their graduates in the workforce with combined wages of approximately \$2 million per year that contributes to Tribal, local and state economies (IHEP, 2007).

Purpose of the study

The purpose of this study is to increase understanding of online learning and the learning context of traditional Native American adult online learners. Learning more the essence of effective learning experiences for these learners as well as the role of context upon the learning process and outcomes of traditional Native American learners participating in an online educational program will tell us more about how to develop, produce, and facilitate learning experiences for traditional Native American learners in the online environment. According to Tippeconnic (1999), an Indigenous scholar, “Research must determine not only how well students are doing academically but also explore how Native languages, cultures, and ways of knowing influence the teaching-learning process in local and tribally controlled education settings” (p. 46). With more effective online learning experiences available to Native Americans living in remote locations, there is the potential to recruit, retain and

graduate Native American learners who choose to stay on their reservations and learn in a way compatible with their culture. Positive impacts upon unemployment and poverty are possible.

With these more effective online learning experiences, there is the potential to recruit, retain and graduate Native American learners who choose to stay on their reservations and learn in a way compatible with their culture. Positive impacts upon unemployment and poverty are possible.

Research questions

According to Stake (1995), we study a particular case or cases because we have “a puzzlement, a need for general understanding, and feel that we may get insight into the question” (p. 3). Stake cautions that initial research questions in a case study may evolve into other questions as issues emerge during the study.

The questions guiding this study are as follows:

1. What are the learning experiences of traditional Native American adult learners engaged in distance online education provided by a Tribal college?
2. What are the contextual influences upon these distance online learning experiences?

Significance of the study

The process of learning through technology by Native American learners is largely unknown. To date, there are few studies that give voice to the successes and concerns of Native Americans involved in distance online coursework (Tyro, 2004). Further, there are few studies that examine online learning for non-mainstream populations (McLoughlin & Oliver, 2000). Native American and non-mainstream populations are being offered more and more distance educational opportunities through a Western-developed technology. However, studies make it clear that online learning is not culturally neutral and often represents the worldview of the dominant culture (Chen, Mashhadi, Ang, & Harkrider, 1999; Smith & Ayers, 2006).

Distance learning for Native American learners occurs within a larger social, economic, and political context, and it is consequently necessary to examine the learning not only through the experiences of the learners but also through the perspectives of those who guide the standards and administer the learning, those who develop and facilitate the learning, those who connect the distance learning with the learners, and finally, those who are involved in learning. As tribes design their own online learning for their people, they encounter technology and knowledge systems developed by the dominant culture, contradictions posed by the dominant culture, and ways of knowing dialectically opposed to Native Ways of Knowing.

This is an important problem to study because Native American Tribal leaders and educators working on behalf of Native people are preparing distance online learning for Native adults with hope that this distance online learning will address many of the educational and employment problems of their people. Knowing about the online learning experiences of Native Americans will help to inform administration, instructional design, and facilitation towards successful learning outcomes.

The work of Cajete (1999) has implications for culturally responsive online learning, the learning environment for this study. This online environment requires that learners assimilate content, participate in learning strategies, and communicate with other learners. Cajete's work, although referring to a classroom context, considers the core values of Native American learners and recommends that the learning environment offer specific things that can be meaningfully translated into the online environment. The learning environment should offer:

1. Orientation to the previous knowledge and experiences of the learner
2. Respect for the individual learner including silence
3. Decreased pressure to participate before ready
4. A sense of belonging and cooperation
5. Decreased emphasis on competition
6. Effective use of discussion; not talking just to talk

7. Use of storytelling, case studies, and experiential learning
8. Emphasis on observational experiences
9. Flexibility of scheduling
10. An orientation to the here and now rather than the future
11. Relevance to the learner in the current situation
12. Use of concrete examples and activities with movement to abstraction
13. Holistic perspective rather than linear content
14. Incorporation of spirituality
15. Creation of a safe environment for expression
16. Use of encouragement and guidance in relationship with teacher (Cajete, 1999a)

"Native American learners tend to respond best to learning formats that are group oriented and humanized through the extensive use of narration, humor, drama, and affective modeling in the presentation of content" (Cajete, 1999, p. 144). Further, Cajete (1999) states, "Native American learners tend to respond best to learning formats that are group oriented and humanized through the extensive use of narration, humor, drama, and affective modeling in the presentation of content" (p. 144). Cajete (1994) advises, "Remember that learning is a natural instinct and that success in learning something new is tied to human feelings of self-worth. Create a learning environment that flows with this natural current of humanness.

Enabling successful learning is an essential step in cultivating motivation and enhancing self-confidence in learning" (p. 223) He further relates that "Indigenous teaching focuses as much on learning with the heart as on learning with the mind" (p. 223).

But how can this be accomplished in online learning? Here we turn to previous research for answers to guide this study. The work of Tyro (2004) involved the online learners at the same Tribal college as this study. His findings indicated that the learners he interviewed attributed success to the flexible nature of online learning, working with a caring mentor outside the online learning environment, positive feedback from faculty, and incorporation of cultural content. Negative experiences related to overwork, poorly functioning group work, lack of teacher feedback and encouragement, and poor access to technology.

Berkshire and Smith (2000) describe their distance-learning program for Alaskan Native American adult learners. They found that learners had difficulty moving from a classroom-based environment to their remote home environment for learning. They included a socialization process face to face prior to the course that enabled learners to connect with faculty, support services and other learners. The learners lived in small communities throughout Alaska and represented different Alaskan cultures. Most had had poor prior experiences with universities. They regularly dealt with weather-related issues, hectic work schedules, and family stress. "Expectations at work frequently remain the same, duties at

home demand time and energy, and the role of student, particularly that of distant student at best is unknown to others" (p. 34). The delivery of course content was highly interactive including problem solving, asynchronous discussion and debate. Small group tasks were frequent. "The asynchronous format allows time for reflection and consideration of the topic, for critical thinking about issues, and for discussion of the subject matter with local mentors, references, and elders in the home communities" (p. 35). Once a week, learners joined one another and the instructors for synchronous discussion. After the course, the instructors learned that the learners did not face major problems in the area of technology because they did not incorporate highly technical strategies. Rather, helping the learners with the transition from classroom to the home distance-learning environment was the most important need identified by the learners. The lifelong networks gained by learners from remote areas of Alaska were a positive result of this distance-learning endeavor.

This research is also significant to the body of knowledge about global Indigenous online learning. Although each Indigenous culture is unique, most have Ways of Knowing that are different from the Western Ways of Knowing encountered in much online distance learning today. Few studies have targeted Indigenous cultures for online learning research. McLoughlin and Oliver (2000) found in their study of Australian Indigenous people using distance learning that "the needs of Indigenous Australian learners are unique, and that

mainstream cultural material designed for Anglo Australians are not pedagogically appropriate” (p. 63).

Conceptual Frameworks

Native Ways of Knowing (NWOK) and cultural historical activity theory (CHAT) provide the two lenses needed to understand the learning journey (through NWOK) and to understand the role of political, social, and technological context surrounding the learning processes and outcomes of traditional Native American learners (through CHAT). These lenses help us to look at Native American distance online learning embedded in context. Further, these perspectives provide a holistic understanding of the various forces that exert an influence upon distance learning for traditional Native American adult learners. These two conceptual frameworks, and literature review in Chapter Two, informs this study in terms of purpose, research questions, significance, data collection and analysis.

Native Ways of Knowing (NWOK)

Native Ways of Knowing comprise an epistemological stance socially derived from and culturally bound to Tribal contexts. It is possible that there are over 500 Native Ways of Knowing, each belonging to a specific Indigenous Tribal community in North America (Cajete, 2005; Warner, 2006). “Each culture’s knowledge and understanding of the world varies with their Tribal understanding bound by traditions and experiences” (Warner, 2006, p.149).

Native Ways of Knowing is “a process for seeking life that American Indian people represent and reflect through their special connections to nature, family, community, and spiritual ecology”(Cajete, 2005, p. 69). Native Ways of Knowing provides an understanding that addresses the ways that Native Americans consider the origins and nature of their way of life and how they come to know about this way of life.

"Traditional knowledge is based on the premise that humans should not view themselves as responsible for nature, i.e., we are not stewards of the natural world, but instead that we are a part of that world, no greater than any other part" (Pierotti & Wildcat, 2000) For example, Native Ways of Knowing views nature as interconnected; humans are connected to nature, not independent from nature as in the Western view. One lives with nature in the native way; one lives above nature or separate from nature in the Western way. Western conservationists believe that they are keepers or controllers of nature and therefore should conserve nature for human benefit.

Cultural Historical Activity Theory (CHAT)

In this study, CHAT theory permits analysis of the context for Native American distance online learning; i.e., the influences upon, not only the learners, but also the administrators, faculty, information technology professionals and others. CHAT theory, now in its third generation, outlines the actions, mediations, interactions and contradictions inherent in a learning process embedded in cultural, historical, and social contexts. This

framework allows us to understand the broader influences on Native online learner experiences. A key thread within CHAT is the realization that learning follows activity rather than precedes activity. Learning, therefore, emerges from the activity of the all of those who guide, administer, develop, facilitate and learn. Each act of learning expands the knowledge of these people and therefore impacts future activities of learning. More details of the CHAT framework will be provided in chapters 2 and 3 of this dissertation.

CHAT allows us to study the entire context affecting the learning process including the learner and the learner's culture and history, the artifacts the learner chooses to bring into the learning, and the community that impacts the learning. This theory enables us to look beyond one learning incident or situation into the multiplicity of interactions, contradictions, and dynamism that is characteristic of learning.

Other Possible Conceptual Frameworks

Other conceptual frameworks were not selected for this study, including behaviorist, cognitivist, and constructivist paradigms. While each framework may have provided an appropriate conceptual framework for one or more components of the inquiry, they would not be able to provide a method to analyze the larger cultural and historical forces that are relevant to this study.

This study required a framework that facilitated examination of the entirety of the learning processes and did not restrict analysis to one person or one environment.

Behaviorist theories would restrict this process because they restrict the view to whatever task is presented to the participants. “This approach not only neglects the cognitive processes of learning, but also the goals and motives of the interacting individuals or groups, not to mention the complexity of multiple social and cultural backgrounds influencing situations and activities” (Weber, 2003), p. 159). The learning process in this study is simply too dynamic for a behaviorist theory, as multiple stakeholders work with multiple origins of knowledge and meaning.

Cognitivist theory provides a framework to understand the mental processes of the learners. This theory does not allow examination of the larger cultural and historical context for learning. Learning in this cognitive orientation can not go beyond the context given to the learner (Y Engestrom, 1999). “A central assumption in this approach is that facts, activities, behavior, value orientations and social interrelationships follow standardized patterns” (Weber, 2003, p. 159). In this study, due to the inclusion of the NWOK framework and Native learning processes, cognitivist theory was not appropriate. The learning process examined in this study extends well beyond the context given to the learners in the online coursework.

Finally, examining learning by utilizing a constructivist situated action orientation permits the researcher to examine learning in particular situations, and the researcher is not able to analyze the entire context that surrounds the situations. The studies utilizing the

situated action orientation do not look at actions that extend across situations and contexts.

“These analyses offer intricately detailed observations of the temporal sequencing of a particular train of events rather than being descriptive of enduring patterns of behavior across situations” (Nardi, 1996). Situated learning theory is too limiting for this study that requires looking at individual actions and the cultural and historical context for these actions.

NWOK and CHAT: Two Theoretical Frameworks for this Study

The two theoretical frameworks used in this study provide analytical tools to discover individual learning journeys embedded within a vital political/social/economic environment. NWOK provides a way to understand multiple meanings the participants in this study give to their learning processes. NWOK is a non-Western framework that honors the traditions, values, history, and preceding generations of Native Americans. NWOK explains the significance of Native American artifacts, of the community, and of objects of learning to these learners. Without this understanding of NWOK, the study would encounter significant risk of not understanding the significance or meaning expressed by the learners or the strategy or tool the learner was using to learn.

CHAT is a process of analysis. It is a dynamic theory that allows us to look at the tools people use in learning and the influence of context upon that learning that can yield contradictions leading to even greater learning possibilities. CHAT is a Western framework that explains learning and change in western ways. Since this study is focused on Native

ways of knowing, it is reasonable to suggest that CHAT may not provide the analytical sensitivity needed to uncover and understand relevant information. Consequently, in this study, because the participants are traditional Native American adult learners from Native American cultural communities, there is also a need for a framework that will help us to understand the meaning that accompanies the thoughts expressed by these learners. Native Ways of Knowing (NWOK) help us understand the participants' learning experiences. The incorporation of Native Ways of Knowing and the CHAT framework provides the mechanism to see the dialectics experienced by traditional Native American learners in the online learning environment.

CHAT allows us to study the entire context affecting the learning process including the learner and the learner's culture and history, the artifacts the learner chooses to bring into the learning, and the community that impacts the learning. This theory enables us to look beyond one learning incident or situation into the multiplicity of interactions, contradictions, and dynamism that is characteristic of learning.

One caution exists. Every traditional Native American will be unique and will differ in the expression of NWOK. There is no one learning style or one expression that holds true for every Tribal person. Human differences abound. NWOK merely provides one lens to help us understand the expressions of the learners in this study.

Researcher Story

This study required that I examine my own assumptions about my access to this group of people, as well as power issues, and experiences we have and do not have in common (Merriam, Lee, Lee, Ntseane, and Muhamad, 2001). I realize that I am non-Native; however, I am very sensitive to this, having been married to a Native American for over 25 years and adopting a Native American child who attends a Native American college. I grew up around Native Americans in Oklahoma where it is very natural to be with people who are Native American through intermarriage. During my adult life, I have lived on a reservation and worked for and with Tribal councils. I have family friends who are Native American and I have been privileged to participate in Native American ceremonies closed to tourists and other outsiders such as a “giveaway” and feast celebration in a New Mexico pueblo and a traditional Native American funeral of my sister-in-law. I have experience interacting with people from Native American tribes and find it comfortable to converse socially. Usually this involved talking about our children. Because my child attends a Tribal college, I found education of Native children to be a topic we had in common.

However, I realized that I am truly an outsider. Power issues were in effect as I entered into these research relationships. The advantage of being an outsider, as noted by Merriam, et al (2001), is that the participants will know that I will have no way of inherently understanding their stories. However, it is my hope that they sensed that I was sensitive to

their issues and sincere in my wish to hear their stories and to contribute to the distance learning work of their tribes. “The outsider’s advantage lies in curiosity with the unfamiliar, the ability to ask taboo questions, and being seen as non-aligned with subgroups thus often getting more information” (p. 411). However, because a Native American cultural interpreter accompanied me on the first visit, there was an insider advantage operating as well. “The insider’s strengths become the outsider’s weaknesses and vice-versa” (p. 411). This insider advantage includes being able to ask more appropriate questions to seek higher meaning from what has been said, intuitively recognizing cues leading to expressions of NWOK, and understanding of non-verbal expressions. From this insider, I have learned where to sit in Native households during social events (how to stay out of the kitchen), who to talk to and when to talk to them, not to have eye to eye contact with Native people, how to shake hands, and how to accept gifts graciously. I have also learned how to be quiet and listen, being comfortable with silence and just to sit and watch until the right moment for conversation arises.

I am passionate about the possibilities of online learning. I believe that online learning can take learners to new places and new visions for their studies that we cannot accomplish within the walls of a classroom. I do believe that much of online learning today is not living up to this vision. I have been an online learner and an instructional designer and faculty working with online learning. I have worked with subject matter experts and artifacts

online. My vision for online learning is to “open windows” with learners to content that is limited only by their own imaginations. I am constructivist in both my learning and teaching and learner-centered in my philosophy towards teaching.

I am a lifelong learner and have gotten to this point in my doctoral work in Adult and Higher Education Training and Development late in life. After working with adults for over 25 years and being a learner right along with them, only now can I begin to understand what these learners are telling me. Although I have much life and educational experience, I continue to question all of what I see and hear, always allowing my curiosity and intuition and humility to guide me along with my cognitive queries.

Outline of the Dissertation

Chapter One encompasses purpose and significance of this study and a description of the two conceptual frameworks central to understanding this study. Chapter Two provides a review of the literature from both conceptual frameworks: NWOK and CHAT. Chapter Three is a detailed explanation of the methodology I used in this case study with a special section about Indigenous methodology. Chapter Four is a description of the findings from both NWOK and CHAT perspectives. Chapter Five provides a discussion of these findings and Chapter six discusses implications for future efforts of online learning for traditional Native American populations as well as potential topics for future research.

CHAPTER 2. LITERATURE REVIEW

For this study, I needed a conceptual framework that allowed understanding of the depth of the learning experiences of traditional Native American learners within a distance online learning environment *and* the context surrounding that learning environment. As a reminder, the purpose of this study was to increase understanding of distance online learning within the context of a Native American Tribal college in order to enrich the online learning experiences of traditional Native American adult online learners. Learning more about the role of context upon the learning process and outcomes of traditional Native American learners participating in online courses may provide new information about how to develop, produce, and facilitate learning experiences in the online environment. By enhancing the experience, it is hoped that distance education may contribute towards greater social and economic justice for Native American Tribal members.

The purpose of this study required examination of these phenomena:

1. What the learner contributes to the learning environment
2. What the instructor contributes to the learning environment
3. What the Tribal college contributes to the learning environment

As introduced in chapter 1, I used a dual lens that allowed me to look at learning experiences using NWOK, and to understand the context using CHAT. The literature review consists of two main parts: developing the NWOK framework and the CHAT

framework. After descriptions of each, I will include implications for this study that evolve from both frameworks and from the research and literature about culturally "connected" online learning.

Native Ways of Knowing

The main focus of this study is regarding Native American adult learners who participate in distance online learning. These learners, because they are involved in higher education, probably have likely experienced schooling from both Native and dominant cultures. According to Sanchez, Stuckey, & Morris (1998), Native learners experienced education embedded in their everyday experiences and life situations as well as learning from reservation, Tribal, or public schools. Their teachers have been Native American and non-Native American. Their understanding of content is rich with mental models of Native life and some lessons from the dominant Western culture acquired from prior schooling (Sanchez et al., 1998). Their learning has occurred as a result of living among people of their Native American culture engaging in some level of subsistence living that requires problem solving and social interaction for survival (Sanchez et al, 1998). "Learning is not separated from the world of action but exists in robust, complex, social environments made up of actors, actions and situations" (Lauzon, 1999, p. 263)

History of NWOK

Native people have relied upon their Native Ways of Knowing since the beginning of time. “Indigenous peoples throughout the world have sustained their unique worldviews and associated knowledge systems for millennia, even while undergoing major social upheavals as a result of transformative forces beyond their control” (Barnhardt, 2005, p. 11). These ways of knowing come from generations upon generations of Native people living in the same place learning the lessons of that place.

Four Areas of Orientation

Cajete (1994) describes four areas of orientation that represent the approaches of Tribal teachers and are used as a foundation for this study. These orientations are derived from American Indian, Sufi, Taoist, and East Indian traditions.

1. Area of Orientation 1. "Attention to the practical needs of the Tribal society that systematically addressed learning related to physical, social, psychological, and spiritual needs of Tribal members" (Cajete, 1994, p. 222).
2. Area of Orientation 2: "The teaching of individuals in individual ways when they showed the readiness or expressed the willingness to learn. The emphasis was on allowing for the uniqueness of individual learning styles and encouraging the development of self-reliance and self-determination" (Cajete, 1994, p. 222).

3. Area of Orientation 3: "Application of special intellectual, ritual, psychological, and spiritual teaching tools that facilitated deep levels of learning and understanding" (Cajete, 1994, p. 222).
4. Area of Orientation 4: "Honoring and facilitating of the psychological and transformational process of flowering or opening to self-knowledge and the natural capacities of learning" (Cajete, 1994, p. 222-223).

The first area of orientation of Tribal education draws "attention to the practical needs of the Tribal society that systematically addressed learning related to physical, social, psychological, and spiritual needs of Tribal members" (p. 222). To convey this type of practical learning, Tribal teachers use strategies to enable learners to focus their attention, engage only with learning that has a purpose, and to be flexible and adjust to the experiences of the moment. Learners learn through working and serving others in real world situations. They learn by exploring and observing the ways things happen and compare these ways to the ways of Nature. "Nature is the first teacher and model of process. Learning how to see Nature enhances our capacity to see other things" (p. 223).

The second area of orientation addresses approaching "the teaching of individuals in individual ways when they showed the readiness or expressed the willingness to learn. The emphasis was on allowing for the uniqueness of individual learning styles and encouraging the development of self-reliance and self-determination" (p. 222). As learners develop, they

recall difficult experiences from their past that are often oppressive and must work to use these life experiences and memories in their learning. Cajete (1994) maintains that the learning grows over time if learners are nurtured in their learning process by capable teachers during these learning journeys.

The third area of orientation focuses upon the "application of special intellectual, ritual, psychological, and spiritual teaching tools that facilitated deep levels of learning and understanding" (Cajete, 1994, p. 222). According to Cajete, learners prepare for higher orders of learning by listening to their teachers and through self-reflection. Native teachers apply "special intellectual, ritual, psychological, and spiritual teaching tools that facilitated deep levels of learning and understanding" (Cajete, 1994, p. 222). They place learners in situations that lead the learners to question their own prior assumptions. They enable the learners to connect their new learning with prior learning by beginning with content and experiences that are common to the learners and leading them to what is not common for them. They repeat to the learners what they seem to have learned and, using scaffolding techniques, enable the learners to see what they don't yet know.

The final area of orientation involves "honoring and facilitating of the psychological and transformational process of flowering or opening to self-knowledge and the natural capacities of learning" (Cajete, 1994, p. 222-223). Learners must struggle to overcome their own barriers to learning by calling upon their own inner resources originating from dreams,

life experiences, and spiritual ways. They need to know why they are learning and how they have been deceiving themselves. Teachers help these learners see their learning efforts as they really are, even if they are not appropriate to the task at hand.

Themes of NWOK: Interconnectedness, Spatiality, and Survival

A major theme of NWOK is the interconnectedness of all things. There is the “realization that no single organism can exist without the web of other life forms that surround it and make its existence possible” (Pierotti and Wildcat, 2000 p. 1336). Nature is home to Native people. The Native person is not surrounded by nature; the Native person lives in nature. The relationship to nature is profound; it is more than just a closeness. Native families have long lasting covenants with animals. “Ecological connectedness is culturally and ceremonially acknowledged through clan names, totems and ceremonies” (Pierotti and Wildcat, 2000, p. 1337). Animals are elders as are humans; animals are teachers as are humans.

Ethics and relationships abound in NWOK. There is a social responsibility to one another built into these relationships with all life forms. "Traditional knowledge is based on the premise that humans should not view themselves as responsible for nature, i.e., we are not stewards of the natural world, but instead that we are a part of that world, no greater than any other part" (Pierotti and Wildcat, 2000, p. 1334).

This Native epistemology is spatial as well as connected. This spatial orientation allows Native people to acknowledge the dynamic state of life. There is a recognition of the dynamic state of new experiences and knowledge. Transmission of knowledge using oral traditions allows Native peoples to adjust readily to conditions that are changing (Pierotti and Wildcat, 2000). While Western populations seek to know their place in history by looking at both the past and the future, Native people look around them spatially to get a sense of their history. For Native people, “their history cannot be separated from the entire geography, biology, and environment to that they belong” (Pierotti and Wildcat, 2000 p. 1334).

NWOK provides Native people with a means of survival. "Such traditional societies are interested more in preserving their own social, cultural and environmental stability and integrity than in maximizing production" (Mazzocchi, 2006, p. 463). This belief system of NWOK has ramifications for the curriculum experienced by the learners in this study.

Typology of NWOK

Warner (2006) reviewed 25 works from Native American scholars and began developing a typology of Native Ways of Knowing in four categories: process, person, product, and place. To support her work in these categories I have included theory from Horse (2005), Archibald (2006), Cajete (1994, 1999, 2005), Mazzocchi (2006), Pierotti and Wildcat (2000), and Barnhardt (1999). Warner directed her work towards assisting researchers to base Indigenous work upon a common framework of Ways of Knowing. This

is difficult because there are over 500 tribes in the United States and there is not an understanding if there is one Way of Knowing that is Indigenous, or multiple Ways of Knowing.

Category #1: Person factor. Warner (2006) defines Indigenous "person" works as those that talk about the "who" when discussing NWOK and asks "Is it 'who is' Native that makes it NWOK? Horse (2005) addresses this concept of 'who is' when he speaks of a Native American identity. People embracing these Native American identities receive the respect of others bearing the same identity. They demonstrate Native Ways of Knowing. These Native American identities are attached to Native American politics, names they call themselves, attitudes about other races, legal status, and what being Native American means. Native Americans born prior to the baby boomers tend to call themselves "American Indians." After this time, they tend to call themselves "Native Americans", but there is a lot of discrepancy on terminology.

Many Native Americans can have an identity related to oppression. For those who believe they are oppressed, it is often a tendency to speak the language and perform the actions of the dominant oppressor. Some see this as adaptive for survival. Some see it as part of the cycles of change their culture is experiencing.

Often Native people identify first with a tribe and then as American Indian. A tribe based on parentage, clan membership, genealogy, and Tribal name identifies the individual.

Some will say this identity depends upon speaking the Tribal language. These cultural identities are changing. “Most lay notions of 'Indianness' are part American history, part myth, part ethnology, and part fiction”(Horse, 2005, p. 65). Horse provides a listing of four influences on American Indian identity: Tribal enrollment, language or cultural identity (groundedness), valid genealogy, and worldview.

Category # 2: Process factor. Next in the Warner (2006) typology is the “how” or process factor of Native practices and learning that makes them Native Ways of Knowing. Native practices and learning are Native Ways of Knowing when they are practiced in a way respectful of Native pedagogy. Warner found terms in the works she reviewed that described processes: “aboriginal, aboriginal knowledge, aboriginal ways of knowing, cultural knowledge, culturally appropriate, holistic, Indigenous, Indigenous world view, Indigenous knowledge systems, intangible heritage, traditional teaching, traditional knowledge, Native Ways of Knowing, ways of knowing and connecting and ways of knowing, being and doing” (Warner, 2006).

Archibald (2001) described examples of these processes or practices as those that can be acted out in ceremonies, those that demonstrate leadership, and ways they speak before groups. She stated that knowledge must be lived through rituals, relationships and reverence to be appreciated. People are important, as are relationships; she emphasizes listening and

working with others. Learners can understand the values of the culture through mentoring and listening to stories of elders.

Cajete (2005) described Native processes of education as involving connections or relationships between the person and group and natural world. “This relationship involved all dimensions of one’s being while providing both personal development and technical skills through participation in the life of the community” (p. 70). Cajete listed characteristics of Native education as nature, family, spirit, and community. In the Lakota language he refers to this epistemology as “Mitakuye Oyasin” (we are all related). Education is a process of learning how all lives are connected to each other and to the world.

Cajete (2005) offers elements that are part of the process of Indigenous education. These are:

- The sacred view of Nature permeates and contextualizes the foundational process of teaching and learning.
- Integration and interconnectedness are universal traits.
- Relationships between elements and knowledge bases radiate in concentric rings of process and structure.
- Its processes adhere to the principle of reciprocity between humans and all other things.

- It recognizes and incorporates the cycles within cycles that is that there are always deeper levels of meaning to be found in every learning-teaching process.
- It recognizes and applies ordering through ceremony, ritual, and community activity.
- It recognizes that true learning occurs through participating in and honoring relationships in both the human and natural communities (from p. 70-71).

Cajete (2005) further explains that there is a respect for a process of continuous development of learners throughout the life cycle in terms of understanding, participation, awareness of nature, roles and responsibilities within the community, and spiritual growth. Experiential learning, storytelling, listening and imagining, dreaming, apprenticing, and artistic expression are all part of this continuous learning process. Traditions are mostly passed on orally in Tribal languages. The stories relate to harmony, balance, and Indian spirituality (Horse, 2005). This process for the Native American learner is a journey to learn more about survival of self, others and the community. “The foundations for Indigenous education naturally rest on increasing awareness and developing innate human potentials through time” (Cajete, 2005, p. 72).

Category # 3: Product factor. Third in Warner’s (2006) typology is the “what” or product factor of Native Ways of Knowing. These are the products that inspire learning or are created in the learning process. Archibald (2001) spoke of Native American stories that are an example of these Native products. The stories, storytellers, and listeners connect to

facilitate the process of creating meaning. Songs, stories and humor are important to Native American learning. The Native American teachings use oral lessons including stories and songs that require the learners to use all of their senses. They see stories as sustaining life. "The stories in particular integrate the life experience and reflect the essence of the people's sense of spiritual being through time and space. The mythic stories of a people form the script for cultural processes and experience" (Cajete, 2005, p. 76).

Symbols and rituals are part of NWOK. These allow Native people to participate in the natural order of life. The concept of environment to Native people is rich with symbolism representing both humans and nature (Mazzocchi, 2006). Native Ways of Knowing includes respect for both humans and nonhumans as individuals with bonds between them and codes of ethics guiding behavior. Names of clans and totems reflect the symbolism of the covenants between humans and nonhumans. Humans are part of ecology of the natural world "rather than separate from and defining the existence of that system" (Pierotti and Wildcat, 2000, p. 1335). These bonds between humans and nonhumans offer mutual empowerment and emotional connections. "This relationship is more profound than most people can imagine, and the implications of this relationship carry uncomfortable consequences. To be Eagle, Wolf, Bear, Deer, or even Wasp clan means that you are kin to these other persons; they are your relations" (Pierotti and Wildcat, 2000, p. 1337).

Barnhardt (2005) also talks about products that are oral records of learning. Working with the University of Alaska at Fairbanks, he uses both metaphor and story to connect to behavior and values in the curriculum. He stresses that each part of these products are connected to other products. “Just as the whole contains each part of the image, so too does each part contain the makeup of the whole. The relationship of each part to everything else must be understood to produce the whole image” (p. 62). In an example, Barnhardt describes the Native American interpretation of the universe as governed by forces that cannot be seen and are two or three dimensional, not linear.

Symbols from the culture are part of the products of Native Ways of Knowing. There are symbols of the “Tree of Life, Earth Mother, Sun Father, Sacred Twins, Mother of Game or Corn, Old Man, Trickster, Holy Wind or Life’s Sake, We Are All Related, Completed Man/Woman, the Great Mystery, Life Way, and Sacred Direction” (Cajete, 2005, p. 73). These are expressions and symbols are seen in Native American languages, another product of Native American Ways of Knowing. The languages carry these symbols with understandings common to all. They are foundations for traditional ways of learning. “Behind each of these mythic metaphors are the philosophical infrastructures and fields of Tribal knowledge that lie at the heart of American Indian epistemologies” (Cajete, 2005, p. 73). These products have foundations in the environmental, artistic, mythic, visionary, affective, communal, and spiritual realms.

Category # 4: Position or place factor. The fourth element in the Warner (2006) typology is the “positions” of Native Ways of Knowing. These are the places where Native Ways of Knowing are in practice. Archibald (2001) speaks of the spiritual power invested in places and the healing of the environment as an example of position. Cajete (2005) states that learning is related to the position of the real world and that in Tribal education one first learns from experience in the world and then takes it or explores it through ritual, art, technology and ceremony and in turn uses this knowledge in the positions of everyday life. “Indigenous education is at its very essence learning about life through participation and relationship to community, including not only people but plants, animals and the whole of nature” (p. 70). Further, he states that Native Ways of Knowing are mixed in with daily life. “The living place, the learner’s extended family, the clan and tribe provide both the context and source for teaching. In this way every situation provided a potential opportunity for learning; and basic education was not separate from the natural, social, or spiritual aspects of everyday life. Living and learning were fully integrated” (p. 71).

Barnhardt (2005) also states that Native American learners acquire knowledge directly through experience with the world. Their learning is related to survival and achieving competency isn’t made by passing a grade level, it’s surviving when hunting or fishing, for example. These Native learners learn through observation in the places that are Native. They want to see the practical application of what they’re learning and skills they’re

learning. Everything they learn is tied to daily life and subsistence practice and must make sense in that daily life. They have many generations of inhabitation in a particular place and gain their lessons from that place. They are able to understand the patterns in their world directly around them such as animal behavior and weather patterns. "Through long observation they have become specialists in understanding the interconnectedness and holism of our place in the universe" (Barnhardt, 2005, p.15).

Implications for bicultural education. Relevance of the learning content and task to the learner is important to effective learning. To be relevant to a learner, content and tasks must relate to prior knowledge (NCREL, 1995). "A Native student's constellation of values has ancient and well-developed roots in the Tribal social psyche. It is because of these deep-rooted values that unconscious aspects of Native 'American social personalities remain so durable and relatively visible through layers of acculturation" (Cajete, 1999). Tying new learning to the core values is empowering to Native American learners. "In a bicultural approach to education, helping students bring core cultural values into their conscious awareness for examination is a transformational necessity. This process sets the stage for students to synthesize creatively and interpret these values in new and psychologically rewarding contexts" (p. 139).

Bicultural education, such as that offered by the Tribal college in this study attempts to impart multiple realities such as the realities of both NWOK and Western science. The

Native learner may have a mixture of representations from prior schooling and life experience. This learner may not have had much opportunity to even practice Western science either at home or at school in earlier years (Cajete, 1999). These learners have had cultural and practical encounters with nature that are unfamiliar to Western science. "Herein lies a very real conflict between two distinctly different worldviews; the mutualistic/holistic-oriented worldview of Native American cultures and the rationalistic/dualistic worldview of Western science that divides, analyzes and objectifies" (p. 146). These learners have the skill to recognize what is familiar and to relate what they perceive to meaningful frameworks; however, their frameworks may be different than those of Western science. This Western science is a new language for some learners. However, because the learners in this study are advanced in their coursework at the Tribal college, the language of Western science has become familiar. It will be important to discern the frames of reference of these learners that have emerged from their values, religion, community and social context. Many may actually be engaging in revitalizing activities within their Tribal communities and consciously relearning their Native Ways of Knowing. "Language revitalization, along with a resurgence of cultural identity, will directly affect the perceptions and attitudes of Native American students toward science" (p. 151). Each learner will have a different life experience and different frameworks for understanding the content of their coursework. Cultures are continuously evolving, as are the individuals within those cultures.

Other Cultural Studies of Online Learning

In her work with adult Australian Indigenous learners, McLoughlin and Oliver (1999) studied cultural impacts for instructional design. In their work, they used Lave's community of practice model and incorporated values specific for their learners, adapted to cognitive and learning preferences of the learners, and used learning tasks to lead to deeper learning. Effective strategies used in this work included a culturally metaphorical informal chatting space, use of collaborative work, support from teachers, multiple representations of content including audio from experts, support services, shared workspaces, and clear learning outcomes. Higher order thinking was encouraged through reflective assignments such as journaling, questioning, belief-based responses, and development of solutions to problems.

Culturally sensitive or appropriate online instruction can be provided if designers are aware of the socio-cultural background and learning styles of their learners, and if an appropriate instructional paradigm is applied to the process of development. In the context of contemporary Australian Indigenous education, it is essential for educators and designers to respect cultural identity, participation styles and expectations of learners (p. 241).

McLoughlin and Oliver (2000) propose a model of culturally responsive distance learning that is constructivist and highly flexible, moving away from the linear learning often seen in online learning in the past. Berkshire (2000) describes a blended model of online

learning where learners begin the course by coming in from Alaskan villages to the university in Anchorage for a week prior to beginning the course. During this time the learners receive an orientation to the course and the technology. They have an opportunity to socialize and connect with one another as learners before they go back to their villages, connected only by technology. In this program, which they evaluate as highly successful, they did not use a linear model for the coursework. The learners experience an interactive, problem-rich model of learning that involves them in debates and discussion. They are also involved in small groups, reflection, and discussions with local mentors.

The goal of culturally responsive online learning, according to Chen, Mashadi, Ang, and Harkrider (1999) is to integrate learning with the particular values and beliefs of the learner. Henderson as described by McLoughlin and Oliver (2000) developed a typology of four types of culturally responsive online learning. These types of online learning range from the totally inclusive sites developed for a circumscribed group of learners to sites with no cultural influence. Each type of site has advantages and disadvantages. Culture in the form of person, position, product, and process ranges from central to the learning, to peripheral or non existent. Both Henderson and McLouglin and Oliver offer a multi-cultural approach to instructional design that embraces multiple cultural viewpoints, multiple learning strategies, and strives to achieve equity for learning outcomes for all learners. Teachers and designers can consider eight questions when preparing culturally responsive online learning.

- What kind of learning environment is most familiar to the students?
- How does the cultural background of these students influence their conceptions of learning?
- How do students conceive the role of the teacher?
- What kind of relationship do students want with an online tutor?
- What kinds of assessment tasks will support learning and cultural inclusivity?
- What rewards and forms of feedback will be most motivating for these students?
- Is the locus of control congruent with these students' own sense of personal control?
- What cognitive styles characterize the target group? (McLoughin, & Oliver, 2000)

Wang (2007) focused her work on engagement of learners of diverse cultures (Chinese, Korean, and American). Her study employed the power distance index that refers to the effects of the perceptions of superiority or inferiority power position upon a learner's response to another person in an online context. She found cultural differences in student's perceptions of being an equal to the instructor and comfort interacting with the instructor.

There also were differences in beliefs about adhering to rules of conduct during learning. "Knowing the differences in student perception regarding course content, technology and facilitation of courses is an important consideration in the design and development of online curricula, where real-time cues that aid and impact the teacher-learner communications are not readily apparent" (p. 309).

Wlodkowsky (1999) states his belief that "enabling people to realize their own power relates to our obligation to create an equitable opportunity to be motivated to learn as well as to have the right to an equitable education" (p. 89). This theory of inclusion advocated by Wlodkowsky, is equally as important for online learning as it is for classroom learning. He presents strategies for groups of learners from diverse cultures, which include:

1. Encouraging group members to engage in sharing interactions that are primarily social in nature. These can be pictures, stories, favorite books and movies, etc. If the learning group has an opportunity to be face to face, he encourages gatherings with food and activities that enable participants to introduce themselves in natural, non-threatening ways.
2. Using cooperative learning strategies that involve the participants working together towards common goals. In these activities, learners work towards developing shared meaning.

3. Having clear goals for the learning that is, communicated to each learner in a way that learner can comprehend the purpose and potential outcomes. Wlodkowsky (1999) states that the facilitator should “emphasize the human purpose of what is being learned and its relationship to the learners’ personal lives and contemporary situations” (p. 118). He further states that writing instructions for diverse audiences requires that the instructor use language that is understandable by all. It might be necessary for someone from the populations represented read the instructions and provide feedback to the instructor about meaning and implications. Once the students receive instructions, the instructor should ask for individual feedback via email and group feedback via discussion methods about the assignment and plans for accomplishing the work. Perhaps examples of work created by participants in previous classes would help to make the assignment clearer. If instructions utilize technical or culture-specific terminology, a glossary could be quite helpful.
4. Recognize differences in the ways people come to understand or make meaning, differences in language and expressions, and differences in knowledge and skill and experiences.
5. Establish norms for the learning. Norms are necessary to assist these learning activities. The participants can co-construct the norms with the instructor to allow for more autonomy. They could be asked to determine how they can each know if their

participation is appropriate and adequate for the group. Members can check in regularly with one another to determine if the norms are being followed. If it is determined that a participant is having difficulty with participation or understanding an assignment, the instructor can always work individually with that person by email or phone. (Woldkowsky, 1999)

Henderson (1996) states that there is no culturally neutral instructional or web site design. There are many guidelines for the visual design of web sites. While it is very important to pay attention to these guidelines when working with web based instruction, it is even more necessary to acknowledge the cultural implications inherent in visual design and site navigation. Learners from diverse cultures will not feel comfortable and motivated if the site design is cold, offensive, or foreign to them. Henderson (1996) encourages the use of materials that reflect the multicultural nature of society.

Future Potential for Tribes Incorporating NWOK in Online Learning

By blending NWOK with the distance online learning, tribes are developing opportunities for their learners to access and experience their culture in new ways. One way to understand the meaning of interweaving NWOK into online learning is to use the same framework as Warner applied to the typology for Native Ways of Knowing that includes person, position, product, and process.

The *person* factor of Native Ways of Knowing is represented in distance online learning by the instructors, learners, and elders involved in the online learning effort. Native learners over wide geographic distances are connecting via technology to learn together. According to Sanchez, et al (1998), there is the potential for online learning to de-marginalize Native learners.

Learners also have more access to Native teachers. There are few Native teachers and online learning allows their influence to reach more learners. However, when the teachers are non-Native and do not live in the Tribal communities, they have difficulty earning the respect of the learners. In response to this potential problem of “outsiders” as teachers, Tribes are bringing these teachers into the communities to live and demonstrate their willingness to participate in the life of the tribe (Barnhardt, 2005).

The *position* factor of Native Ways of Knowing situates learning in the context of the daily lives of the learners. In distance online learning, by using representations of the locale of the learners, the learners can experience learning from a context similar to that found in their Native Ways of Knowing. Berkshire (2000) describes Alaskan Native learners as involved with issues of position or place while learning at a distance. These issues included weather, family and Tribal concerns, and local work issues. Although they found it a challenge to work on learning at home, they were able to learn within their local context. Some believe that learners must first experience knowing in their Native place before they

work effectively with representations of that learning online (Berkshire, 2000 and Barnhardt, 2005).

The *product* issue in distance learning is typically represented by the content of the learning. Artifacts from the culture and even museums are included in multi-media portions of the learning. Native language courses are now online (Cherokee, Cheyenne-Arapaho). Tribes have expressed concerns that their closely guarded Tribal secrets will make their way to the internet (Sanchez, 1998). Not all tribes agree about including Native artifacts in the online learning experience.

The *process* factor is evident in distance learning through the pedagogy woven into the design of the learning. Distance technology makes it difficult to fulfill cultural expectations regarding face-to-face interaction, to preserve the sacredness of the spoken word, and to maintain privacy permeating the exchange of privileged information (Sanchez, 1998).

Cultural Historical Activity Theory

CHAT allows study of the context affecting learning processes including the learners' culture and history that embraces the process. This framework allows one to look at the interactions of the tools to enable learning that the college, faculty and learners deem significant to bring into the learning. It allows for examination of the community comprised

of the Tribal college, faculty, and learners that impact the context, including rules and division of labor, for the learning.

In this study, NWOK is the framework used to understand the individual learning experiences of the participants in the study; CHAT is the framework that provides the analytical lens to examine the broader contextual influences upon the learning experience from a Western perspective. This section describes the history and components of the CHAT framework of analysis.

History of CHAT

First generation activity theory, developed by Vygotsky in the 1920's and 1930's in the Soviet Union, was initially suppressed by Stalin, but eventually emerged again in the 1960's. Vygotsky considered psychological phenomena to be dependent upon social, cultural and historical experiences. Central to this first generation work was the idea of "mediation" by culture and cultural artifacts. "The individual could no longer be understood without his or her cultural means; and the society could no longer be understood without the agency of individuals who use and produce artifacts" (Engestrom, 2001, p. 134). In this generation of activity theory, the activity was still focused upon the individual. Therefore, from the first generation of activity theory, work by Vygotsky, emerge the concepts of mediation and artifacts for analysis at an individual level.

While first generation activity theorists based their work upon Vygotsky and examine the actions of individuals and the mediators of those actions; second generation theorists look at the bigger picture of the collective activity surrounding the actions of individuals.

Vygotsky's follower, Leont'ev, developed this second generation of activity theory that is considered to be cultural-historical rather than sociocultural as in the first generation of Vygotsky's theory. Leont'ev moved from looking at individual activity to collective; i.e., from looking at an individual's actions to looking at interrelationships between an individual and his or her community. He considered humans to be object-oriented or outcome oriented. "Object-oriented actions are always, explicitly or implicitly, characterized by ambiguity, surprise, interpretation, sense making, and potential for change" (Engestrom, 2001, p. 134).

According to second generation activity theorists, activity systems are complex and continuously evolving. They are not time-limited as in a learning "activity" accomplished in a classroom. Activities are rather structures of mediated human collective actions that produce objects and eventually outcomes. Activities consist of many actions that are goal directed and used to accomplish a task. For example, a learner might read an article about moral and ethical perspectives people use in making difficult decisions, interview a family member or elder to gather information about the ways people from their tribe might view the decision, apply this learning to a client encounter in social work and finally post their

learning to an online discussion. This example would include a chain of actions leading to an outcome such as the posting of reflections to an online discussion.

This second generation of activity theory was viable until theorists began to acknowledge its limitations in understanding cultural differences. International theorists began to move the theory to include diversity, finding challenges with dialogue among people from different perspectives. Third generation activity theory, thus, addresses the challenges of “dialogue, multiple perspectives, and networks of interacting activity systems” (Engestrom, 2001, p. 135).

As the theory advanced to its third generation, there are works engaging more than one activity system. This newer work enables the examiners to look at learning across activity systems: learners to learners, classroom to classroom, school setting to work setting, and possibly Native American community to Western science community. Learning is a major concept through this third generation theory (Engestrom, 2001, p. 133).

Third generation activity theory addresses many of the problems researchers have found with earlier generations of the theory. First generation theory was limited because it only encompassed individuals even though it considered individuals operating within cultures. Second generation theory was limited because it never examined an entire activity system although Leont’ev, the originator of second generation theory took a collective rather

than individual approach. Using Leont'ev's work, researchers were able to see how individual subjects interacted with their community.

There still was an insensitivity towards cultural diversity, made explicit by the work of Cole (1999) that became much more evident when CHAT theory work became an international endeavor. Because this study involves subjects embodying knowledge from both Native worlds and Western worlds, this third generation theory is important. The motives, emotions, and identity of the learner emerge as major concepts.

Use of Third Generation Activity Theory in this Study

This study employs the Third Generation of CHAT. This section provides details about how the third generation activity theory was used in this study to respond to the two research questions.

The questions guiding this study are as follows:

1. What are the learning experiences of traditional Native American adult learners engaged in distance online education provided by a Tribal college?
2. What are the contextual influences upon these distance online learning experiences?

Engestrom (2001) in his research using CHAT, works to discover answers to these four questions:

- 1) Who and where are the Subjects of Learning (p. 140)

2) Why do they learn- what makes them make the effort? (p. 141)

3) What are they learning? (p. 147)

4) How do they learn-what are the key actions? (p. 150)

He employs five principles of the third generation activity theory (Engestrom, 2001):

The first principle is an activity system that is "a collective, artifact-mediated and object-oriented activity system, seen in its network relations to other activity systems, is taken as the prime unit of analysis" (p.136). The data indicates that the participants of the external segment of this case study interact within their external activity system (EAS). Therefore this analysis, according to this first principle, is a systems analysis. The second principle is "an activity system is always a community of multiple points of view, traditions and interests" (Engestrom, 2001, p. 136).

The third principle guiding this analysis is "historicity" (Engestrom, 2001, p. 136). One can understand activity systems such as this case only when one examines what has occurred over time within the system. "History itself needs to be studied as local history of the activity and its objects, and as history of the theoretical ideas and tools that have shaped the activity" (Engestrom, 2001, p. 136). The fourth principle is the activity system that encompasses contradictions that are "historically accumulating structural tensions within and between activity systems" (Engestrom, 2001, p. 137). Essentially, contradictions occur when the old ideas of the participants encounter new thoughts or data that contradicts those older

impressions. When an activity system encounters a new artifact from outside the activity system, a contradiction can occur when the old ways conflict with new ways. The result often presents a need for reconsideration and has the potential for innovation and change. The fifth principle is the activity system that has the potential for multiple transformations across time. These transformations expand the activity system. "An expansive transformation occurs when the "object and motive of the activity are reconceptualized to embrace a radically wider horizon of possibilities than in the previous mode of the activity" (Engestrom, 2001, p. 137).

Components of Third Generation Activity Systems

Components include the subjects, artifacts, object, community, rules and division of labor. The activity triangle in Appendix A illustrates these components and their relationships to one another.

CHAT framework: Subjects. According to Jonassen (1999), "the subject of any activity is the individual or group of actors engaged in the activity." In this study, the subjects are the students, faculty, administrators, information technology specialists, grant-writers, and a media specialist. These subjects each carry with them their own history.

CHAT framework: Objects. Jonassen (1999) states that "the object of the activity is the physical or mental product that is sought" (p. 63). To be an object, a belief, piece of work, or other representation must transform during the activity and is something the subject

works with. Changes in the object move the "subjects toward accomplishment of their goal or an outcome. Because this transformation process continues to motivate activity, the object of activity focuses the intended actions of the object. The transformed object is the motive of the activity" (p. 65).

CHAT framework: Operations and actions. There are three levels within an activity system that form a hierarchy. The three levels are operations, actions, and activities. The lowest level is “operational” and refers to human actions that are based upon routines and predetermined by conditions of the activity system. These actions might be the processes of accessing an online course, completing a login, going to a discussion board, and posting a response. For faculty, operational actions are completing a login to place a course on the learning management system or accessing a database of learners enrolled in the course for example. For administrators, operational actions include accessing an excel spreadsheet to review the budget for the program, or sending an email over the wireless network. For an IT specialist, operational actions include gathering tools and opening up wireless networks.

The next level involving actions is the main focus of this study. Actions are goal-directed and require a higher level of cognition than operations. This is the level at that learners can make meaning of the content and produce objects, teachers can interact with administrators and learners, administrators can procure funding and develop support, and IT specialists can maintain systems. The technology becomes a tool. At this level the tools

need to be culturally appropriate, the rules and roles made explicit, and the objects something that they all can manipulate (FitzSimmons, 2005).

CHAT framework: tools as mediators of actions. The tools in an activity system are the instruments, materials, models, theories, emotions, representations, observations, or information and knowledge that alter the activity and in turn are altered in the activity (Jonassen, 1999) and therefore mediate the actions of the subjects. According to Jonassen (1999), Leont'ev (1974) believed that tools mediate activity that connects a person not only with the world of objects but also with other people" (p. 75).

In this study, the subjects used tools such as learning objects, syllabus, discussion forum, curriculum, hardware and software, internet access, prior experiences, ideas, library resources, textbooks, websites, real world examples, consultation from experts in student retention and writing, online teaching expertise, passion for teaching, entrepreneurial spirit, understanding of student life issues, help received from others, expectations for students, and media support.

Chat framework: Communities. The context of an activity system is formed by the communities of the subjects. A community "negotiates and mediates the rules and customs that describe how the community functions, what it believes, and the ways that it supports different activities" (Jonassen, 1999, p. 6). However, each of the subjects in both activity systems belonged to various communities that influenced their actions. Jonassen (1999)

further states that subjects are always in the process of altering their "beliefs to adjust to the socially mediated expectations of different groups" (p. 66). He also states that the different expectations of these groups can produce conflict among and within subjects such as role conflicts. It is in the process of working through these conflicts that the activity system takes part in "transformational activities required to harmonize those contradicting expectations" (Jonassen, 1999, p. 66). *CHAT framework: Rule mediators of actions in communities.*

According to Jonassen (1999), "Rules mediate the relationship between the subject and the community or communities in that they participate. The models, procedures, or methods that are culturally accepted in any context can also mediate activity" (p. 75). For example, one of the goals of the college is to provide a learning environment in that students develop skills in effective communication, critical thinking, cultural understanding, and citizenship (the "4 C's"). Insuring that the graduates are becoming good citizens, are thinking critically, have an awareness of culture, and a sense of their place in the community is a strong goal of this school. These "4 C's" are "rules" that direct the syllabi for all courses and therefore provide the framework for design of objectives and assignments. *CHAT framework: Role mediators of actions in communities.* Each member of a community has a motive for participation. These motives lead to roles these members assume. Subjects often work with other subjects with similar roles in a community of learning (Lewis, 1997). Some roles are rewarded by the community and prescribe the specialization of tasks within the community Jonassen et al,

1999). Group structure affects what is going on. So everyone in the community must have a certain level of motivation to participate. Roles within communities guide subject actions within these communities. *Motive, identity and emotion in activity theory*. How we feel as we learn or work affects how we perform. Our feelings moderate our individual assessment of how we are performing. Motive, emotion, and identity are also part of expansive learning in third generation activity theory. “There now appears to be an emerging sense in the CHAT research community that emotion, and the derivative concepts of motivation and identity, ought to be included in the integral analysis of human activities generally, and to mathematical and scientific knowing and learning specifically” (Roth, 2007, p. 40). In CHAT, motivation impacts emotion and therefore influences action. Motivation is related to the amount of control subjects have over actions and expansion of the possibilities for action. Although much educational research disconnects emotions from cognitive work, activity theorists see direct ties between emotion and the functioning of the activity system. Emotions assist subjects in determining meaning. For example, subjects shape their actions dependent upon their emotional awareness of whether their actions will lead to success or failure. They select meaningful actions somewhat based upon emotional valence. The actions also provide emotional feedback to the learners as well. Emotions affect actions by shaping reasoning and directing actions.

Implications of CHAT for Online Learning

The online learning or virtual context for this study consists of three levels: operational, action, and activity. This context at an operational level includes the virtual interface, the computer, the connection with the Tribal College server, navigation of the learning system, and email with faculty and administrators. At an action level, the context consists of artifacts or tools, learners and what they bring to the virtual learning environment, a community of learners and faculty with rules and roles for discourse, and objects of learning or products and ideas created by the learners. At the activity level, the context is the collective virtual classroom or Tribal college online distance learning system.

At the operations level in the course activity system, navigation of the virtual learning interface, connectivity, and usability are issues and contradictions encountered by learners new to online learning or learners living remotely with difficult access issues. Just being able to access and subsequently use the online learning system is the primary challenge. When difficulties arise in the Tribal college online learning activity system, information technology professionals, faculty, and administrators must suspend concentration on their work at the action level to care for these immediate operational issues.

Components of the course activity system at the action level include artifacts or tools, learner characteristics, the community of learners and faculty with rules and roles, and the objects of study. To be culturally responsive, artifacts or tools in online learning can either

be learning materials or learning tasks and must represent multiple perspectives. These tools should create “interaction, immediacy, and interactivity” (Biggs in McLoughlin, 2001, p. 23). The language of the artifacts or tools must be a language familiar to the learner and must use examples related to the learner’s life experience. “Multiple realities may be created or evoked by the use of a given word owing to different meaning assigned to the same word” (Hutchison, 2006, p. 308). These multiple realities, if unrecognizable or unattached to the learner’s life experience, can cause conflict in the learning process. For example, Hutchison (2006) cautions teachers not to use examples that do not come from the life context of the learner.

NWOK and CHAT Informing this Study and Raising Questions

NWOK and CHAT inform the methodology of this study. An increased understanding of the dynamic processes of culture and history of the participants will enrich understanding of the dynamic processes occurring within the online learning. NWOK and CHAT inform the research methods giving questions to constantly reexamine the fieldwork and analysis of data. For the purpose of this methodology discussion, explicated in chapter 3, the researcher utilized NWOK to increase understanding of the learning experiences of the Native American students and CHAT to explain the context impacting these learning experiences. Table 2.1 in Appendix B illustrates ways that NWOK and CHAT might interact within this study.

Summary of Literature Review

This study relies upon the frameworks of Native Ways of Knowing and cultural historical activity theory. This chapter includes the relevance, history, and a description of each of these frameworks. Implications for this study that inform the methodology and pose significant questions for the researcher conclude the section.

The next section focuses upon methodology. This methodology, based upon the frameworks of NWOK and CHAT, will present the plan for this research that will guide the researcher prior to fieldwork and during the initial data collection process. The researcher realizes that although the frameworks for the study will not change, the methodology will adapt to the circumstances of the study as they evolve.

CHAPTER 3. METHODOLOGY

This chapter describes the methodology of this descriptive case study. Following an overview of the study, I first present a discussion of the core components of the study guiding this inquiry. Next, I describe the components of the methodology of the case study in the following order: research design including setting, boundaries, and sampling; data collection including entry and building trust and data sources; analysis of data including data organization, data immersion, category and theme generation, and coding; trustworthiness including internal validity, consistency, and external validity; and finally limitations.

I implemented this methodology to respond to my two research questions:

1. What are the learning experiences of traditional Native American adult learners engaged in distance online education provided by a Tribal college?
2. What are the contextual influences upon these distance online learning experiences?

Overview of the Study

The purpose of this descriptive case study is to increase understanding of distance online learning from the perspective of the epistemology of the learners who have a lived Native experience and attend a Native American Tribal college. This study provides an opportunity to listen to the stories of the learners, their instructor, and others involved in the

administration, financing, production, delivery, and facilitation of online learning at this college.

Core Components of This Study

There are three core components that guided this study. The first component was following the standards, practices, and guidelines for a qualitative, descriptive case study. The second component, as described in chapter two, comprises the dual theoretical frameworks, Native Ways of Knowing (NWOK) and cultural historical activity theory (CHAT). This component guided the development, implementation, and analysis of the study. The third component is Indigenous research methodology that guided the researcher in the completion of the study.

Component #1: Qualitative, Descriptive Case Study Research

The decision to construct this as a qualitative, descriptive case study allowed me to study the participants' learning experiences in the online learning environment in an integrated and dynamic way. The descriptive case study method focuses on issues in a situation that are "intricately wired to political, social, historical and especially personal contexts" (Stake, 1995, p. 17). According to Yin (2003), "a case study "investigates a contemporary phenomenon within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident" (p. 13).

Merriam (1998) explained that a descriptive case study research is useful when the purpose of the study is not to solve a problem or develop comparisons. She notes that descriptive case studies are particularly helpful when the study is focusing upon an issue that has not been studied widely. This particular study is a unique examination of the online learning experiences of traditional Native American adult learners from a contextual perspective. While there is an earlier study by Tyro (2004) exploring similar issues, this study contains substantially different frameworks of analysis. Tyro's work, however, is a basis for this work about the learning experiences of learners.

While not built in to the methodology at the beginning of the study, it became obvious early on in the data collection that there needed to be some strategic change in how the case study was conceived. As the study progressed, it became apparent that a solution was needed to manage the large amounts of data that were being generated from examining both the learning experiences and the contextual influences upon those experiences. Consequently, a decision was made to think of an internal and external sub-case within this case study. The first research question led me to a narrow focus—what I call the internal case--to study 8 learners and their faculty for three online courses. The second question led me to seek a broader focus that became the external case study. For ease of reference, I provide a picture of the distinctions between internal and external, as seen in Figure 3.1 below.

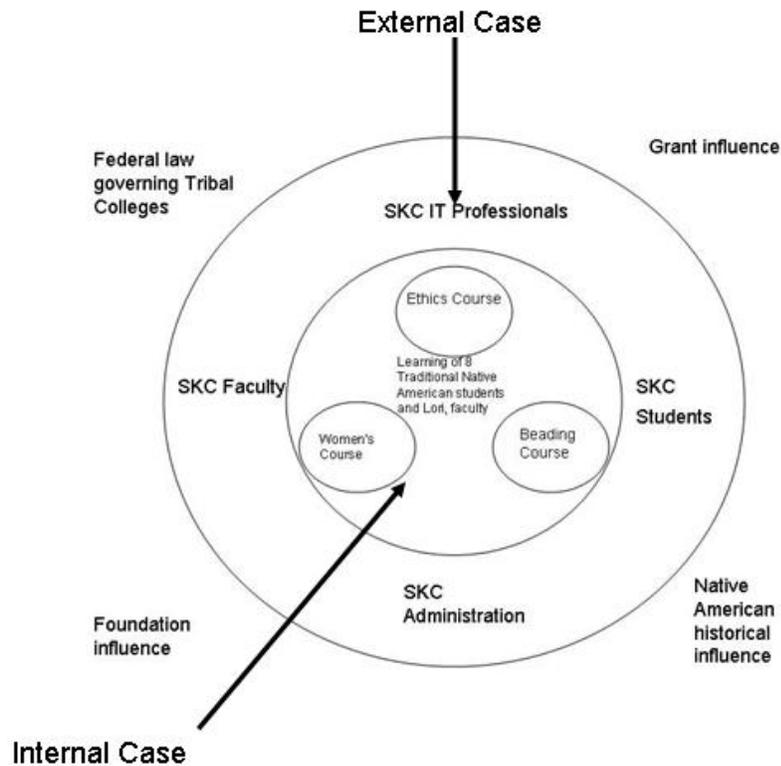


Figure 3.1. Design of the study: Internal and external cases

The distinction illustrated in Figure 3.1 is relevant to this discussion. In that figure, there are three courses contained within what I call the internal case. The three courses were Native American Beading, Multi-cultural Ethics, and Native American Women. One instructor taught all three courses and one student was enrolled in all three of the

courses. All other students enrolled in a single course. Initially I had hoped to observe and analyze discourse in only one course. However, no single class contained enough students who met my participant criteria of being a ‘traditional’ Native American student.

Consequently, I had to draw from three classes in order to meet my participant goals.

Component #2: Dual Conceptual Frameworks

The use of dual conceptual frameworks to gather and make meaning from the data is the second component guiding my study. As described earlier, the frameworks are NWOK and CHAT. Native Ways of Knowing (NWOK) represents a “body of understandings” of traditional Native American learners (Cajete, 2005, p. 69). Therefore, NWOK provides the framework necessary to describe the learning experiences of the participants of the study and addresses both research questions. In this study, because the participants are traditional Native American adult learners working with a Tribal college distance learning program, NWOK helps us to understand the multiple meanings that accompany the thoughts expressed by these learners. Without this understanding of NWOK, there is a significant risk of not understanding the meaning of words or observations. Cajete (1994) described traditional Native American learning experiences and Indigenous orientations of learning that I used as a framework to describe the learning experiences of the participants in this study.

NWOK was limited in helping me understand the broader contextual, political, and community issues to the learner’s experience. Consequently, cultural historical activity

theory (CHAT) provided the framework to examine the interaction of contextual components. CHAT is a process of analysis. It is a dynamic theory that allows examination of the tools people use in learning and the influence of context upon that learning that can result in contradictions that learners must resolve to expand their possibilities for further action within the learning process. CHAT, therefore, provides a Western way to understand learning within the broader context; NWOK provides an Indigenous way to understand learning within the Indigenous context. Both frameworks are necessary for answering the research questions guiding the study.

Using these two conceptual frameworks within the same study was difficult. NWOK is representative of Indigenous epistemology and CHAT is representative of Western epistemology. The specific ways the two frameworks interacted within the methodology of the study emerged during the process of analyzing the data. In the process of coding and analyzing the data using two such disparate conceptual frameworks, I experienced dissonance when thinking in both Native and Western ways. This experience increased my sensitivity to the difficulties Native American learners must encounter with the linear, objective facets of Western epistemology.

Component #3: Indigenous Research Methods

Indigenous research guidelines assisted my research process, opening my conscience to the meaning of both my actions and my findings. Works by both Swisher (1997) and Swisher and Tippeconic (1999) provided the evidence I needed to make this decision and follow Indigenous guidelines for my study, especially because I am non-Native. There are numerous reports in the literature of disrespectful and non-ethical research of Native Americans. Most of these research errors stem from the lack of respect of academia for local customs and priorities. It is my hope that my adherence to Indigenous research guidelines in this study will enable future non-Indigenous researchers to have an increased understanding of the sensitivities of conducting research with Native American participants while honoring their culture and history. See Appendix B. for Indigenous guidelines followed in this study.

There are numerous reports of disrespectful and unethical research of Native Americans. Most of these research errors stem from the lack of respect of academia for local customs and priorities. "It is up to us as reflective practitioners to challenge domination by enabling these voices to be expressed, heard, and lived in a way that liberates" (Piquemal, 2001, p. 123). At one particular point in my data collection, I made this notation in my journal: "I don't want to take any credit for the work of this college and these people and the spirit that is here. It's critical that I be a "pass through", a bird that carries a message on to another that gathers stories and takes them to share and share. They must realize that's my philosophy. How can they trust my humanness, my Western humanness not to take away

their work?" In this same spirit, my mentor at the college told me to "honor the spirit of our ancestors." By relying upon the Indigenous guidelines, I was able to continually monitor my intentions and behavior as a researcher.

Employing Indigenous research guidelines was essential to this study. This experience opened my conscience to the meaning of both my actions and my findings to the Native American community. By reviewing the works of Native American scholars, I determined more about the importance of using Indigenous research guidelines in this work. Deyhle and Swisher (1997) stated that "the role of researchers, both Indian and non-Indian, has never been more important than it is now...when research is perceived as a partnership between the researcher and the community, sustained over time, the research that emerges benefits both parties in the partnership" (p. 183).

First and foremost, Indigenous scholars strongly recommend that Native American research be situated within the Native American community. This recommendation influenced my decision to conduct the study within a Tribal college setting, rather than studying the learning of Native students attending a non-Native college or university.

Hermes (1998) described this process as conducting a research project that is meaningful to the Native American community in a way that it serves a purpose for them. Piquemal (2006) seems to agree with Hermes when she includes a comment from one of the participants in her Native American research:

After what happened in the past, it is hard to trust, and the problem is that when they come and do the research, they don't really try to get to know the children and they don't spend time with the families. They seem to be only interested in their careers. They don't really care whether we agree or not with their ideas (p. 116). Wax (1991) stated that it is important for researchers to participate in the Native American community of study by going to gatherings, to listen respectfully, to give of self and one's possessions. The community must see the issues of the research as problems before they can participate meaningfully or take action with the recommendations of the study. "A lot of research is really geared more to the researcher's needs. It isn't studying something that could immediately result in improvement in services or conditions" (p. 437). Hermes (1998) suggested that the Native American community review the proposal, read transcriptions of interviews, and be given a copy of the final dissertation for archiving in Tribal libraries. Hermes' work influenced my decision to have a representative of the Tribal college review the study before it was published. In addition, the college will place the dissertation in their library and I have provided abstracts along with letters of thanks to each person participating in the study. In the future, I will allow the Tribal college an opportunity to review any publications of this research.

The nature of choosing words in Indigenous settings. I was very sensitive to the words I chose for descriptions in this work. I followed the tradition of Cajete (1994) in my

honoring Native work or Native descriptions by capitalizing words such as Native, American Indian, and Indigenous and Tribal. In addition, I chose the words Native American instead of American Indian when referring to groups I met with or consulted. However, Azocar (2007) stated that either is acceptable and are often used synonymously. I also used the word "Rez" in quotations by participants; my cultural consultant advised that this word is acceptable.

Research Setting

“Human actions are significantly influenced by the setting in that they occur” (Marshall and Rossman, 2006, p. 53). The main setting for this study is a Tribal college located on a Native American reservation. I chose this setting because of the work they had done with online education for the traditional Native American population. Further, I chose this setting because many of the students who attended this college followed their Native traditional heritage. The Tribal college setting included classrooms, homes, offices, and worksites of many of the participants as well as the cyberspace created by the online learning distributed by the Tribal college.

Research Subject Recruiting & Informed Consent Process

While it is fairly straightforward to obtain consent for individual interviews, it is not as easy to obtain the consent of every member of an online course. Rourke, Anderson, Garrison, and Archer (2001) argue that “a researcher analyzing the transcripts of a conference, without participating in the conference, has not intervened in the process and

thus has not placed them in the position of research participations” (p. 14). However, they do acknowledge that these transcripts contain private information and this risks ethics violations, especially with more vulnerable populations such as the population for this study. Their position to date is that “there seems to be no easy solution to this problem, other than for researchers to expect to expend some considerable energy obtaining consent or stripping non-participant postings or personal identification from the transcripts” (p. 15). In this study, all students within each course were asked to inform their faculty if they did not wish to participate and none responded. The faculty was willing, however, to work privately by email if any of the learners did not wish to participate in the study.

Within the Tribal college boundary for this study, I chose to use purposeful sampling to select participants. "Purposeful sampling is based on the assumption that the investigator wants to discover, understand, and gain insight and therefore must select a sample from that the most can be learned" (Merriam, 1994, p. 61).). Because I wished to study the learning experiences of traditional Native American learners in the online environment, I recruited students who self-identified as Native American. The students in this study would be characterized as "transitional" according to Cajete (1999, p. 20). Transitional Native Americans are "characterized by movement toward the assimilation of many American socio-cultural, economic and personality norms in preference to traditional Native American cultural patterns" (p. 20). While they live and work on and off the reservation, they know

about their Tribal heritage and may even speak a little of their Tribal language.

"Syncretization of Native American and non-Native American cultural patterns is readily apparent in this group, however, these students maintain close ties to their Tribal culture and community, frequently visiting relatives and friends" (p. 20).

Each eligible learner had an equal opportunity to participate in the study; I contacted each to discuss the study and give them a participant recruitment flyer. However, some of the students received their first notice about this study from their instructor. This instructor, my Tribal college mentor and advisor, posted the flyer about the research to the online learning site for the three courses so that students who met the criteria could self-select. This flyer included a place for the students to write in their contact information if they wished more information about the study. The flyer explicitly stated that participation in this study was not a part of the Tribal college course requirements and would not influence the student's grade. All learners who returned the flyer or contacted me individually received a contact via email or phone from me so I could confirm their eligibility before enrolling them in the study.

Of particular note was the definition I used of "traditional Native American". I chose a definition that called for the participants to self-identify as Native American. I did not wish to select participants based solely upon Tribal enrollment. Tribal enrollment criteria varies significantly from Tribe to Tribe and the purpose of this study was to learn from individuals

who believed themselves to be traditional Native American learners and lived according to the traditions of that heritage. If I would have used the 'objective' Tribal enrollment criteria for my study I do not think I would have accessed the optimal population for my study. Furthermore, documentation of Native American heritage was not possible for some of these students due to such issues as the absence of family members who could affirm their blood quantum. The students who did not have official Tribal enrollment status, but self-identified as traditional Native American learners, embraced significant Native American heritage.

I subsequently met with each participant and discussed the informed consent process and asked them to sign if they wished to participate in the study. I assured them that this research was not in any way a test of their abilities and would not be reported back to their faculty or others in any way that could identify them personally. I gave them the assurance that data would be reported in either an aggregated format or that I would use fictitious names. I told them that I thought there was the possibility they could gain from participating in the study as well as contribute to the future knowledge about how to best prepare online learning for Native American students.

My Tribal college advisor suggested other participants who became part of the external case; i.e. faculty, Tribal college administrators, information technology professionals, and others who were involved with online learning at the college. She suggested these particular participants because they had been part of the early history of

online learning at this school. From her suggestions, I was able to obtain the consent and participation of six faculty representing various departments, 2 administrators, 2 grant writers, 1 audio-visual specialist and 2 information technology professionals. These participants informed the study about the influences of the Tribal college environment upon the online learning opportunities of the students in the study.

By the time I left the campus after the first visit, I still had not been able to contact or find all of the other potential participants for the study. I learned that this first week of the quarter was a time when students were adding and dropping courses and others were very busy with beginning classes and administrative duties. Therefore, when I returned home, I found it necessary to contact a few students by phone to explain the study and emailed the consent form, asking for it to be returned via mail or to my Tribal college faculty advisor, who willingly consented to do this.

I finalized my participants with 11 students, however three of these could only participate in one interview so I placed them in the external case study. This decision to place them in the external case study was based upon their lower participation in the study; one was not enrolled in a course taught by the instructor I studied. There were 8 students and 1 instructor in the internal case and 17 college faculty, administrators and staff, along with the three students mentioned above, in the external case. The instructor for the three courses was

a part of both internal and external cases because of her dual roles as both teacher of the three courses as well as her role in developing the online learning capacity of the college.

Data collection

In this section, I discuss entry and building trust as well as data sources. Entry and building trust is a critical part of this study as I exemplified the Indigenous foundations of the research. Four types of data sources were used for this study, including interviews, online discourse from three 10 week courses, observations, and documents. I decided upon these types of data sources in order to triangulate the study. For example, when the interviews of the students and the instructor were combined with their online discourse in the three courses, the meaning of the data was enriched and more trustworthy. I could confirm interview comments through analysis of online discourse, and vice versa. Observations of the students and around the campus also improved the trustworthiness of the data from the interviews and course discussion.

Entry and Building Trust

Before my first official visit to the Tribal college campus, I submitted my research proposal to the Tribal college Institutional Review Board (IRB). Four faculty members of the Tribal college sat on this IRB. In my application, I included an explanation of the significance of the results for future planning of their online learning efforts. Consequently, my research is accountable to three groups: the Native community, the Tribal college IRB,

and my university IRB. On my first visit to collect data, I met with Tribal college representatives accompanied by my cultural interpreter, who is of Native American heritage. He was most, who was familiar with the issues of culture and customs, rituals, language and beliefs of Native people. Because of his life experiences growing up in a traditional Native American family, attending boarding school, working with his Tribe, and serving as a health care provider to Native Americans in many regions of the country. To signify the Tribal college IRB approval, the Tribal college president gave me an official letter of approval at the beginning of my first visit in an early official meeting in his office. The value of having my cultural interpreter accompany me on my first visit was immediately evident upon my appointment in the President's office. The administrative assistant, a Native American woman from the area, asked my consultant that boarding school he had attended, upon that he was quickly able to answer, "Haskell". This seemed to form a connection and opened up conversation. Then, my consultant talked at length with the college president about the college golf course, Indian Health Service friends they had in common, and high school and college sports. This same connection occurred with my Tribal college faculty advisor who talked to him about Native ways, local customs, and family. I later learned that these introductions were a Native American style of introductions often used in courses to enable students to get to know one another. Although I am Caucasian, I believe my Native

American affiliations and passion were evident. My cultural advisor accompanied me on three of my four visits to the Tribal college during the study.

Upon my first visit, I informed the college president that I would ask college representatives to review the findings of my study after identity of the participants was removed. The President approved of this opportunity to review the study before publication. My Tribal college faculty advisor informed me that she would conduct this review. Although I realized that this review might limit what results I could publish from the data, respecting Indigenous guidelines for research was of utmost importance. In the final analysis, my Tribal college faculty advisor did not omit any data. I assumed the roles of both an observer and participant in the Tribal college community similar to the efforts of Hermes (1998) in her study. I made a conscientious effort to become familiar with the region of the study and the Tribal College by becoming involved as a sensitive outsider in order to learn as much as I could about the college and the people involved with the college. I studied every day in their library, ate in the dining hall with faculty and students, observed in a face to face social work, nursing, and forestry classes and sat in hallways and administrative offices during class days. I traveled much of the reservation witnessing the beauty of nature and even encountering an injured bear along side of the road on a cold winters' night.

Building Relationships with Participants

I attempted to develop relationships with the participants beyond the contractual relationship such as that required by my home academic institution. I negotiated free and informed consent with each participant after describing the study and insuring the support of a respected Tribal college faculty member and advisor to the study. Further, each time I spoke to a participant I determined that I still had their consent to participate in the study and reassured them of confidentiality. I developed relationships with many, but not all, of the participants beyond the researcher-participant relationship. As the students and others were sharing their personal stories with me, I provided feedback that indicated understanding of their involvement in the coursework, the demands of their roles outside of school, and the pressures of work. As I listened to each, I developed follow up questions that indicated that I was listening respectfully and was very interested in their personal experiences.

In a few instances, I visited with students in their homes with their family members. One student brought her young child to both interviews. This student even met me after school one evening and helped me buy beading supplies. Another student, who is a beauty consultant, allowed me to be one of her customers and shared her home and family with me. My faculty advisor shared meals with my cultural consultant and me, as did other faculty. I attended the girls' basketball tournament, feasting on the best hot dogs I've ever tasted in their new and sophisticated gymnasium. I encountered a Native American artist, his infant,

and his wife who worked in the college bookstore and learned about his art and his spirituality after purchasing a beautiful piece of his work. I attended evening silversmith and beading classes to see the faculty and students at work and left with a beautiful piece of jewelry made during class that I will treasure forever. Following the advice of researcher Hermes (1998), I worked to be a member of the community first and a researcher second.

I asked the faculty and other participants what “gifts” would be appropriate for me to take to the interviews. The gifts needed to be unique to the person’s culture and life experience. The Native American “giveaway” ceremony is a way traditional people have of showing honor by presenting community members, elders, friends, and others gifts. When my husband, a Native American, worked with health care and Tribes in North Dakota, he was often the recipient of such gifts as a truck load of corn, or a blanket. At a dinner after his sister’s funeral, I received a shawl from her immediate family. “The value, among many Native Americans, truly lies in the giving that is a socially learned interaction, residing in social prestige networks with socialization patterns based on relationships” (Fenelon & LeBeau, 2006), p. 35). From talking with my Tribal college advisor, I determined that it would be very helpful for me to offer either a gas expense card or actual money to each of the student participants, as these would be the most appropriate “gifts” in these hard economic times. Knowing that gift giving is appropriate to Native culture, I readily

consented and informed prospective participants that they would be given these gifts upon completion of their participation in the study.

Data Sources

Data for this study comes from interviews of students, faculty, administrators, information technology professionals, and grant-writers; observations on the campus and in the homes of students; online discourse from three courses; and document review. Data for the internal case study comes from sources related to the eight students and their faculty in the three online courses selected for this study. Data for the external case study comes from other students, faculty, information technology professionals, administrators, and grant-writers.

Interviews. Using draft interview questions (See Appendix D), as a basis for the interviews, I used conversational interviewing that involves informal conversations that share power with the participants (Hollingworth & Dybdahl, 2007). Not only was this style of interviewing comfortable for me, but also it seemed to be comfortable for the participants. In addition, sharing power is an ethical responsibility for researchers guided by Indigenous research protocols and who are working with Indigenous participants.

After the interviews, I shared the data with the participants for their feedback. I constantly reminded myself that I was an intruder in the lives of these participants. I informed them that they were a part of an effort that could help other learners in their Tribal

college. Maxwell (2006) advises, “avoiding the social-worker or Bureau-of-Indian-Affairs-do-gooder image” (p. 79). I used informal interviewing methods always beginning with a broad question asking the participant to tell me more about their lives and their experiences with online learning. From this broad question I used probes that led to more conversation about family, learning, work, personal history, and Native heritage. I used the series of interviews developed by Jonassen et al (1999) with Tribal college faculty, administrators, and others to reveal CHAT components. Interview questions are included in Appendix D.

In my second interview, I built upon findings from the first interview of each participant, probing for more in depth information. Because the second interview occurred more towards the end of the quarter, the participants were able to tell me more about their experience with the coursework. I also noted that in the second interview, the participant and I had more of a relationship to build upon, allowing for more personal stories and meaning.

For some participants, telephone interviewing was the most available method due to distance and weather conditions affecting roads. I always made sure I was calling the students on their cell phones during times of day that would not cost them money to participate. Interestingly, I found that the conversations that occurred by phone were often more in depth than those face to face interviews, even upon the first conversation. This caused me to wonder if these learners might have perceived "in person" interviews as

somewhat invasive. 31 of my interviews were face to face interviews and 11 of my interviews were telephone interviews.

I conducted two in-depth conversations with each student participant and four with the faculty in the inner case study. I encouraged each participant to talk about people, places or strategies that influence their learning in the online courses. I listened for expression of emotion and signals of inner reflection as the participants related experiences with me. I was not only concerned about understanding content learning; I was also concerned with what Cajete (1994) calls 'learning with the heart.' In this view, "Indigenous teaching focuses as much on learning with the heart as on learning with the mind" (p. 223).

The second interview with each participant was a progression of the first interview, offering him or her an opportunity to further explain comments from their first interview.

During these interviews, the learners had an opportunity to connect their learning to other life experiences as well as other lessons. This is what Chase (2005) calls "retrospective meaning making" (p. 656). Listening to the actual learners about their learning experiences not only provided valuable research data, but also had the potential to be a learning experience for the learners themselves. For example Struthers (2001) talks of experiencing great emotionality during her interviews with Native healers. My reaction. In this study, discussing career and educational choices and learning experiences seemed to engender

feelings of accomplishment accompanied by frustration, anger, and feelings of being overwhelmed.

I assured the participants that this research was not a test of their abilities and during the interviews reiterated that I honored their experiences and was grateful for their participation. . I Because many of the participants described earlier experiences of receiving harsh judgment from teachers, I did not want to contribute to any tension they might have from fear that I would submit their interviews to their instructor for her scrutiny. I gave them the assurance that only aggregated information or information using fictitious names would be reported. I explained that not only would I like for them to participate in the study, but that I wanted them to gain personally from the findings as well as to contribute to feedback about online learning that their Tribal college could use in future planning.

Observations. The observations for this study occurred prior to and during the interviews. I traveled to the homes of three of the students and was able to observe their home communities and living situations along with computer access. I was able to see interactions of the students with their children and others. There were no protocols for these observations. I recorded them in my field notes and will include them in the findings for this study in this chapter.

Discourse Analysis. The course discourse was of particular interest in this study. The analysis of this discourse contributed to my understanding of the learners, their learning

experiences, and ultimately to NWOK. At the beginning of each course, the faculty posted a note to the course discussion informing all of the students in the course that I would be observing their discussion and asking them to notify her if they had concerns about this. No students expressed concerns. I took precautions to eliminate names and other identifying information from the discourse analysis reporting.

Document Review. I examined products created by learners, and documents pertaining to planning and preparation of the distance learning at the Tribal college. In this study, the documents were housed at the Tribal college or were the property of the learners or other participants, and were relatively easy to access. These documents were not developed for research purposes; therefore I only used them to enhance key findings.

Data Analysis

I began processing the data once data collection was underway. Efficiency and clarity were my goals. I chose to use four of the six phases suggested by Marshall and Rossman (2006): data organization, immersing myself in the data, developing themes and categories, and coding.

Data Organization

I began by organizing my data into notebooks for individual participants once the conversations were transcribed. In these notebooks, I included pictures obtained from the internet of their home reservations to enable me to envision the settings for their life stories.

I then moved the transcriptions into NVivo 8 for storage and coding. I moved the discourse from the learning management system to notebooks every week during the quarter and then to NVivo. I created NVivo memos of my observations and added the students' papers and Tribal college documents into the software as well.

With these tools I progressed from coding and retrieving to exploration of data for emergence of themes and patterns. Using the search tools of NVivo enabled this process with the large amount of data from this study. NVivo has the capability to both code and retrieve as well as build conceptual relationships and reports. I coded and analyzed data using NVivo software and manual notations in the interview transcripts themselves. NVivo allowed me to manipulate large amounts of data.

I used a data collection log that allowed me to keep track of places I visited, including activities, who I talked to, and what we discussed. I used a digital recorder and the accompanying software and immediately entered my audio data on my hard drive and downloaded it to a flash drive for back up. I transmitted these recordings by disk to a transcription professional, who had signed a confidentiality agreement, immediately after each visit to the Tribal college and reservation so that I could review the transcripts as soon as possible. I took notes while interviewing the participant or immediately afterwards if I felt a need to record a particular emphasis the participant was making. .

Data Immersion

Marshall and Rossman (2006) state that each stage of data analysis requires reduction of data and some interpretation. For the internal case, I began with over 100 categories of raw data for the NWOK framework alone. Coding for NWOK was a difficult process because NWOK stems from over 500 Tribes and other Indigenous cultures. I began with the work of Warner (2006) by coding for person, process, product, and place. It was difficult to move from this fine, granular data to categories that would describe learning experiences, the intent of my first research question. In addition, this granular data did not seem to describe what I was seeing in the interviews and the course discourse. I then reviewed the data and categories assembled according to the Warner (2006) typology and subsumed these data categories under the Cajete (1994) categories and descriptions of the four areas of orientation of Indigenous learning,

The categories I then generated related closely to the Indigenous areas of orientation of learning related by Cajete (1994) who reviewed the work of traditions across Indigenous cultures. I immediately found much clarity of thought and reduced my data categories significantly. Marshall and Rossman (2006) state that “the process of category generation involves noting patterns evident in the setting and expressed by participants...the categories should be internally consistent but distinct from one another” (p. 159).

I simultaneously began by coding the data from the internal case using CHAT categories of artifacts, objects, communities, roles and rules. I experimented with merging the NWOK typology of Warner (2006) into the CHAT categories. However, the rather linear and categorical nature of CHAT obstructed my understanding of the holistic nature of NWOK. As I continued to work with the data and the NWOK and CHAT frameworks, I had the realization that all of the learning experiences and their related context should first be expressed as Native Ways of Knowing to honor and connect with the words of the Native American participants and their instructor. I realized that coding this raw data with any CHAT codes did not fully describe the Native American learning I was seeing.

The research question focusing on context (e.g., the external case) did not seem to require a NWOK analysis so instead I used only the CHAT framework. Many of the participants in this external case were not Native American. CHAT seemed to be a more appropriate framework for categorizing the data from the transcripts of the administrators, other faculty, and information technology professionals. CHAT enabled me to view contradictions the participants spoke of in their stories about the early history of online learning at this college. CHAT enabled an analysis of the decisions, actions, and experiences of these participants. Interestingly, CHAT provided a much clearer analysis of organizational and systems data than individual learner data in this study.

As I worked with both NWOK and CHAT in this data analysis process, it became important for me to mentally immerse myself in NWOK before immersion in CHAT because the two conceptual frameworks require different thinking processes for the researcher. NWOK required me to think in a holistic, interconnected manner and CHAT seemed to require me to think in a more linear way. Although both conceptual frameworks have ecological tendencies, NWOK seemed to be a very different way of thinking than CHAT. Additional research combining Native and Western frameworks may clarify this phenomenon I experienced.

The notes in my journal reflected the confusion I experienced in the midst of trying to code for NWOK and CHAT simultaneously. I had to force the separation of my work with the two frameworks with considerable breaks to avoid my tendency to use a more Western interpretation of data before fully exploring the NWOK perspective. Throughout this process of data immersion I was predisposed to seeing the data through CHAT frameworks, possibly because of my Western background. But, once I disciplined my thinking to look first at NWOK and then at CHAT, my perceptions of NWOK became much clearer.

Category and Theme Generation

Marshall and Rossman (2006) warn that “identifying salient themes, recurring ideas or language, and patterns of belief that link people and settings together is the most intellectually challenging phase of data analysis, and one that can integrate the entire

endeavor” (p. 159). Patton (1997) warns against forcing data into categories prematurely. I was looking for expressions of the learner’s discovery of their learning and the strategies they used and their relationships with their faculty and other learners in the online course.

In the internal case, this required an analysis of the content of the messages in online discourse using NWOK. In reviewing the data and comparing it to the Cajete (1994) NWOK theory, I found four main themes describing learning experiences. Marshall and Rossman (2006) state that “the process of category generation involves noting patterns evident in the setting and expressed by participants...the categories should be internally consistent but distinct from one another” (p. 159). The categories I generated related closely to the Indigenous orientations of learning related by Cajete (1994) who reviewed the work of many theorists across Indigenous cultures.

In a review of 19 studies using analysis of asynchronous online discourse, Rourke, Anderson, Garrison, and Archer (2001) explained ways to select units for analysis: sentence, paragraph, message, or theme. I chose message analysis of the online discourse because full sentences and paragraphs did appear frequently in the online discourse for these courses as the students were responding to questions that required critical thinking in many instances. Messages in this online discourse had the probability of carrying the most information. Full sentences and paragraphs did not appear frequently in the online discourse due to the informality of the discussion. I also chose message analysis as this restricted the comments

to one learner and perhaps the response of the faculty. Had I chosen theme analysis, my analysis would have involved several participants, some of whom were not officially in the study.

First I developed a table using the four learning themes and student and faculty roles according to NWOK. Then, I took these same four learning themes and placed them in a CHAT table, mining the data for tools and artifacts, community roles and rules, and objects of learning. Once I had built the overall descriptive tables of the four learning themes, I built tables for the individual three courses, noting subcategories that emerged from those courses and the students involved in those course. The external case didn't seem to require a NWOK analysis so instead I used only the CHAT framework. Many of the participants in this external case were not Native American. Even though they were operating under the restrictions and permissions of federal law and Tribal sovereignty, CHAT seemed to be a more appropriate framework for categorizing the data from the transcripts of the administrators, other faculty, and information technology professionals.

Data Coding

Once the themes were in place, I began coding the transcripts and online discourse using NVivo. I continued to reduce the data by subsuming codes under other codes and thus developing subcategories. These subcategories became more relevant when describing the

individual courses. I used NVivo to code and retrieve as well as build conceptual relationships and reports.

Trustworthiness

Trustworthiness provides an assurance that the data in this study meets criteria for validity and reliability (Merriam, 1998). Trustworthiness makes the data noteworthy to audiences. I have approached this discussion of trustworthiness of this study from the perspectives of internal validity, consistency of results, and external validity.

Internal validity

The concern with internal validity within qualitative studies is to insure that the research findings match “people’s constructions of reality – how they understand the world” (p. 203). Merriam cites strategies that can enhance internal validity; I believe I have used all of these at some point in my data collection and analysis. These strategies are: triangulation, member checks, extended observation, feedback, and participant involvement.

Triangulation. The first in the list of Merriam’s strategies is triangulation that can be accomplished through the use of multiple sources of data and multiple methods of gathering data. Triangulation is a way to paint a fuller picture through gathering information from multiple sources. Fine, Weis, Weseen, & Wong (2000) describe triangulation as helpful to accompany interviews in qualitative research. These authors talk about producing a “quilt of stories and a cacophony of voices speaking to each other in dispute, dissonance, support,

dialogue, contention, and/or contradiction” (p. 119). Creswell (1998) calls for corroboration from multiple sources to improve understanding of a theme. Because there were 9 primary participants and 16 others involved in the study, I brought many voices together to tell the story of online learning at this Tribal college.

In addition to interviews, I used observation. Three of my interviews took place in homes of the student participants and this helped me understand their narratives in a much richer way. For example, one of the students was interacting with her two young children and husband during the interview and I could see for myself the ways the children and her role as a mother competed for her time and energy. I also used discourse analysis and document review as two other methods of collecting data and addressing triangulation. Meyer (2008) suggests using body, mind, and spirit as a way to triangulate data from Indigenous studies. She states that this “asks us to extend through our objective/empirical knowing (body) into wider spaces of reflection offered through conscious subjectivity (mind) and finally, via recognition and engagement with deeper realities (spirit)” (p. 224). I have made a determined effort to honor Meyer’s holistic way of looking at data in the analysis portion of this study. This was consistent with the intent of NWOK.

Participant review of transcripts. The second internal validity strategy, according to Merriam (1998) is conducting member checks. I also increased the credibility of the narratives by having the participants review them to insure that I was representing their

narratives appropriately. Although, some of the participants did not complete these member checks, a majority responded and some corrected the transcripts.

To enable the student participants to feel more comfortable with their member checks, I developed profiles of each of them after coding their transcripts. These profiles that included my perceptions as well as some quotations from their transcripts, included what they had told me about courses they were taking, their experience with online learning, their Native American heritage, their higher education experiences and plans, and their family. Even with this approach, some of the students did not respond to my request to provide feedback about their interviews. The overall problem students told me they had with reviewing their transcripts was the embarrassment they experienced with their choice of words or repetitive phrases that are natural in verbal communication but unnatural in written communication. I explained that this was a common concern and it did not detract from the quality or importance of their contribution to the study. As I described earlier, following Indigenous guidelines compelled me to assume responsibility for honoring their participation and minimizing any possible negative judgment.

Extended observation. Merriam's third strategy to insure internal validity is observing at the research site over a long period of time. Prolonged engagement is another method of assuring trustworthiness proposed by Creswell (1998). I completed four visits to the Tribal college to meet with the participants and studied the discourse of three online courses for an

entire 10 week quarter. Because I studied three courses, I could relate findings across a broad spectrum of course content and find similarities. I also communicated with participants via email and phone and had regular conversations with my Tribal college faculty representative.

Tribal college feedback. The fourth internal validity method recommended by Merriam (1998) is peer examination or gathering feedback from colleagues about the data. I talked to my Tribal college faculty about her understanding of the participants' backgrounds and this helped to increase credibility of their narratives. She reviewed the findings and data analysis on behalf of the Tribal college. Creswell (1998) calls for external review as well. My own cultural consultant and my university dissertation committee reviewed my work. I conversed regularly with my chair and Tribal college faculty representative during the course of data collection and analysis.

Participant involvement. Merriam's fifth internal validity method is involving the participants in all components of the research from the conceptualization of the study through final writing. In this study I involved the participants prior to the beginning of data collection and worked with a Tribal college advisor throughout the study.

Discovering biases of the researcher. The final internal validity method recommended by Merriam is discovering and discussing the biases of the researcher. Throughout this study I clarified my assumptions about the importance of context to learning,

the necessity of using Native Ways of Knowing to understand the learning of Indigenous participants, and the passion I have for online learning for people who live in remote locations.

Consistency of Results

Instead of reliability, qualitative researchers attempt to determine if their results are consistent and tied to the data collected. Merriam (1998) states:

Because what is being studied in education is assumed to be in flux, multifaceted, and highly contextual, because information gathered is a function of who gives it and how skilled the researcher is at getting it, and because the emergent design of a qualitative case study precludes a priori controls, achieving reliability in the traditional sense is not only fanciful but impossible (p. 206).

In this study, I began by asking the participants about their own life experiences and their childhood as Native Americans. Throughout the progression of interviews with each participant, I was able to ascertain if the life experiences they were sharing seemed compatible with their life history and Native heritage.

External Validity

According to Merriam (1998), external validity is concerned with the extent to that the findings of one study can be applied to other situations” (p. 207). She cites strategies that can increase external validity. The first is “rich, thick description” (p. 211). By thoroughly

describing each setting and interaction, I have provided much material for participants as well as my colleagues to use in critiquing my work. This kind of description enables readers to determine if what I've learned might be useful in other situations (Creswell, 1998).

Although I cannot generalize from this kind of qualitative study, some of the learning may actually transfer to other Indigenous research designs and settings. These learners will tell us about their use of artifacts and participation in communities representative of Native Ways of knowing. Some of this information may be useful to future research.

Dependability is an assurance I can provide the reader that my work was “logical, traceable, and documented” (Schwandt, 2001, p. 258). My field notes provided this information as well as my digital recordings of the interviews. Confirmability will be evident in my narratives because I did not make overarching statements without the details of evidence that allowed me to draw those conclusions.

Harrison, MacGibbon, & Morton (2001) deal with the difficulty of attaining trustworthiness when reciprocity is part of the methodology of the research. However, reciprocity was very much a part of my work because of the necessity of gaining entry and trust and conveying respect for the Native American participants who have specific criteria for research with their populations. Developing relationships with participants and sharing my own voice makes reciprocity a part of my design. Harrison, et al (2001) captured the contradictions between reciprocity and trustworthiness.

We strive to avoid othering yet are compelled by the nature of our work, the constraints of the institutions we inhabit, and the requirements of academic publishing to construct research projects in certain ways and produce certain types of texts as we talk among ourselves about other people's lives (p. 341).

I had to be as completely honest with myself as a researcher about my motives as well as the ways I handled the gifts of information my participants gave me. This kind of reciprocal involvement with the participants could have affected my bias as a researcher. My positionality stated earlier in this section of my proposal indicates that I am sensitive to the life stories of Native American learners. Throughout the study I have kept my attention focused upon my own past experiences, prejudices and biases that could have influenced this research (Creswell, 1998).

I consulted with my Native American cultural interpreter and scholar to provide debriefing opportunities for me following each course of interviews and during the focus group work. Lincoln and Guba in Creswell (1998) suggest that peer reviewers be "devils advocates" in order to help me remain honest and truthful in my work (p. 202). Creswell (1998) calls for external review of the work as well. This is the work of my Tribal college advisor and university dissertation committee. I met regularly with my chair and others during the course of data collection and analysis.

Limitations of this Study

This study of NWOK in online distance learning of traditional Native American adult learners is potentially limited in several ways including:

1. Difficulty people have describing their ways of knowing and learning
2. Lack of facial expressions and body language in online discourse
3. Sporadic participation of some learners in the online discourse
4. Closeness of the Tribal college community
5. My limited time in the research setting
6. My non-Native positionality

Describing learning. First, the descriptions or stories of the learning experiences of the participants are difficult to convey. We don't easily talk about how we learn; however, the interview questions, probes, and validation of the information gained that will enable some clarification of these accounts. Talking about their NWOK may have been difficult for the learners as these ways may be more commonly discussed by elders rather than the younger Tribal learners or be so common to the learners that they don't even think to mention them. In addition, because there are over 500 Native American Tribes in our country, the determination of what is NWOK and what is not, is subject to multiple interpretations.

Online discourse. Rezabek (2000) cites limitations of online interactional groups. Because they are online, participants cannot display facial expressions or body language that can be data in some situations. Further, the online medium has the potential of altering the dynamics of the conversation. For example, some participants were less adept at computer interaction than others in this study.

Sporadic participation. In the online discourse I studied, I experienced problems of sporadic participation and interactions that were spread far apart in time and disrupted chains of thought. Some participants did not participate for a week or two at a time and that slowed the discussion process. This often happened when participants were caring for sick children or other relatives.

Closeness of community. Another limitation arose from the closeness of the community studied. Because it would be very possible for participants and local readers to determine the identity of participants based upon their descriptions and quotations, I had to limit what I could share and how I presented the data to protect confidentiality.

Limited engagement. Third, the brief time I was able to be in the vicinity of the Tribal College potentially limited my understanding of the participants. Two of my visits lasted ten days and involved multiple outside activities of the college including day and night classes, community meetings, sports events, and evenings at restaurants and in homes. However, the other two involved brief three day visits that did not allow me time to immerse

myself in the environment. This was not an ethnographic study, but it would be a wonderful place to conduct such a study.

My positionality. Because I am not Native American, my positionality in itself was a potential limitation to this study. There have been generations of non-Native researchers encroaching upon the privacy of Native Americans leading to an outcry for Indigenous researchers. My family ties to Native Americans as well as my Native American cultural interpreter assisted with this.

Hermes (1998) discovered that her relationships formed from residing and working in the Native American community was integral to her study. “By developing relationships with teachers in a variety of ways, I never clearly fit into any one particular category – just a researcher or teacher or community member” (p. 161). Because of the distance I had to travel to interact with participants in my study, I was not able to have a “residential” position in the community. This could have unnecessarily emphasized my research position.

Summary of Methodology

This third chapter of the proposal elaborates upon the methodology I employed in this study. In the setting of the reservation, I worked with traditional Native American learners who were learning from a distance within the online medium. I talked to providers and planners involved in the process of developing the online learning. I followed careful plans for entering into the Tribal college community and developing relationships in order to

engage the participants and ensure a comfortable level of reciprocity. My primary research method was a descriptive case study using interviewing, observation, discourse analysis and review of materials to describe online learning experiences and the context influencing these experiences.

CHAPTER 4. FINDINGS

The purpose of this study was to increase understanding of distance online learning experiences of traditional Native American adult students within the context of a Native American Tribal college. Data revealed the influence of context upon the learning process and outcomes of these learners participating in online coursework. This study provided insights into the development and facilitation of learning opportunities within the online environment for Native American learners.

The data for this study came from interviews of the students and their instructor, the online discourse of three courses they were taking, papers and products prepared by the students and other tools submitted by representatives of the Tribal College. I also gathered and analyzed data from administrators, technologists, and others working at the Tribal college. This chapter presents the findings from the data collection from the NWOK perspective. The research questions guiding this study were:

Research Question 1: What are the learning experiences of traditional Native American adult learners engaged in distance online education provided by a Tribal college?

Research Question 2: What are the contextual influences upon these distance online learning experiences?

The Student Participants in the Study

This data about the student participants in the study was truly a finding more than a methodological issue as is normally the case. This information came from the interviews of the students who shared many intimate stories. These stories were an integral part of the data gathered from the interviews and were beyond the demographic information usually included in the methodology chapter. The learners who were participants in the internal case study, brought their past life experiences with school, work and family into the learning process as well as rich descriptions of their Native American heritage. One student participated in all three courses. The same instructor taught all three courses. In the beading course, there were four student participants in the study; i.e. *Online Beading Student 1, Online Beading Student 2, Online Beading Student 3, Online Beading Student 4* who all had prior beading experience. In the ethics course, there were four student participants in the study; i.e. *Online Ethics Student 1, Online Ethics Student 2, Online Ethics Student 3, and Online Ethics Student 4*. In the women's course, there were two student participants in the study; i.e. *Online Women's Student 1 and Online Women's Student 2*. Most of the students were involved in training for professions such as information technology, social work, and psychology. All were taking the online courses because this type of course allowed flexibility within their life responsibilities. Table 4.1 displays demographic data to illustrate this group of students.

Table 4.1: *Student demographics N=8*

Live near Tribal college	Native American heritage	Over age 30	Caring for young children	Single parents	Visit with Native family frequently	Involved in Native practices	First online course	Experienced computer users	<i>Enrolled in professional education</i>
7	8	7	6	3	6	8	2	6	5

As a researcher I had the privilege of accessing a small glimpse of their life experiences. Many of the students grew up on a Native American reservation. Their stories contained remnants of boarding school experiences of their grandparents, religious influence away from traditional life, happy childhoods unaware of poverty, and relationships with parents, grandparents and siblings. A few lived "off reservation" and frequently visited relatives on the reservation. The students' childhood communities were generally small and inclusive; only a few grew up in urban areas.

Online Ethics Student 1 told stories about going to powwows and having fun "hanging out" with kids and climbing on things. Best friends and closest family friends lived next door. "Known as 'Little Powwow Girl'; the fun of the powwows are lifelong memories continuing into the present, attending powwow's now with her children. She and makes the regalia for her children to wear for dancing. Growing up she had everything she could want including dogs and a candy store nearby. Monthly shopping trips with her mother and siblings for supplies in the city that was 2 hours away were a ritual. Growing up with her

brothers, "a house of boys" and a single "mom" who taught school was fun, yet difficult at times.

Online Women's Student 1 grew up in a barren place with no running water. She played and really enjoyed life growing up with her extended family.

She lived "traditional" and carried water, used outdoor bathrooms, and cooked over a wood stove. Our sweat lodge was just right behind where we lived and was just part of growing up. My grandparents and my parents and my aunts all got together. It was like a once a week thing to sweat and my grandparents, they live there, but didn't speak very much English. They, you know, they were had broken English and just real traditional.

Online Ethics Student 3 grew up in a city and had a heritage from multiple Tribes and other cultures and described a sense of pride in this multi-cultural heritage. Learning about all of the different cultures and how to speak all of the languages learned from relatives who speak many languages was a source of pride.

Online Beading Student 3 was always one of her grandma's favorite grandkids and grew up without running water until her daughter was a junior in high school. This grandparent was an "awesome" beader. "Late in life she really didn't have the patience to teach me to bead, but she served as a role model for me with beading. She was 91 when she died." Her grandmother made an annual trip for supplies.

They would go get all their supplies for the year and come back on horseback. She didn't understand how cell phones worked but she knew if she called me, I would get a hold of my mom for her. My mom is the baby of six and so my grandparent would say to me, 'I can't get a hold of Baby'. Call her for me.' So she would call my home phone, get a hold of me and I would have to call my mom's cell and say, Grandma needs you. Can you call?

Many of the student participants grew up in a traditional way. *According to Online Ethics Student 2*: "I never lived on the reservation but my dad's parents and my grandparents and my parents raised us like we were on the Rez". Growing up traditional meant, "respect your elders, don't talk back, listen to them, help them out, and help out other people." *Online Ethics Student 1* was raised by her grandparent who left often to go visit Canada. She didn't see her much after she was 14, but could always find her at "Bingo". She regretted that she didn't get to learn about participating in traditional ceremonies from this grandmother because she died before she could convey this piece of her heritage.

Online Ethics Student 1 had a similar experience because her grandparent did not want her mother to be traditional because this grandparent had been raised in a boarding school and feared that her daughter would be scorned for being Native. She didn't like Native American way at all. She didn't go to powwows and I think it was the way she was raised because of the boarding schools; it wasn't something to be proud of. She

brought my mom up not to speak it and not want it she didn't like my mom marrying an Indian man. My mom wanted to embrace those things. My mom and my uncle both look Native American and practice traditional ways.

Online Beading Student 1, raised by a parent who didn't speak English, didn't learn Native American ways from her parents, but her grandparents taught her Native ways.

If someone would have asked me about that period of time in my life that would be the greatest time in my life. Growing up there. With me, it's like that is my heart strings. Right there. That's just like the center of what my family, my beliefs, who I am, is all about. It means a lot to me.

She wished she had been raised more traditional. Even though, when she was young, she went to powwows and danced, she was never raised around beading. She kind of found her traditional ways on her own.

I am proud of my quarter Indian heritage. I am, I'm just proud. It's just, I always felt deep inside of me that it didn't matter like, if I'm white. Because I am light and I have green eyes and you know, I'm pretty light skinned but in the summer time I can get a really good tan. I tattooed this Indian on my hand when I was younger just because I wanted people to know I was Indian.

The father of *Online Women's Student 1* was the first in the family to go on to school and earned a PhD. He worked on different reservations administering different schools. She

moved frequently for his work on different reservations. Her dad had high expectations for Native American children and encountered teachers without this same level of commitment. "Because he really had a passion for educating natives, he found that the education of Native children was very disappointing and discouraging."

Several of the students were raised Catholic and experienced conflict with Native religion and beliefs. *Online Ethics Student 3* didn't really experience living truly "traditional" until she married her first spouse and lived within the "longhouse" religion because she was raised Catholic. Both of her parents have worked on the reservation, however, for over 30 years and lived in the same place around extended family all that time. Everybody watched everyone else's kids. This student was influenced by her father's involvement in sports and talked about "teamwork" in her family. She carries that philosophy of teamwork with her today.

Students connected their learning in these three online courses with lessons they received from relatives or with actual conversations with their relatives about their learning. Grandparents provided beads for projects, parent-in-laws helped them learn new beading techniques, parents discussed ethical issues with them, and spouses discussed evolving roles of women and the empowerment they were experiencing.

Some students, such as *Online Beading Student 1*, had to move away from their nuclear families as "they have problems that are difficult for you to live near" even though

they visit and still share their lives. This nuclear family is at times influential in encouraging them to continue their education and at times not encouraging as in the story of *Online Ethics Student 1* whose sister has no desire to continue with school and doesn't understand why she is continuing her education. "It doesn't make me feel like I am better than my sister who has never been to college. It's just something that in order to be, I guess to be up on the same level as other people, then I have to have this plaque on my wall."

Online Beading Student 3 clarified what the word "traditional" meant to her. She said her family was "traditional" but definitely not outdated. They were traditional because they danced and practiced Native American traditions.

There are a lot of traditions in both of our families and, I mean, I just feel like we are already moving in the 21st century. We text each other. We are on line. We do all kinds of 21st century things. But we are still very steeped in our tradition. And like it's still important to us that our children dance. And it's still important to us that they pray and that they smudge their homes and you know, learn those kinds of things that were passed down to us. And it's really important for us to grow up in the world where I just think that just because we do those traditional things, doesn't mean that we are outdated or that we are living in teepees. Some people incorrectly seem to think that traditional people typically wear braids and are even militant. She said that

some people incorrectly seem to think that traditional people typically wear braids and are even militant.

These stories are just a few of the narratives discovered through collecting data for this study. The students in the courses presented a diverse and rich history of moving between two worlds—the world of NWOK and the world of the 21st century technology-enhanced culture. Below, I present the key findings from the data analysis to understand how Native students currently experience online education, and provide an appreciation for the role of context in that experience.

Key Findings of the Study

The data analysis conducted in this study led to the emergence of three key findings. The first finding describes the integral role of the instructor in online learning for Native American students. The second finding focuses on the NWOK work of learning in online course work. The third finding describes the environment of the Tribal college working with online learning and relates to the importance of support to both the teaching and learning process from the Tribal college itself. Evidence for these findings comes from student and faculty data and data from Tribal college representatives, using the data collection and analysis methods described in the methodology. The findings support the initial argument in this study that online learning is effective for Native American adult learners and has potential for reaching remote Native American learners in the future.

Finding 1. Integral role of the Instructor in Online Learning for Native American Students.

I began this study thinking that I wanted to understand more about the learning experiences of Native learners, and how their context shapes or influences their experience. As noted in Chapter 2, I expected that the instructor would influence the context of learning. However, after analyzing the data I developed a profound depth of understanding about the importance of the role and approach of the instructor to the Native learning experience. Consequently, the first finding of the study suggests that the instructor is not only a critical part of the context for learning as I had first conceptualized, but, more directly, has a strong impact upon the actual learning experiences of Native online learners. Further, as a role model for teaching online and as mentor to other faculty, this instructor's influence extended to impacts upon the Tribal college context, further illustrating the pivotal role of the instructor in this study impacting the learning of Native American students at this Tribal college.

Data analysis suggests that the approach of this instructor is deeply rooted in her philosophy of teaching Native American students as well as in her teaching strategies. Brookfield (1990) stated that instructors should have their own "philosophy of practice", and communicate this to their students in a way that the students will "feel that they are under the influence of someone who is moved by well-thought-out convictions and commitments" (195). It was very easy to see how the instructor was guided by her philosophy:

Okay, here's my philosophy of teaching Native people. They have been screwed so much by mainstream education. They have been told that they can't get degrees, they are not smart enough, they'll never amount to anything. You're going to be flipping burgers. You know, there is a student that I know whose teacher told them, "oh you're just going to be a hair dresser." She has a Ph.D. in chemistry. I mean, you cannot, you know, you cannot do that to students. So, my job first of all is to build the self confidence of the students and that's what I try to do in my classes. On campus or online.

This philosophy led her to embrace a nurturing and empowering persona with her students. She brought to life her philosophy of teaching that was deeply grounded in Native American epistemology. Her key goal was to build the self confidence of the learners that resulted from her understanding and honoring of their lives. The students were significantly influenced by the instructor who had a great impact upon their learning; she co-created the learning with the students.

This philosophy of teaching was enriched with teaching strategies that aligned with Native Ways of Knowing. My analysis uncovered a variety of teaching strategies that emerged into six themes that promote effective learning for Native American adult students. In the description of the findings that follow, I provide descriptions of the themes using data from interviews, and examples from the online discourse from three courses. This instructor

created a vibrant, engaged, and vital online learning experience for the Native learners.

These descriptions and examples illustrate the effectiveness of the strategies for her students evidenced in the learning they experienced. The effectiveness of these strategies is further confirmed or triangulated by data in the next finding that describes the learning experiences of the students stemming from these teaching strategies. The six themes for grouping this instructor's strategies are:

- Constructing a safe learning space within the online learning environment
- Approaching each student "mind to mind"
- Being "Auntie": Building nurturing relationships with students
- Using NWOK strategies for expression of content
- Providing feedback, scaffolding, and questions that facilitate movement to higher levels of thinking
- Assisting students to use their learning in their lives

Teaching Strategy Theme 1. Constructing a Safe Learning Space Within the Online Learning Environment

The online learning environment is the stage for the student interaction and sharing. This instructor builds a learning environment that is centered upon building a safe place for her students to learn that demonstrates her commitment to building safe confidence of the learners. "Building self confidence takes a change in a mind set in a person. In my mind,

you are important, you can do the work. I'm going to help you get to your goals and we are going to work together as a team to do that." This sensitivity to the needs of Native American students is a product of her heritage, experience, and deep understanding of Native American history. This instructor has a goal for constructing the learning environment in this way.

The students will feel very confident and very comfortable that they will be able to do the work and tell me anything because it's a safe place. I am not going to judge them. I'm not going to say, 'You stupid Indian' or whatever, you know. And that has been done. That has been done to our kids in the schools on this reservation that you are never going to amount to anything anyway so why do I have to worry about you. You know. Your parents are drunks. Some teachers say that. They do that to our kids. So our kids have a negative opinion of college and school.

This instructor created this atmosphere of safety by providing a clear orientation of the students to the learning modules, structure of the discussions, the nature of her responses to the students and open door policy for her office, email and phone. The orientation helped students become familiar with the purpose of the course, the instructor's perspective, and the learning management system. An excerpt from the first session of the online multi-cultural ethics class illustrates that by sharing herself, she set the tone for an atmosphere of sharing.

Hi, and Welcome to the Course: Social and Environmental Ethics. The modules in the Course Schedule are designed to enhance your learning and expand on the textbook information. When I was an undergraduate in my own ethics courses, I hated the way the course was taught and I promised if I ever taught it I would include the multicultural perspective. Therefore this is how I am managing this course through the eyes of many cultures.

Then she shared her course philosophy with her students:

This is a safe place to voice your opinions. Nothing leaves this “course room” when class is over. We can discuss anything without hurting others. The instructor is not the only 'one who knows'. Everyone has a voice, an opinion, an ethical theory that guides actions....this is the place to apply that knowledge!

Following this she had the students engage in a scavenger hunt of the learning management system and post 5 new things they learned about the system.

Through expressed intention of keeping the discourse protected and safe, adopting a non-judgmental position, offering access to the students for private conversation, making expectations clear and providing an orientation to the learning environment, this instructor creates a safe learning environment. The students' have had prior negative experiences with teachers, and the learning environment, but this kind of safety and clarity is a standard for online learning that respects the learner.

Teaching Strategy Theme 2. Approaching Each Student "Mind to Mind"

This instructor described her teaching as working “mind to mind” with the online students. Unlike a traditional Western perspective, where instructors routinely request or require online learners to upload pictures to develop a sense of ‘community,’ this instructor had a different perspective of developing a mind to mind community absent of any visual clues of external experience.

People are thinking critically in their courses and then I’m going to support their ideas, mind to mind. I don’t care what you look like. I don’t care, you know, about anything like that. My goal is your mind and your understanding of the content and being able to apply it to your life. That’s how I see mind to mind.

This comment is relevant for instructional designers who often request that students display their picture in order to promote community in the online course. In this instance, the instructor did not suggest photos be included in course content. Not relying on photographs sent a clear signal to learners—it is indeed the mind that matters, not the external appearance. This approach to working with students of Indigenous backgrounds sent a signal of honor and respect. About this practice, this instructor states, "I don’t ask for pictures. My image of them when I see them on campus is like so totally different sometimes. I love teaching because I know them mind to mind and I know how they write." Because her students have often experienced discrimination, she found this approach especially respectful.

Our students may be afraid sometimes of what other people will think of them if they raise their hands and answer a question. A fat girl. Or a girl with a bad complexion or a guy who is fat. Or the way they dress. If their clothes come from the second hand shop; and they are not going to answer the question. They don't want to. They are shy. So, you know, I won't know what's in their mind. I won't know what they are thinking because they are not going to tell me. But they will tell me because online they don't have to show who they are as far as what they look like or what tribe they are from or whatever.

Online Ethics Student 3, expressed earlier experiences she had had with this instructor "mind to mind": "I think her courses are more personal. You know, not, I guess no so much personal, but more in tuned to what do you think. What is your opinion? How do you feel about this issue?"

This posted response of this instructor to Online Ethics Student 4 demonstrates this mind to mind approach:

It was good to read your story of growing up here on the reservation and how your Mom and Grandpa helped to raise you to be the wonderful woman you are. And you are very kind like your Mom. So you have a lot of negative memories and I was shocked to read about your auntie not feeding you. Today that would be viewed as

child abuse. Good work and thank you for your story.

With a goal of facilitating learning, this instructor worked with her students towards critical thinking and understanding. Her strategy excludes the necessity of face-to-face encounters or pictorial introductions. She worked "mind to mind" with her students. But how does she come to "know" her students? She learned about them from having them submit stories about themselves or their relatives. For example, in the Women's course, she had these students write about a strong woman in their own family. She also learned about these students from living in the same community or from knowing about their Tribe or clan from reading or life experience. She talked about where they work, about their children, and about their previous school experience. For example, one of her students worked at *Wal-Mart* with the instructor's son. She also learned about these students through the quarter by becoming deeply involved with each student's written work and phone and office visits. The students believed that she knew them well and addressed their individual needs.

Teaching Strategy Theme 3. Being "Auntie": Building Nurturing Relationships with Students

This instructor used an informal conversational style online with her students. She believes in serving her students and sharing herself, and developing relationships.

Oh, yeah. I want to be Auntie. I want to be their auntie and not their professor. I don't want them calling me Dr. And I think that breaks down a lot of barriers. Even

the way I have my office set up, I don't have the desk between us. I have an open door policy all the time. If I'm in there, the door is cracked open and students can come in. And I am always available to them. I check my e-mail before I go to bed. Students can call me up until 10:00 o'clock at night.

But how is she "Auntie" online? How do the students respond to this relationship with their instructor? This is the evidence needed for this study to examine the effectiveness of relationship-based teaching for Native American learners. This clip from the discourse in the Native American beading is one illustration. Online Beading Student 1 says, "For some reason I have a hard time with this stitch and have been trying to find different places and instructions to learn." The instructor responds:

Ok I am the old Auntie. Come to my office and I will show you how to start the peyote stitch. I know you have some time on campus. You have a great list of sites. I am sure you will find many more. Like I said, it is like a world wide powwow with all the designs from all over the world.

The instructor described Online Women's Student 1, who was experiencing her first online course and having difficulty with the computer:

I have a gal who came into me yesterday. She's the mother of three kids; it's her first on-line class. She was scared to death and she sent me an email. I check my email at night at 10:00 o'clock and 'I'm scared, blah, blah, blah. Call me. Please call me.'

And I spent an hour with her teaching her how to do everything and I said you're okay now. You do it. I want you to do it. Show me what you have to do to get into your class. And she was able to do it. Of course, she had some other questions because she is doing it on her own.

After this 1:1 session with this student, Online Women's Student 1 remarked in the online discussion. "I have learned a lot this past week. Thank you for all your help and patience, I really appreciate the time you took to show me what to do. I am not feeling as overwhelmed." To that the instructor responded, "I am so glad that it is more comfortable for you. Remember I am in the phone book if you need to discuss anything."

According to Online Ethics Student 1, who was somewhat isolated from others on campus and who had received encouragement and assistance from the instructor's daughter to enroll at the Tribal college:

She is always, no matter how bad you did on it, she is always positive about it. She's like 'could you think about that more or go read this person?' I think she is just a really good understanding teacher. She really takes the time to respond to everybody and if you have a problem you can just call her or talk to her on line or just send her an e-mail....she has positive responses. She is always, no matter how bad you did on it, she is always positive about it. She's like oh, yeah, could you think about that more or go read this person.

This instructor further described her relationship-based teaching:

In the back of my mind, I'm thinking about that. And how the relationships with my students can be made? How can relationships with one another in the class that they don't see each other can be made? How can they make a relationship with the content of the course? Because to me teaching is all relationships. It's all about a relationship. It's about a relationship with my students. It's about a relationship with one another and with the content of the course.

Teaching from the position of co-creating knowledge places the instructor in a relationship with the student. The key here in this example is to build a "nurturing" relationship that embraces encouragement and informality and removes barriers.

Teaching Strategy Theme 4. Using NWOK Strategies for Expression of Content

Within NWOK, content is expressed using strategies that are multi-sensory, metaphorical, storytelling, and tied to Native heritage and tradition. Multi-sensory strategies were most evident in the Native American online beading course in that this instructor was teaching a Native American art form as well as history that some would think is difficult to convey in the online medium. The instructor described her work. "In the beading course, I do it with the videos. I do it with drawings...and I have this awesome textbook. I have videos that I've gotten from *YouTube*. I can make my own videos." She told me that people doubted that a course like beading could be taught online.

People said to be me, you can't learn beading on line. And that's the challenge for me. If you say you can't do it, I'm going to prove you wrong. I am going to prove that Indian students can do anything. So I said I'm going to develop a beading course.

When teaching content that was essentially Western and potentially unfamiliar to the Native students, this instructor used metaphors to assist her students to transfer their Native thinking to the Western concepts. I experienced learning in this way when I observed a few classroom sessions of Indigenous Science taught by a Native American instructor during one of my site visits to the Tribal College. During one class, we had a storyteller visit and share the ways stories are used for learning by Native Americans. After we immersed ourselves in a "smudging" ceremony that helped to take our minds to a sacred learning space, the storyteller shared a story about the "trickster" and a campfire. Each one of us could use the metaphor in our own ways of thinking. The storyteller didn't provide an interpretation or require us to think a certain way.

The instructor in this study used stories and metaphors in her online teaching. For example, using metaphors, the instructor links thinking between Native Ways of Knowing and Western Ways of Knowing. She explained one of her metaphors as follows:

In microbiology, you know, it's another way. It's a Western way of looking at the world through microbes and animals and things like that. And when I started to put

this online, I thought, well what do we know? How do we, where do we begin? You can't just begin with the world is filled with these microbes and viruses. You have to think about a way to get it into their, their cultural values. And so I thought, well, okay, it's a lot like hunting. We all know about hunting. We hunt. We fish. We dress the animals in the fields. Take out their guts. Take a look at what they have and stuff. So when I started thinking about that I thought oh well, microbiology is like hunting. You are going out with your microscope and you are hunting for microbes. You can't see them so you need the microscope. They leave tracks in the form of disease so you can track them, where they've been. Have they been in this town? Who has the cold virus and you know, you can track them. You can dress their bodies out on a slide and look at them. Um, when you go to a different place to hunt, sometimes you need to know the language of the people. The language of microbiology is Latin. So you are going to have to learn some of that in words in this class. Like "ology" means the study of. Ectomy means "the removal of". You know that kind of thing. And so that the story of hunting really fits with microbiology. And they are like oh yeah, uh uh. Is that all it is? Hunting microbes without a gun. You look at it with an instrument called a microscope. You know, it has a lens on it. Just like a gun has a lens you look through.

She uses stories in her teaching. She told me:

The stories get to the heart of what people know and it's like teaching in the old times when the aunties would tell them a story, say about beaver catches his fire. You know, or where skeletons came from. You make the story up for what you want the student to get out of it. I think outside the box all the time. You know, how can I make it valuable? How can I make it meaningful for them? How can I make it so that they can apply this stuff to their own life right now?

When I asked her how she constructed these stories, hoping to gain insight to her wisdom, she said, "I don't know. I just do it. I have no clue how it happens. I have an active imagination." I believe this was tacit knowledge for this instructor who was always trying to make the lesson valuable for the learners and applicable to their own lives.

Besides teaching through metaphors and stories, this instructor honors Native students by providing lessons about Native American heritage and culture. Depending upon the prior school experiences of the learners, they quite possibly may not have learned about history from a Native American perspective or even had an opportunity to examine Tribal life today. Learning about some of this history creates an emotional as well as intellectual response for the learners. In my observations of the three courses I saw many examples of teaching Native content from using strategies that elicited both emotional and intellectual responses. The instructor's feedback to a student in the Native American women's course is

an example of a lesson about a Native American nurse who road by horseback visiting the sick and injured in the 1800s. Remarkable about this lesson, is that the students did not know of the significant efforts of this historical Native woman or had an opportunity to ponder the difficulty of her work. The instructor responded:

You have a very good discussion on the loss of traditional healers. As you say these early medicine women paved the way for Native women in medicine and nursing. I always think of Suzy Walking Bear Yellowtail coming to Boston from Crow Agency. It must have been a shock in 1923. And I wonder what her motivation was....although I know there were 5000 Indians in Boston when I grew up there, so maybe she had a support system huh?

Online Women's Student 1 responded with a question, "It must have been an incredible drive to motivate her to move somewhere that is so foreign and being a small town Native. I wonder if she had family there?" To that the instructor said, "At that time there were not many Crows in Boston, but there were a lot of Indians from Canada and from New England and so she may have had some support. The Mohawks were there working in the building industry as steel workers." Learning came to life for this student through her look at history.

In another example in the ethics course, she created an assignment for the students to interview a Native American elder about decision making:

Most of them learned ethics from their grandparents because a lot of the times their parents were either working, they were relocated or they were alcoholics and their grandpas and grandmas taught them the old way, how to take care of horses, how to make food the old way, how to dry meat, how to pray every day and smudge and go in the sweat lodges and that's how they learned right from wrong. And they passed those values down to their children. Basically, mostly it's the grandpas and the grandmas who have taught these people right from wrong. And how to live in the world and how to make good decisions. And that's what ethics is all about.

These two examples are but a "taste" of the lessons I observed. This instructor brought the Native history to life in a way that the students could embrace their heritage with pride.

Teaching Strategy Theme 5. Providing Feedback, Scaffolding, and Questions That Facilitate Movement to Higher Levels of Thinking

This instructor used feedback, scaffolding, and questioning to encourage her students to progress to higher levels of thinking. This exchange between this instructor and Online Ethics Student 1 illustrates this strategy.

Online Ethics Student 1 begins:

I have done some reading on the topic of cloning, and I think this is a real controversial subject, but then again what's not? I guess what my opinion about all

this stuff related to cloning is, we can put laws and guidelines for scientists to follow, but in reality, what goes beyond that is people not following the laws and discovering something fatal and it being the end to the world we all share, so in terms of that I guess its really scary, but as for science discovering something to undo all the damage we have done in the global warming aspect, hey I am all for that....

Instructor:

Ok recently the US government sent out information that it is OK to eat cloned animals and drink milk from cloned cows. What do you think about that? Also can you do a Google search on cloning? I think you need to have a stronger background so we can discuss the issue in depth. Can you get back to me on that?

Online Ethics Student 1:

Sure, I can get back to you on that but I know last night I was looking at some new information on this topic, I guess eating and drinking from a cloned animal really is kind of weird, and I really don't think I would completely ignore the opportunity, especially if we could help out other third world countries that have tons of people starving, and if the price of meat and milk would go down, those might be good things. However, we also have to look and infringe on animal rights, what does that say about how we feel about animals, and is it morally right, even for the economic stand point of view.

Instructor:

I am glad you are thinking of the animal's rights and that is a good thing. In cloning there is one cell that is from the cloning donor and it doesn't hurt the animal at all. I agree it is a good technique for feeding the world in the future. But here is another dilemma...the animals are cloned to be eaten, is that any different from keeping cattle or pigs or any other animal for slaughter?

Online Ethics Student 1:

Ok so no animals are hurt in that perspective I don't think that is harmful, but in retrospect to keeping the cattle or pigs or any other animal for slaughter, could you clarify what your asking or saying, I'm not understanding. Thank you

Instructor:

Well, one of the things you brought up was the question, do animals have rights? So the animals are cloned for food. So I guess my question is if they have rights, do we have the right to kill them and eat them? I know I am getting off the topic, but in the case of animal rights it may be worth talking about. OK so here is my take on the animal rights and slaughtering animals for food: I think when Coyote made the world safe for humans, he also asked the animals to give themselves to us for food and they agreed and so... we slaughter them and eat them. But we have to slaughter in a moral way and not cause harm to the animals.

Instructor:

Coyote is Creator, Trickster. Coyote stories are filled with morality...so this is one I used to help a student realize that it is OK to kill animals for food, but not for fun or to waste its body and just take trophy antlers or such like their fur pelts. So as ethical and moral people we have to make sure the animal is not suffering and that the bullet is true and straight. Unlike the fur farms in China who skin dogs alive just for their fur.

Throughout this interchange with the instructor, the student is deepening her thought and the instructor is interjecting new thoughts and questions. This evidence of encouraging higher order thinking is repeated throughout my observations of her teaching.

Teaching Strategy Theme 6. Assisting Students to use the Learning in their Lives

The first area of orientation of Tribal education addresses the practical needs of Tribal society. To convey this type of learning, Tribal teachers use strategies to enable learners to focus their attention, engage only with learning that has a purpose, and to be flexible and adjust to the experiences of the moment. Learners learn through working and serving others in real world situations. They learn by exploring and observing the ways things happen and compare these ways to the ways of Nature. The instructor in this study reinforced the Native tradition of linking education to life, and believes strongly in connecting her teaching to the real world of the students.

You have to bring it down to adults and apply it to their lives today and how can they use this information. I always go on that premise. How can my students use this information today? How can what I am teaching them apply to them, their career or their lives or something like that and I'll always ask them. There is always a discussion question: How can the information in this module, how can you apply this to your life and your career? Every module has that question. They'll see that. Because I want to make sure that they can see the relationship of what they are learning to their own lives. And if you can't make that connection, then the information they are learning is worthless.

Online Ethics Student 3 shared her experience in one of this instructor's classes about Native American entrepreneurs. She said:

Each week was based on a almost like a characteristic, you know, community service or like, um, not so much strength but just, you just went through and talked about ways that you are, the things that are happening on your reservation and so every week she would have interviews with different Indians on this reservation that went into business. So every week you had an interview that she did with an Indian business owner... And then you would write on that and then at the end of the course, we did our final paper on what we learned from those values, interviews, and how if

we as Indian people were going to start our own business, how we would go about it and incorporate that into your own business.

In many instances the students were learning content and lessons that enabled them to not only relate intellectually to their own lives as in the above instance, but also to their emotional lives as in the following discussion I had with the instructor that described why she developed the Native American Women course.

I developed this course called Native American Women and, because we had so many women who were in treatment for alcohol and they had poor self esteem and they were being abused by their spouse, I wanted them to stand up and see what American Indian women really have done over the years in the arts and in politics and voting and, you know, in spirituality and that's why I wrote that course. And it's so empowering for them. So empowering. They never realized themselves that there were so many wonderful Native American women. All they know is Pocahontas. At the end of the course, I have them write a narrative about a women in their lives that they want to honor. We are writers. We are sports people. We are politicians and advocates and oh my God, it's just wonderful to see them. There is transformation of those women from when they start the course and at the end.

Comments from *Online Women's Student 2* illustrated this type of transformative experience in her learning.

"The power of woman is changing in the world, we are going more power. We are taking back the power from man, we always had power...I think that Indian women are more valued now more than any other woman. Because men are more educated and they see what the Indian women do for the Indian man."

She received this feedback from the instructor:

It has taken Indian women a long time to be proud of themselves. That was one of the big problems. We were told that we had no power and that we were worthless and so over time we believed it. Many of our husbands were drunk and spent all the money on himself and left the family destitute. It is up to us as strong individuals to get out of those relationships, get our education and have a good job so we don't need any financial support from men and if we find someone we can accept as a lover and a partner, they have to play by our rules as well...it is 50-50 huh? Good thinking.

These examples and more that I have not had the opportunity to share in this work, demonstrate this instructor's commitment to the content and conveying this content in multiple ways. The responses of the learners indicate their receptivity to these teaching strategies.

Finding #1: Summary

This first finding of the study showed that the instructor was not part of the context for the learning, but actually was co-creating the learning with the students. She was the "glue" or the connection that held the internal case together and thus assumed a role integral to the learning of the students. But, it was not just the role she assumed. It was the enactment of her philosophy of teaching deeply grounded in Native epistemology that enabled her to assume this role. Her key goal throughout this study was to build the self confidence of the learners and this came from her understanding and honoring of the lives of these learners.

The question for those of us who are not of Native heritage or even for those of us who claim that heritage is, "Can we as teachers assume the role she did with our students?" I don't have that answer even for myself as yet, but I do believe that the capability is rooted in the philosophy of teaching and understanding of the life experiences and epistemology of the learners. This has many implications when learners come from different backgrounds and carry different life experiences. I will discuss this further in Chapter 5.

Finding 2. Learning Experiences in the Online Course

From the NWOK perspective, four themes for the students' learning experiences emerged from analyzing the data. I describe these themes before presenting supporting evidence from the data analysis. The finding, generated through the NWOK lens, describes

the student's processes of engagement and meaning making through the courses guided by the four orientations of NWOK learning in Tribal societies described by Cajete (1994). The four orientations guided my data analysis that generated four different themes of learning experiences.

These themes with the related orientations according to Cajete are in Table 4.2.

Table 4.2. *Connections between areas of NWOK orientation and themes of learning experiences in this study*

Area of Orientation according to Cajete (1994, pp. 222-223).	Four themes of learning experiences in this study.
Orientation 1. "Attention to the practical needs of the Tribal society that systematically addressed learning related to physical, social, psychological, and spiritual needs of Tribal members" (p. 222).	Learning theme 1: Increasing capacity to contribute to the Native community
Orientation 2: "The teaching of individuals in individual ways when they showed the readiness or expressed the willingness to learn. The emphasis was on allowing for the	Learning theme 2: Using one's own ways of learning to develop self-reliance and self- determination from the learning experience.

Area of Orientation according to Cajete (1994, pp. 222-223).	Four themes of learning experiences in this study.
uniqueness of individual learning styles and encouraging the development of self-reliance and self-determination" (p. 222).	
Orientation 3: "Application of special intellectual, ritual, psychological, and spiritual teaching tools that facilitated deep levels of learning and understanding" (Cajete, 1994, p. 222).	Learning theme 3: Developing higher levels of understanding
Orientation 4: "Honoring and facilitating of the psychological and transformational process of flowering or opening to self-knowledge and the natural capacities of learning" (Cajete, 1994, p. 222-223).	Learning theme 4: Developing knowledge about self

The first learning theme is a practical one. This theme is about learning content to 'do' something that can contribute towards the Native community. The learners worked to develop a clear vision of what it is to be Native American in order to affect their interaction

with the Native American community. In other words, the learners used the learning to make a contribution to Native society. Learners engaged in developing skills that were of benefit to many aspects of Tribal life and to many of their other communities of families and friends. The second learning theme is *discovering one's own ways of learning and using these to develop self reliance and/or self determination from the learning experience*. To be able to develop or increase their self-reliance towards self-determination, the students discovered ways that they learn and engage in their own development of self. The third learning theme is higher levels of learning. To be able to experience this level of learning, students learned how to become open to higher levels of thinking, use their own internal resources, and take a stand on issues from an informed perspective. Finally, the fourth learning theme involves learning more about oneself in order to apply learning to their own lives. During the courses, some were able to work on some levels of their own past oppressive life experiences and emerged with greater understanding of past life events.

The next sections are organized by theme and each section provides examples of how the four different forms of learning were manifested in the data. In each of the four themes, the learner is not only learning content but also learning about learning. It became apparent to me that this is a natural process and it is the role of pedagogy not to obstruct this natural process.

In the process of learning in these three courses, the learners were developing the inner resources they brought with them to the learning. The learners let me "see inside" their learning processes through this NWOK perspective. This is an experience I have not witnessed using Western pedagogy and Western assessment tools. I also saw clearly how this learning was tied to their feelings of self worth. These students were able to discover pieces of missing evidence of their own powerful history as Native Americans and by using NWOK, the Tribal college and their instructor gave them the nurturance to engage in this discovery. The students explored culturally relevant content that enhanced their oral histories passed down from extended family members. They produced works of art based upon this cultural history. They questioned their observations of Native life based upon this expanded knowledge.

Learning theme 1. Increasing Capacity to Contribute to the Native Community

This first learning theme related to Cajete's first orientation of becoming a productive member of Tribal society and how this was represented in this study was an increasing capacity to contribute to the Native community. As Cajete (1994) states, this capacity is spiritual as well as material, emotional and social and so are the examples I present here in this first theme. Each example demonstrates students increased understanding of their Native American heritage and how they discover ways to use that new knowledge to interact with their Native American community.

Example A. In the Native American beading course, the learners each created a piece of beadwork that could be worn in a Tribal ceremony or as clothing that contributes towards Native cultural traditions. The instructor and the students were each involved with their own projects. The instructor was creating her own beading project, a total buckskin beaded ceremonial dress for an Australian relative's graduation. She shared her tacit knowledge of beading with her students. The students were working the entire quarter on different projects they could use later as a gift or piece of ceremonial dress.

Students used beads and supplies in this course that were either given to them by family or purchased in Native local beading stores. Because beading is a typical practice of the tribes in the area, there were many opportunities to find appropriate beads for their projects from the Native beading community. The students indicated that they learned more about certain types of beading and where to find beads and beading patterns. . From looking at websites, reading their text, and sharing ideas, they were able to see the work of many tribes.

According to *Online Beading Student 2*, an experienced beader,

I've been learning about new styles of beadwork that I've never even been introduced to and that's pretty interesting....The one thing new that I am doing right now is I am making moccasins for older people. Usually, I generally make moccasins for tiny people like children. I've never made a pair of moccasins for an older, like an older shoe size.

The student above was integrating her new learning into service for the greater Tribal community, by connecting her beading expertise with another's need for moccasins. While not every student's experience had such an obvious connection to the Native Community, the weekly journaling the faculty required for the course assisted the students to reflect upon their own progress with their projects. Many of the students intentionally planned to use the beading they accomplished in this course to be gifts—to family, friends, or others. The act of creating gifts reinforced the Native understanding of relational interactions with community. For example, students included detailed information in their reflections about the people who were going to receive their beading gifts. Journaling also reinforced the connections between learning (beading), doing (giving a gift), and Native community.

Example B₂ One of the issues examined in the ethics course was care of the environment as this relates to Native Americans today. The instructor framed part of the discussion with this assignment that had practical implications for the tribes:

President Bush plans to open up the Alaska Native Wildlife Reserve to drill for oil and gas. Most scientists believe that the oil reserves will only last 10 years and it will take 10 years to develop them. Is it worth the risk? In this discussion I would like you to write a letter to your Senator describing whether you think this is a good idea or not a good idea. Frame your argument to him/her using one of the ethical theories we are learning about.

Prior to writing their letter, the students had this discussion to formulate their ideas.

Online Ethics Student 2:

This would be a great thing for everybody that wants to know what really goes on in the world. One thing I would have to think really hard about is the drilling for oil. To me it is like drilling a hole into your own mother. Indians should know what I am saying here because we treat the earth as our own mother.

Instructor:

You have some good comments, but I want to play Devil's advocate for a minute. Do you know what I mean? I want you to think critically about this. Sure it is like drilling into your mother, like you say. But, mothers are also nurturing as well. When we treat them with respect, they give us everything we need to survive. Like the earth. If we drill with care, because we need oil to survive as a society, and we drill in non sensitive places... then what? Can we drill with care? Do we have the technology to do that? Do we have the will as a society to do it in a good way?

The example above clearly represents the NWOK understanding of earth as mother, and asks the student to connect Native ideas with Western ideas. The students are learning ethics and also 'seeing' the relationship between themselves and the Native community in a new and

different way. Finally, and perhaps most importantly, when the instructor asked students to write their senators and congress people, the instructor was providing another opportunity for students to take action that could enhance or contribute to the Native community.

Learning theme 2. Using One's Own Ways of Learning to Develop Self-reliance and Self-determination from the Learning Experience.

In this second theme, the learning experiences assisted the students to use their own ways of learning towards increasing their reliance upon themselves. This reliance leads to greater self-determination, a sound goal for Native Americans in this world today. The important concept in this theme is the students using their own ways of learning in the process. Their ways of learning had their roots in past experiences and observations. The course design and questions from the instructor enabled the students to recall these experiences and use them in their learning. I provide data from the courses that demonstrates students using their own ways of learning to work with the course content and assignments in order to develop greater reliance upon themselves.

In a beading course example, the learners were accomplishing their own goals with their beadwork. They had prior experiences with Native beading that included hands on lessons from elders. They recalled and used this prior learning to approach new learning in this course. This included developing a new appreciation for the teachings in earlier times of their lives, discovering the personal satisfaction and spiritual connections to their own

beadwork, and developing a new expansive vision of the history of Native American beadwork.

In the ethics course example, the learners were recalling their own experiences with racism, determining racism that exists in Tribal communities, and discussing ways of coping. *Online Ethics Student 1*, in particular, used keen observations of her parent coping with racism in the community while serving as a special education teacher. This experience coupled with her own newer observations of that community enabled her to understand that even though she would like to return to this community to practice once becoming a professional, it would not be a safe experience for either her or her family due to the racism she would experience returning to this community with an education.

In the Native American Women course, students were reading and grasping the power of Native American women throughout history. In their responses to this content, they were exploring their own experiences as women and developing a new sense of empowerment from the stories they were reading.

For the most part, the students shared with me their ways of learning from past experiences. However, students also talked to me about their ways of processing content from the online medium that is important to this study. As they discovered their own ways of learning online, they further developed a sense of self reliance. Two students described what they did prior to posting their ideas or responses to the course discussion. Their level of

effort indicated to me that they were honoring the others in the class with their voices.

Online Women's Student 1 said, "I try to put in a lot of effort in them. I am one of those people who can't just answer with well, yeah. I want to be able to answer in detail, what I am asking and make sure that I am giving quality work. Why do it if you are not going to do it right?" She described her thought processes, "for me, to tell you honestly, it takes me a long time to do my classes. It could take me anywhere from an hour or so to answer my questions. To just really think about my answers. And to collect my thoughts. And ah, figure out how I want to approach it." She compared this to the thought she gave her in class responses and said,

I have to think about what I am going to say more. You know, because when you're in class, you can kind of discuss, it's easier to discuss and just kind of start talking. But the difference between typing is you really got to think about your answer and you really have to decide what you want to say. I pay attention to how I am responding in that way and how I want to come across with my answers. Do they make sense or is my point, and I, you know, am I making my point clear?

Online Beading Student 3:

And I just jot down notes. My brain is moving faster than I can type. And I'm a pretty good typist and I have pretty good you know, language skills and what not. So, I think I keep up pretty well as far as that and it is a little bit more difficult to get all

of my thoughts down on paper instead of just speaking but if I just jot myself notes, like if I am getting way too far ahead, then I won't forget what I wanted to say. And that happens more it seems like if I am doing like writing a big paper or something like that.

Many examples of how this learning theme manifested from the data were evident. However one example will illustrate this theme. In this example students were using their own ways of learning from the lesson to discover their own issues and develop strategies for coping that are necessary for the self determination of a Native American.

Two types of racism discussed in this example were (1) Indian vs. Indian and (2) Indian vs. non-Indian. This discourse illustrates an example of this discussion.

Instructor: "Is there racism on reservations?"

Online Ethics Student 2: "Yes, there is a lot of racism on reservations, non-Indian vs. Indian as well as Indian vs. Indian. It stems from a lack of knowledge and the misconception that people are superior or inferior based on characteristics such as skin color, religion, sexuality, etc.

Instructor: "Who perpetuates or carries on those attitudes?"

Online Ethics Student 4 responded with "Parents who are racist instill pre-conceived ideas and opinions about others in their children, who most likely carry on the racist attitudes."

An "Indian vs. Indian" racism issue the students discussed in this racism module in the ethics course was that of blood quantum for Tribal eligibility. The instructor posted this question to the online discussion: "All tribes set their own enrollment criteria. In many tribes if you are not at least 1/4 Tribal you are ineligible for membership. Should or how can these marginalized people be Tribal members anyway?"

Online Ethics Student:

I guess the members who are not at least 1/4 in blood degree, are still Tribal members, but they are called Tribal descendents. I think a real Indian person is anyone with Tribal member history. I think that any person with Indian in them and who has lived on the reservation is a real Indian person. I think that anyone with Tribal blood who has endured the hardships, and found faith with the Creator is a real Indian.

Online Ethics Student 4 added that she was treated very differently in high school because her skin wasn't dark enough to be Indian nor light enough to be white. She learned more about herself in this class and "just how like different people, no matter where you come from, no matter what ethnic background you come from, people have the same problems. You know, you just think when someone, when somebody is racist against you, you just think it's happening to you and not everybody else."

The instructor guided the discussion to how the students could assist with this racism that was prevalent: "What can we do about it?"

Online Ethics Student 3:

We are responsible for racism because we carry it with us, and we allow people to have racist attitudes and we continue to be uneducated about other people and other cultures, we continue to stay unaware. I think the ethical theory that could be used here is utilitarianism because no matter how the Tribal people treat you as a educated, female, native, its regardless of the individuals personal feelings, but how it makes the majority feel running you out of the Rez.

Instructor: "How can our children know peace among the races or the religions?",

Online Ethics Student 1:

I feel the only way children can know peace among the races/religions is by example. I firmly believe that children learn what they live and some are able to change certain aspects of the environment they grew up in, but most of it is so deep rooted that it never really goes away.

Instructor: "How are we responsible for racism?",

Online Ethics Student 4: "We are responsible for racism by continually judging, harassing and even joking about people based on their race, creed, religion and other beliefs/practices they may have."

Online Ethics Student 1:

In my own life, I as a mother I try to carry myself strong, and in doing so I try not to bestow my own racial prejudices on my children. I know a lot of stereotypes that I grew up learning were taught from my mother, and the same for her and the way she was raised. I know personally I am working towards being more open-minded and less judgmental, but it is tough and difficult to stay on track, especially when I am around family or people who are not trying to be open-minded, but I just think if it as a growing and maturity process, the older I get the more I learn the more open-minded and easier it is for me not to be judgmental. I find myself challenging my beliefs and things that make me uncomfortable that is where I want to be, basically for myself, and to unlearn my own prejudices and to learn my own feelings instead of having someone make the judgment for me.

How do these learning tasks assist with development of self reliance and self determination?

What is the connection? The students, through these tasks and similar tasks, were developing their inner resources. These inner resources provide the foundation for reliance upon self and determination of one's life.

Learning Theme 3. Developing Higher Understanding from the Learning Experience

The third theme of learning experiences requires critical thinking. To be able to experience this level of learning, students must learn how to become open to higher levels of

thinking and learn how to apply "special intellectual, ritual, psychological, and spiritual teaching tools" (Cajete, 1994, p. 222). This would require evidence of using these tools to reach greater understanding. In the beading course, the students used their intellectual tools to read and study forms of beadwork from tribes throughout history. They also learned how to study historical beadwork. From this intellectual discovery, they were able to expand their knowledge and level of curiosity. In the ethics course, the students used their psychological capacity to understand their own experiences with such issues as racism in order to develop ways of coping and understanding their own realities. In the women's course, the students used their readings and reflection to tap their own spiritual potential for empowerment as women, based upon new knowledge of empowered Native American women throughout history. How often had they been exposed to this history in their earlier school experiences? What history books teach about powerful Native American women? These students were able to learn the missing evidence of their own powerful history as Native American women.

I discovered many examples of the students using these various tools in their learning. But, due to a need for brevity, I present an example of students using intellectual skills in the beading course and an example of using both emotional and spiritual tools in the women's course. I did not find the students using ritual tools in this data; however, students talked of smudging as a part of their family life, but didn't relate this to learning.

Example A. In the beading course, the learners were deepening their understanding of the importance of historical Native American beadwork and appropriate ways to study this beadwork, not only learning how to bead. Learning about historical beading—not only learning how to bead-- was meaningful to the students in the course.

Online Beading Student 1, who grew up in a remote reservation talked about beading from Native Americans in Maine:

It was just amazing to me that when I was a little girl, I used to think that the only Indians were in my state. I never knew Indians were all over. I did not know that...and so now, I am like one of these days maybe I'll be in a traveling nurse when my kids are grown and gone and I'll get to go out and explore the United States and just see the different cultures.

Online Beading Student 4:

I find that no matter where you are from every tribe uses nature in their beadwork. My goals were to have a better understanding of different tribes beading and how they do their beadwork. I think that I did understand, because there were some many different kinds of people in the class.

Online Beading Student 1:

All I ever thought was beading has been around forever and how cool is it that Indians have such great creativity. And so that's really all I ever knew. I mean, I

never even read a book about it or anything. So this course has given me a whole new fascination for learning about the history of not just my own Indians but everyone, you know.

Example B. In the women's course, Online *Women's Student 1*, relating her feelings:

It pains me to read the history of our people and the persecution that they endured at the hands of the Black Robes. They came in the name of the Lord but did not live what they believed. If they really believed in Biblical truths they would not have done the evil things they did. They were using religion as a banner for destroying our people. I know that when they stood before, Creator that their deeds would come to haunt them. They abused their positions for their own self gain and no matter how you slice it, it was morally wrong. I read the Bible and nowhere in Scripture have I found what they have done as justified in God's Word. Scripture clearly states that many will say that they have done many works in his name, but God will tell them to depart thou workers of iniquity, I know you not.

These examples illustrate the students using intellectual, emotional or psychological and spiritual tools to learn in a deep way. They indicate the level of understanding that the students were gaining from their online learning.

Learning Theme 4. Learning More about Self

The fourth theme of learning experiences involved learning more about self during the learning process. Here we see the students applying the learning from the course to their own lives and life philosophies. They express connections and spirituality related to their learning. During the courses, some were able to work on some levels of their own past oppressive life experiences and emerged with greater understanding of past life events. Discovering self is a major tenet of Native American learning. In these examples, the students were exploring personal meaning and life experiences that had suppressed their own personal power. The interviews with the students towards the ends of the courses were particularly helpful to understanding some of the growth experienced through this self discovery.

Online Ethics Student 1 was able to share her real ideas about abortion with her instructor. Another was able to tell her strong woman story that in the end sounded like a revealing of her own personal story when I compared it to her interview.

Online Beading Student 1, when asked what learning about the history of beading meant to her as a Native American woman: "Ah, it just makes me feel really proud." Some students found spirituality in their beadwork.

Online Beading Student 3: "Beading it just, it just takes you to a place. It's just a really um, sacred, I think time for you and your heritage and to find that is really amazing."

Online Beading Student 1:

It just takes you to a place. I'm at home. On the couch with my beads. That's where I like to do it best and I have a bar where I tried beading and a table where I tried beading. But on my couch with my beading tray on my lap and all of my supplies right there with me. And I sit with my feet up on a foot stool and the kids will be watching a movie or doing their work or reading to me or whatever. I just go into such a place of peace and serenity.

Online Beading Student 3: "Beading it just, it just takes you to a place. It's just a really um, sacred, I think time for you and your heritage and to find that is really amazing."

Finding #2: Summary

This second finding of the study provides an "insider's" view of the learning the students were experiencing. By viewing these experiences through the lens of NWOK, I was able to see the meaning they were expressing in a different way. I saw that these students were learning for the welfare of their Native heritage as well as using their critical thinking abilities to examine content deeply and apply this content to their own lives. I also saw that they were developing their own ways of learning online. Perhaps in this online environment, it became necessary for the students to reflect about their ways of learning and how to best adapt those ways to this new environment. There was considerable evidence that they were giving the content and assignment much thought before responding.

As a researcher, I had a special opportunity to see inside of the learning these students were experiencing. The qualitative methodology allowed me a glimpse of learning that assessment tools can only begin to approximate.

Finding 3. It takes a Village: Contextual Influences upon Learning from the External Case

The teaching and learning occurring in the internal segment of the case could not have taken place without the support of the Tribal college as is described in interviews with the participants in the external segment of the case. The findings in this section support the second research question for this study: *What are the contextual influences upon these distance online learning experiences?*

Effective online learning for Native Americans was a reality at this Tribal college, not only because of the effective pedagogy and experiences of the learners in the internal component of the study, but also because of the support of the resources that are part of the learning context, the external component of this study, and influences beyond the scope of this study.

I have purposely written this section as a compilation of fourteen voices from over 25 interviews, observations, and review of documents to reflect overall support for student online learning and issues encountered. Because these findings are expressed by more than one source and to protect the identity of the participants, I have not incorporated quotes from

the interviews. These issues directly and indirectly influence the students and instructor in the internal case for this study.

As discussed earlier, in the design of this study, I created internal and external segments of the case study that in this analysis, using the CHAT terminology and framework, now become two interconnected activity systems. The internal segment of the case, which includes data from 8 students and one instructor participating in one or more of 3 online courses taught by this instructor, is now the Internal Activity System (IAS) for the purpose of this CHAT analysis. The external segment of the case that includes data from administrators, faculty, other students, and information technology professionals, is now the External Activity System (EAS) for the purpose of this CHAT analysis. It is this external activity system that is the focus of this Finding 3 that provides a response to Research Question 2.

Research Question 2: What are the contextual influences upon these distance online learning experiences?

In order to present the analysis of the data for Finding 3, I grouped the data into themes, forming four learning challenges experienced by the external activity system. This analysis applied CHAT principles and components that are presented in Chapter 2 and Appendices E and F.

Using CHAT to Construct the Activity Triangle for the EAS

Mwanza and Engstrom (2005) applied CHAT to online learning, looking at "social-cultural and pedagogical practices of the targeted context of use" (p. 459). They cited and used a model from prior work of Mwanza (2002) of eight steps that included questions to examine learners using technology based content to produce objects. These steps and questions were:

- 1 Activity of interest : What sort of activity am I interested in?
- 2 Objective: Why is the activity taking place?
- 3 Subjects: Who is involved in carrying out this activity?
- 4 Tools: By what means are the subjects performing this activity?
- 5 Rules and regulations: Are there any cultural norms, rules, or regulations governing the performance of activity?
- 6 Division of labor: Who is responsible for what, when carrying out activity, and how are the roles organized?
- 7 Community: What is the environment in that this activity is carried out?
- 8 Outcome: What is the desired outcome from carrying out this activity?

Using these eight steps, I constructed an activity triangle for the EAS shown in Figure

4.1.

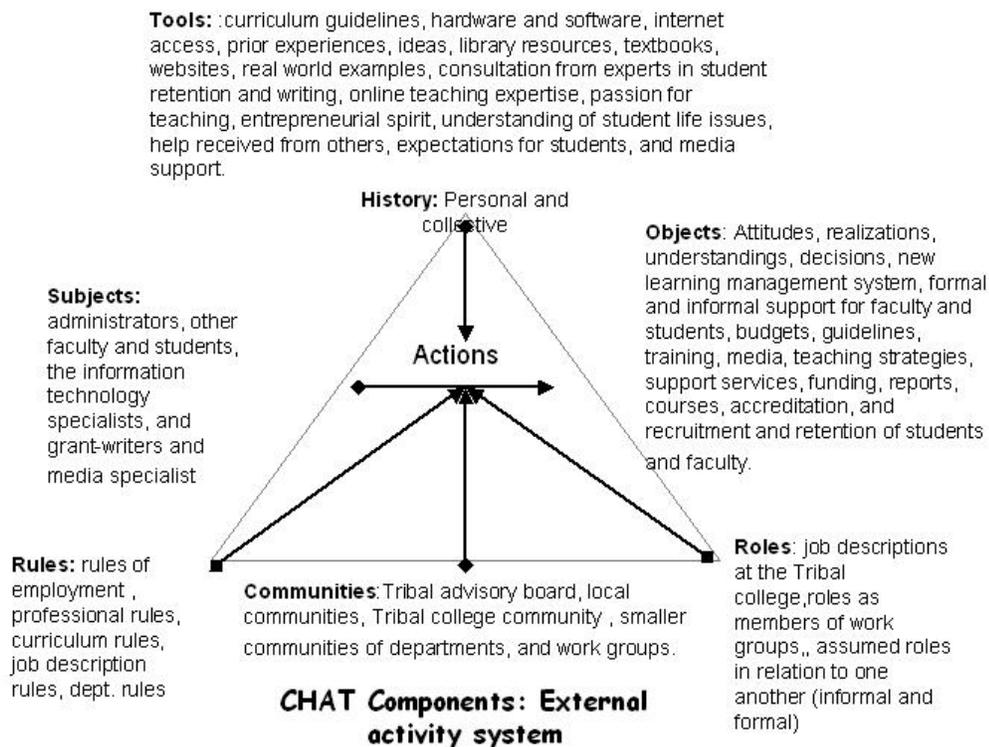


Figure 4.1. EAS Activity Triangle

Learning Challenges in the External Activity System

As stated previously, the four learning challenges emerging from the data included:

- (a) providing infrastructure support to online learning efforts, (b) providing support services for students and faculty, (c) providing technology support to online learning, and (d) increasing workforce development capacity. In this section, I present these four challenges from the CHAT perspective indicating interactions and contradictions encountered in each.

Learning Challenge 1: Providing Infrastructure Support to Online Learning Efforts

One issue facing the students who lived at a distance from the Tribal college, or who have demanding lives and need the flexibility of online coursework, was that they could not access enough coursework online to complete their degrees or to maintain the course load necessary to access student loans. As a result, two of the students in this study were planning to access courses from another university, such as University of Phoenix Online.

Fiscal constraints, expanding the numbers of faculty who teach online especially Native American faculty, recruitment of Native American students, and other priorities had an impact upon this college's ability to increase online learning options. These can be understood as "contradictions" within the activity system. In the CHAT framework, these contradictions are not conflicts, but rather are dialectics that a system must resolve to move forward. There is evidence that the college continues to work with these contradictions because they continue to deliver online courses and experience success with online students.

The first contradiction that this Tribal college faced was competing priorities and interactions with rules and roles.

Historically, one of the main funding streams for the college is Native "count" that determines the amount of federal support the college receives. The college must maintain over a 51% student population who are from federally recognized Native American tribes. Other Tribal colleges in the country have the same mandate for their appropriation from

Congress that allows them somewhere between \$5000 to \$6000 per student per year. The Tribal colleges have jointly agreed not to recruit students away from one another. This poses some difficult considerations for distance education offerings for students not in residence at this Tribal college. If they recruit non-Indian students via distance education, they could potentially dilute their Native count; if they recruit Native American students from other Tribal colleges they are at risk of not honoring their agreement. This college has experimented with offering only upper division courses not offered by the other Tribal colleges by distance, but then encountered difficulties working with students with different backgrounds and preparation.

Another fiscal constraint emerged from inadequate external support from state and federal resources. This college has a scale of tuition requirements based upon residency and Native heritage. The college receives no federal funding for Canadian students. They receive a small stipend from the state for in state students. Another constraint came from student loan programs where many of the students receive loans and the college must continually monitor repayment rates. According to the people I interviewed, this college is considered a "land grant institution". However, as a Tribal college, it receives less funding than the larger land grant institutions in the country, including the historical black colleges and universities.

Learning challenge 2: Providing Support Services for Students and Faculty

One of the goals of the college was the provision of student services. The supports in place for students learning online included: access to funds for college, access to library and bookstore, online registration and advising, and writing resources.

Access to funds for college. Students must come to the college in person to apply for student loans. This is due to a federal mandate that the Tribal college is investigating. Students attending courses at the Tribal college can receive support from their Tribes, from the state, from federal sources such as food stamps, WIC, and Medicaid, and from scholarships provided to the college through the development office by grants and foundations. The college must continually monitor loan repayment and keep default rates to a minimum. Students in this study were taking courses they not required for graduation just to maintain enough credits to be eligible for loans. This became a problem when there were not enough online courses available. Some of the students were unable to access Tribal support for college because they were not formally enrolled or were descendents rather than members. Students had difficulty finding employment as the due to local economic issues; however, some found employment at the college, in Head Start, at the Tribal offices, in local retail, and in local health care agencies and hospitals.

Access to library and bookstore support. The library provides passwords for students. Distance students access these at the beginning of the semester and can access library

databases from home. Departments at the college orient these students to the library or include a library orientation while students are on campus.

The bookstore mails books to students. In addition, some faculty print materials and mail them to distance students. The instructor in this study requires text books and videos and provides other learning objects within the learning modules.

Online registration and advising. Students access registration tools online. They work with their advisors by phone and e-mail.

Writing resources. Many of the faculty from many departments noted that their students have difficulty with writing assignments. This can be a special issue for online learning where most communication occurs via writing. Faculty try to encourage the students to spell check their postings, but avoid being critical online where other students can observe. Faculty and administrators throughout the Tribal college system have developed an understanding that the students need writing skills both to succeed in college and to succeed in professional positions. This is a strong emphasis in two of the baccalaureate level professional programs that received feedback from the professional community that their students didn't have adequate writing skills.

There are plans for students to have access to support from a writing lab or class on campus. However, distance students will still have difficulty accessing support. Some faculty provide writing coaching via email and others offer coaching when students visit

campus. A couple of faculty track their students writing skill development and provide feedback to the students. One department has adopted a writing program and departments are instituting writing requirements for their graduates.

Learning Challenge 3: Providing Technology Support to Online Learning

Technology support needs of students are multi-faceted. Students need access to hardware and software and internet as well as assistance with computer use. There are computer labs on campus available for student use. Students taking online courses generally took them because of the flexibility they afforded and therefore didn't use campus resources regularly. Resources from information technology were available to students needing to access passwords or needing help with the learning management system.

In the past, there was a special lab where students could go for computer coaching. I heard many reports of faculty working 1:1 with students who were having difficulty with their computer skills. The faculty members I interviewed often assume a coaching role with students. In most instances, an hour or two of coaching enables the students to improve their skills enough to participate in class. Students have told me they work with people in the college library to learn their computer skills, talk to information technology specialists, and consult with friends who help them.

In addition to not having state of the art computer systems and internet access, many of the students have not had much prior experience with technology in their high school or

other college experiences. It is the opinion of many that just recently students are coming to college with more and more computer skills from high school; however, many of the students are older and haven't had this exposure. Some of the older students have a level of fear about working with technology. They need tutors or mentors when they are not living near the college or a place where they can go to hook up to the internet and this is rarely available.

Many students lack access to technology especially from their homes, making online classes more difficult. Most of the students in this study had their own equipment. Some used resources of family members, the campus library, and friends. Some students even used distant university libraries. Some are still on "dialup" access to the internet and some do not have access at all. Others had older models of computers. If these students are taking other classes on campus, they have access to computers in labs and in the library or in their community libraries. However, many of these students elect to do online classes late at night when such facilities are not available. I had one student in my study who had computer access but no access to a printer.

There seems to be disagreement on campus of whether or not students should have broadband access so they can receive video and other large files with less download time. Most of the students in the study had at least dial-up access, but most had a "high speed" connection. Some faculty mail materials to the students either in hard copy or by DVD/CD.

Faculty receive encouragement to limit assigning documents requiring large bandwidth.

Students do have access to free printing in the college library.

This college began online learning using lotus notes for online learning. Due to cost and usability issues they created their own learning management system that for many was an effective platform. Faculty and students found it simple to learn. Towards the end of the study, the college was considering moving to the Moodle platform because it is open source and there would be a lower demand upon the IT department for maintenance. New technology brings challenges. A frequent response from faculty was that they strive to make their courses engaging. They adopt a "trial and error" position on course development and share workable strategies with one another. Heavy workloads and lack of time disrupt some of this energy to try new ways of teaching online.

At a point in history, faculty at this college received technology instruction on an as needed basis. In the past there was a lab set up to provide this kind of assistance for faculty. However, in the last few years, the departments have taken upon the task of providing this support, thus decentralizing the lab and faculty coaching. There is still evidence of support, although it is largely informal at this time. There seems, to be a strong willingness on the part of both IT and faculty to help one another with the mysteries of working with technology in teaching.

Learning Challenge 4: Increasing Workforce Development Capacity

One of the goals of the Tribal college is "to assist the Indian community with economic development needs of the Flathead Indian Nation." (Tribal college mission, vision, and goals statements). It is within the mission and goals of this Tribal college to provide continuing education, professional development education as well as assistance to the Tribal departments and businesses in the areas of training, planning and research. The college assists the Indian community in the area of economic development. Further, the college provides 22 work readiness certificates and degrees as indicated in Table 4.3.

Table 4.3. *Work readiness certificates and degrees provided by the Tribal college*

Certificate Programs	Associate Degree Programs	Bachelor Degrees
Dental Assisting Technology	Business management	Business entrepreneurship
Digital Arts & Design	Business technology	Computer engineering
Highway Construction	Dental assisting technology	**Elementary education
Training	*Early childhood education	*Early childhood education
Medical Office Clerk	Engineering graphics	**Forestry
	Forestry	*Information technology
	*Information technology	*Nursing
	*Nursing	**Social Work

Note. Asterisks indicate courses represented by faculty interviewed in this study.

The students in the study were pursuing professional degrees representing social work, nursing, IT, early childhood education, and psychology. The faculty represented social work, nursing, forestry, elementary education, and IT. Six of the bachelor degree professional programs at the Tribal college have online courses in various stages of development and implementation. All are experiencing different successes and challenges as described below. The professional nursing bachelors' degree program has been online for several years and the lessons learned from this program are helpful to new program developers.

Licensure and accreditation issues. The students engaged in the entirely online baccalaureate in nursing program at this Tribal college are already licensed registered nurses. They work with a clinical preceptor at local agencies in the practicum components of their online coursework. This nursing program receives accreditation from the National League for Nursing. Program accreditation is important for these professional programs provided by the Tribal colleges. Currently, the department of social work at the college received a 4 year accreditation for a bachelor's degree program, a segment of that will be online. The teacher education program has accreditation in place, but has not yet implemented online courses even though they have many developed through earlier grant efforts

Need and recruitment. These professional programs target Native American students who do not reside at the Tribal college or in the local communities as well as others who do. In many instances, Native Americans assume technical roles in service delivery on the reservations because they do not have access to bachelor degree programs for preparing professionals. This is true in nursing, social work, forestry, education and information technology. Tribal college faculty desire to offer more online bachelor's level courses because many of the eligible students are working full time on their reservations and have families, making it difficult to move and attend classes as resident students. They proceed cautiously with course development because of concern about the readiness of these workers for this professional preparation and online coursework. There are also concerns about not having direct contact with the students for clinical supervision and professional development. However, in the data there was evidence of considerable faculty commitment towards online professional program development.

Program development. Professional programs require interaction for learning and professional development of students. The social work program is considering use of synchronous video conferencing, faculty traveling to remote students, and online course delivery as well as some on campus courses. Programs such as nursing and social work have a need for students to work with many emotional issues and therapeutic communication with

clients. Therefore, preparing students at distance for these specific roles is a challenging process.

Programs for different disciplines can have different needs. For example, one of the student participants in this study told me of an example of an online early childhood course offered by the Tribal college. She was currently taking five online credits at the Tribal college. Two of the courses were offered through her work at Indian Head Start; one was a course about community service and the other was "Touch Points" with expert, Dr. T. Berry Brazelton. Dr. Brazelton was working cooperatively with Indian Head Start and the Tribal college to bring this course to the Head Start Teachers and early childhood care providers. This student and her mother both worked for Indian Head Start that pays for one course per semester. Many of the people who work for this Head Start are involved in taking coursework. This student said that she was able to apply some of what she'd learned to her work at Head Start. She said her favorite learning was from an article called, "*The Three Million Word Gap*". About this reading, the student said, "It was mind boggling to me how, how children from different socio-economic groups were like, like their vocabulary and just, the actual number of words they use per day is so different. That was just mind blowing to me and that has really stayed with me." She told me that with every word she gave to the toddlers you are working opens up some "connection" for them. "I try really hard just to

really stress their verbal learning with them. So that is one of my strengths and that's one of the things that I learned through online learning”.

In the social work and nursing program and perhaps other programs, there is a need to help professional students develop ways to care for themselves as they care for others. To do this, students must share personal stories and engage in thoughtful dialogue with one another and faculty. The faculty work with the students on such issues as self-advocacy and finding support.

These students must learn how to work with agency issues such as supervision, policy development, and budgeting. In the online nursing curriculum, students work on the role of the professional nurse that includes scholarly writing and reading, working with ethical and legal dilemmas, and determining how to facilitate change within organizations. They take courses related to community health and courses about Native American populations. Assignments in this program are related to the work setting. Students select patient care situations for their written assignments.

Because elementary teacher preparation is very "hands on", according to one instructor I interviewed, faculty have difficulty determining how they could teach students at a distance. However, they do see how the general education coursework could be online, even though the methods courses are difficult to teach in this manner. Information technology has similar issues even though they offer some online courses towards

professional development. There are some concerns expressed by faculty about delivering such a skill-based curriculum as information technology online. They have tried simulated practice, but still are finding that 1:1 interaction with students is superior. However, they do believe that reading and writing courses such as technical writing were more successful online.

In conclusion, there are both affordances and barriers to online learning at the Tribal college. While affordances include passion for helping students, support services in place, informal and formal help systems, barriers are still evident such as fiscal constraints, attitudes towards distance online learning, competing priorities, and other issues presented by requirements for professional education at the baccalaureate level. These strengths and weaknesses provide data essential for future planning. There are strong elements of creativity and entrepreneurship at this Tribal college. Therefore, the future looks strong.

Summary of Chapter 4

These data for the three findings presented in this chapter come from interviews of the students and their instructor, the online discourse of three courses they were taking, papers and products prepared by the students and other tools submitted by representatives of the Tribal College. I also gathered and analyzed data from administrators, technologists, and others working at the Tribal college. This chapter presents the findings from the data collection from the NWOK perspective. The research questions guiding this study were:

Research Question 1: What are the learning experiences of traditional Native American adult learners engaged in distance online education provided by a Tribal college?

Research Question 2: What are the contextual influences upon these distance online learning experiences?

The three findings were categorized into (1) the integral role of the instructor in online learning for Native American students, (2) learning experiences in the online course, and (3) the contextual influences upon learning from the external case. I used NWOK to analyze Findings 1 and 2 and the CHAT perspective to analyze Finding 3. The first finding of the study showed that the instructor was integral to the learning of the students through enactment of her philosophy of teaching and her goal to build self confidence of the learners. The second finding showed evidence of the growth and empowerment of the students as they learned using their Native Ways of Knowing. The third finding provided evidence of the challenges encountered by this Tribal college in delivering online learning that impact the learning experiences of Native students. Further, these findings indicated that the students were not learning in isolation, but rather in a context that provided support and nurturance. This responds to research question # 2.

CHAPTER 5: DISCUSSION

The purpose of this study was to increase understanding of distance online learning experiences of traditional Native American adult students within the context of a Native American Tribal college. The main setting for this study was one of the 34 Tribal colleges in the United States located on a Native American reservation. The Tribal college setting included classrooms, homes, offices, and worksites of many of the participants as well as the cyberspace created by the online learning distributed by the Tribal college.

The research questions guiding this study were:

Research Question 1: 1. What are the learning experiences of traditional Native American adult learners engaged in distance online education provided by a Tribal college?

Research Question 2: What are the contextual influences upon these distance online learning experiences?

The design of this descriptive case study included two components: an internal case and an external case. Interviews, analysis of discourse from three online courses, and document analysis comprised the data from 8 traditional Native American learners and one instructor in the internal case. Interviews and document review comprised the data from faculty, 3 other students, 2 administrators, 2 information technology professionals, and 3

others involved in supporting distance online learning at the Tribal college in the external case.

Understanding the Data through two Theoretical Perspectives

As described earlier, I used two conceptual frameworks to analyze the data. Native Ways of Knowing (NWOK) and cultural historical activity theory (CHAT) provided a dual lens for examining the learning experiences and the context surrounding the learning processes. Further, these two perspectives provided a holistic understanding of the various forces that exerted an influence upon distance learning for traditional Native American adult learners.

Using these two conceptual frameworks within the same study was difficult. NWOK is representative of Indigenous epistemology and CHAT is representative of Western epistemology. The specific ways the two frameworks interacted within the methodology of the study emerged during the process of analyzing the data. When I was working with both frameworks simultaneously, I experienced dissonance.

Prior to and during data collection and analysis, I struggled to determine ways these two dialectical frameworks could be connected. I began my proposal thinking that one framework could embed one within the other. Soon I saw that I was trying to merge a non-linear framework with a linear framework: a "square peg into a round hole" experience. Then, I went to the origins of both frameworks. One has its origins in Indigenous culture and

the other in Marxism. This was not effective in determining ways the frameworks could be compatible. The next step was to think of the two frameworks as very separate and merely two ways to examine the same data with the possibility that new findings would emerge. I finally settled upon using NWOK for the internal case and the learning experiences (response to research question 1) because NWOK is the main epistemology of the learners, the language of their learning. At the same time I determined that CHAT was most effective for responding to research question 2, the context for the learning. Because CHAT enabled me to look at interactions among components and to consider the Tribal college online learning experience as a systems activity, I was able to determine affordances and barriers to online learning.

Emerging Lessons from the Findings

The data analysis conducted in this study led to the emergence of three key findings. The findings focus on a) the overarching role of the instructor; b) the learning experiences of the students; and 3) the role of Tribal college support on the student experience.

Emerging Lesson from Finding 1

The first finding describes the overarching role of the instructor in online learning for Native American students. This instructor was not part of the context for the learning, but actually was co-creating the learning with the students. She was the "glue" or the connection that held the internal case together and thus assumed a role integral to the learning of the

students. The question for those of us who are not of Native heritage or even for those of us who do claim that heritage is, "Can we as teachers assume the role she did with our students?" I don't have that answer even for myself as yet, but I do believe that the capability is rooted in the philosophy of teaching and understanding of the life experiences and epistemology of the learners. This has many implications when learners come from different backgrounds and carry different life experiences. I wondered how she came to know her students so deeply. She did not have access to the interview data I received from them. She did not construct a survey instrument at the beginning of the course. Rather, she used her intuitive sense of understanding, knowledge gained from knowing members of their family from her engagement in the community of the Tribal college and Tribal gatherings, and from what the students shared with her because of the trust they had in her. Some came to her office frequently. Some never did. I recall that she said she knew them "mind to mind" and this is a different way of knowing.

But, although knowing her students was important, I wanted to explore specific ways that she so important to the students' learning. When teaching online she would help them see what they had already learned and were in the process of learning. She would provide feedback to what they said and then ask another question scaffolding them to the next step and enable them to seek more information if they could not substantiate their opinions. She would place students in situations or case studies that enabled them to examine old

assumptions and old ways of thinking and search for new understanding. In connecting the students with their own context or life stories, she would provide assignments that asked them to interview an elder or aunt. Or she would ask them to apply the content to their own lives and share. In connecting students with communities she would facilitate their sharing among one another in the course community, assign them to read or talk with others in their families, or have them visit with an elder in a Tribe. She was the "connector".

The emerging lesson from Finding 1 was that learning is impacted by instructors who are able to connect the learners with their own context, communities, and new learning. In this integral role, the instructor has great impact upon the learning of each student. Although, as Cajete (1994) suggests, a primary task of students who are Indigenous learners is to learn how to learn, the role of the instructor or teacher in this process is paramount according to the data from this study. It is possible that the importance of a caring, nurturing instructor has evolved because of the earlier schooling experiences of the Native learners have been at times quite negative and colonial in nature. It is also possible that the importance of the instructor is higher in importance because the learning takes place via technology. This requires further exploration in subsequent research.

Emerging Lesson from Finding 2. The second finding helped in understanding how the learning process in this study embodied NWOK. I began this study with the background I gained from the literature. As I studied the data and reflected again upon this literature, I

found a connection to the four basic areas of orientation inherent in learning in Tribal societies (Cajete, 1994). The emerging lesson was that I found that the learners were not only learning content, but also learning about ways of learning. In the process of learning in these three courses, the learners were developing the inner resources they brought with them to the learning. The learners allowed me to "see inside" their learning processes through this NWOK perspective. This is an experience I have not witnessed using Western pedagogy and Western assessment tools. I also saw clearly how this learning was tied to their human feelings of self worth. These students were able to discover pieces of missing evidence of their own powerful history as Native Americans and their instructor and the Tribal college experience gave them the nurturance to engage in this discovery.

In addition, this work builds upon the work of McLoughlin and Oliver (2000) who suggest that instructional designers use an epistemology to guide their work that is based upon a constructivist framework. However, the constructivist work of Vygotsky and others who followed his work, is Western epistemology. McLoughlin and Oliver do not base their work upon an Indigenous epistemology as was applied in this study. Future work with Indigenous epistemology and online learning is necessary to move the cultural inclusive instructional design discussion forward.

The Indigenous epistemology inherent in the Cajete (1994) work relies upon Indigenous teaching axioms of teaching traditions of American Indian, East Indian, Sufi and

Taoist cultures. Cajete (1994) stated that he presented the axioms with the hope that "teachers will apply their creative interpretations based on the development of their own lessons and curricula" (p. 223). The instructor's work presented in this study followed many of these axioms adapted to her own teaching style and content. Future research may help in understanding more about the experiences of Indigenous learners with online learning designed to embrace their own epistemology.

Emerging Lesson from Finding 3. Effective online learning for Native Americans is a reality at this Tribal college, not only because of the effective pedagogy and experiences of the learners as evidenced in the internal component of the study, but also because of the support provided by the resources that are part of the learning context. By and large, these resources are a result of the college's honoring of their mission to serve Native American students and their access to resources from federal and private sources.

Needs such as funding for college and living expenses, assistance with technology access and learning, access to distance resources such as online registration, bookstore, and library and support from faculty are essential to address. I found both affordances and barriers to providing support for students learning online at the Tribal college. These strengths and weaknesses provide data essential for future planning. There is the possibility that some of these barriers caused some of the disruptions with the early attempts of this Tribal college to implement distance online learning.

The emerging lesson from finding 3 is that support services from the college are important to the student's successful learning. It is apparent that when these resources were in place, learning was supported and when they were not, learning was more difficult. These students were primarily local students living in the nearby communities. However, students who live at greater distances from the colleges, and therefore must rely upon services from local Tribes and other colleges, may have a different need for services to support their learning. Some of these needs emerged when the college attempted to expand distance online learning to students living in other states. This earlier pilot worked demonstrated a need for collaboration and developing resources on other Native American reservations before transmitting learning to students residing long distances from the college. This will require partnerships and funding not currently in existence.

Two Activity Systems

In the design of this study, I created internal and external segments of the case study that now, for the purpose of discussion and further exploration, I translated into two activity systems: an internal activity system (IAS) and an external activity system (EAS). These activity systems are interconnected in this study, but, before describing the interconnections of these two activity systems, each is described separately.

In the descriptions of each activity system, I have included components, interactions, and learning challenges to provide a fuller understanding.

Internal Activity System: The instructor and 8 students

In the IAS as shown in Figure 5.1, a meta CHAT activity triangle showing all three online courses, the subjects are the students and their instructor. The tools that mediate the actions of these subjects include hardware, software, internet, personal histories, emotion, time, learning supplies, and other tools. The communities that influence their actions include the course community, extended family communities, and friendship and work communities. The rules governing their actions in the online course community stem from their own Native American cultural rules of respect as well as the course syllabus and other Tribal college guidelines for learning interactions. The roles influencing their actions come from their teacher and student roles and their other roles within the communities of influence. Objects they created included new attitudes and opinions, life decisions, papers, art objects, and new ways of learning online.

IAS Interactions. In the IAS as shown in Figure 5.1, the subjects were interacting with the tools, rules, and roles mediating their actions to produce the objects of outcomes of the learning. First, the subject-tool-outcome (S-T-O) interaction shows the students and the instructor working with such tools as their computers and the learning management system to co-construct new meaning and knowledge and attitudes. Second, the actions of the subjects are mediated by the communities of influence (S-C-O). Third, the actions of the subjects towards these objects are mediated by the rules governing the work of the instructor and

students (S-Ru-O). And, fourth, the actions of the subjects towards these outcomes are mediated by the roles of the instructor and students (S-Ro-O) that include the instructor's role to create a safe learning environment and the role of the students to engage in that learning environment.

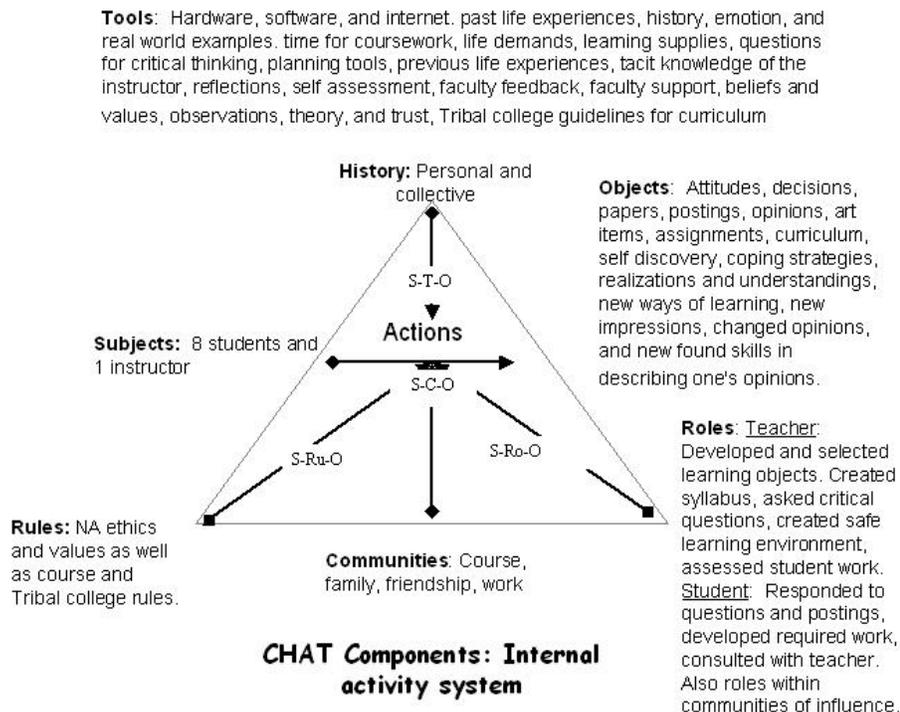


Figure 5. 1 IAS Activity Diagram

External Activity System (EAS)

I present the EAS in the same way I presented the IAS. I include components, interactions and learning challenges.

In the EAS as shown in Figure 5.2, a meta activity triangle displays combined actions of all subjects (administrators, IT specialists, faculty, grant-writers, and media specialist). The tools that mediated the actions of these subjects included hardware, software, internet, personal histories, curriculum guidelines, prior experiences, library resources, professional tools and motivation. The communities that were part of their actions included the Tribal advisory board, local communities, Tribal college community, smaller departmental communities, and work groups. The rules governing their actions together towards course objects resulted from their own job descriptions as well as rules of employment, departmental rules, and other rules. The roles influencing their actions came from their job descriptions and their other roles within the communities of influence. Objects they created included attitudes, understandings, decisions, and exploration of new technology, training, and other objects.

EAS interactions. In Figure 5.2, the subjects were interacting with the tools, rules, and roles mediating their actions to produce the outcomes of the activity. First, the subject-tool-object (S-T-O) interaction shows that the subjects worked with such tools as their

hardware and software to design new courses and support the learning management system. Second, the actions of the subjects were influenced by the communities that govern or surround them (S-C-O). Third, the actions of the subjects towards these outcomes were mediated by the rules governing their work such as the mission of the Tribal college (S-Ru-O). And, fourth, the actions of the subjects towards these outcomes were mediated by the roles of their job descriptions (S-Ro-O).

Tools: curriculum guidelines, hardware and software, internet access, prior experiences, ideas, library resources, textbooks, websites, real world examples, consultation from experts in student retention and writing, online teaching expertise, passion for teaching, entrepreneurial spirit, understanding of student life issues, help received from others, expectations for students, and media support, motivation

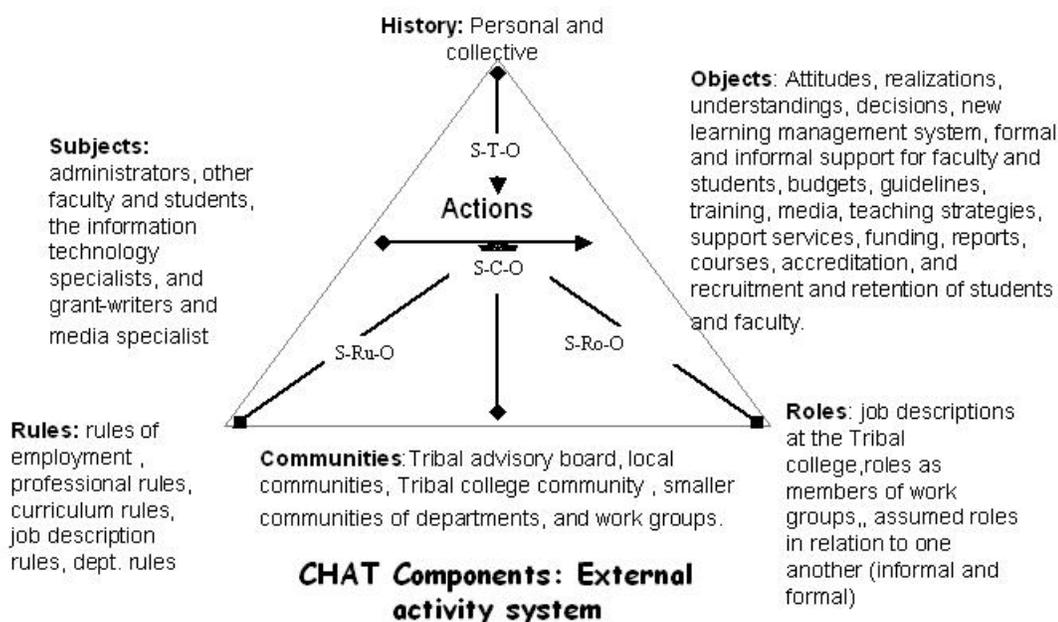


Figure 5.2. EAS Activity Diagram

Emerging contradictions

Contradictions, as described in chapter 2, are key to understanding the fluidity (or lack thereof) of activity systems in the CHAT framework. Essentially contradictions occurred within activity systems when the old ideas or old ways encountered new thoughts or

data that contradicts those older impressions. Contradictions, as described in Chapter 2, often present a need for reconsideration and bring the potential for innovation and change within the system (Engestrom, 2001).

IAS contradictions. In the IAS, the subjects worked with primary, secondary and tertiary levels of contradictions. For two of the students in the beading class, a primary contradiction occurred when they faced using the online discourse to communicate about their beading. Because they were experienced beaders and comfortable beading with Native friends and family, some wanted to meet with other beaders in the class in person to show one another their work and help others. They had to resolve this contradiction and participate in the online discourse because of the rules of the course. The instructor said she would consider allowing one of these students who was not used to discussing online to come in and see her in person and discuss her beadwork, allowing flexibility in the rules. This example illustrates what is perhaps a critical component for successful online learning for culturally marginalized populations: the instructor embodied flexibility in the ‘rules’ of the game, and was sensitive to the cultural and/or communal needs of students.

Many of the students with young children encountered secondary contradictions when the rules of their Native community or their values were to prioritize the care of their children and yet they had to meet the expectations of the coursework. The students resolved these

contradictions by developing ways to manage their time or altering study schedules when other family members could care for their children.

Another secondary contradiction occurred in this study when the learners in the IAS encountered new theory from their readings (demands from the learning environment). This theory revealed the powerful actions of Native women throughout Native American history. These students, many of whom had experienced oppression in their lives and were not particularly empowered women encountered these stories of these empowered women and experienced a contradiction. By resolving this contradiction—through reflection, dialog, and action-- they were able to experience a change in the way they perceived Native American women and their role in the Native community. Similar to the consciousness raising phase of the women's movement, the outcomes of resolving this contradiction emerged over time, in response to triggers from the environment. The learners in the online course were given a new way to interpret and negotiate their engagement and participation in the Native community, and how this impacts their actions will emerge over time. It is important to note that at this secondary level of contradictions, the impact or outcome of 'resolving' the contradiction does not happen once, nor will it automatically happen quickly. Negotiating is a better word than 'resolving' contradictions at this secondary level, because the verb 'negotiating' implies continual participation, over time, in a community.

A tertiary contradiction occurred when the students in the ethics course encountered a learning object about obtaining fur from animals in China without respect for the animal. The students had entered into the module with the expectation of responding to the discussion questions of the instructor and learning about the ethics of other cultures. What the students actually experienced or achieved was different than they had intended. The students were outraged. The students experienced a strong, repulsive conflict with their own values of nature and respect for the animal. In CHAT terms, the students achieved an outcome of a strong, repulsive response when they thought they were going to achieve a more distant, depersonalized understanding of another culture. This contradiction led to strong responses in the discussion and even to their sharing the video with friends and clients.

The instructor helped them resolve this contradiction by having them write a persuasive letter to the government of China about the way the animals were handled. This instructional tactic leveraged the student response and channeled it into an action, further reinforcing the value of empowering students and legitimizing marginalized culture ideas and ethics. In this example, CHAT analysis illuminates another key aspect of this study: once a contradiction occurs, the instructor takes action to resolve it in some manner. Successful online learning in this study seems to be fueled by resolving contradictions continually as they occur. Resolution does not mean solution, because the resolution may mean negotiation over time. However as an instructional strategy, this study points to the

important role of identifying and then dealing with contradictions as they are generated during the course.

Table 5.1. Contradictions in the IAS

<u>Primary contradiction:</u>	<u>Secondary contradiction:</u>	<u>Tertiary Contradiction:</u> when
malfunction of a tool or selection of an inappropriate cultural tool or means of communication	occur when demands from the environment conflict with the rules of the community of the subject	the outcome that the students are trying to achieve and what they actually achieved are different
1. Between communication through technology and communication in person	1. Between tradition of motherhood as priority and demands of coursework	1. Between the desired outcome of learning about ethics of people from other cultures to an emotional outcome of anger.
2. Between watching video and not having access to high speed internet	2. Between social beading and beading alone	

EAS contradictions. In the EAS, a primary contradiction occurred when the motivation needed to enable some faculty to develop and teach online courses was not present. Either due to workload, values, or other priorities or concerns, some faculty were not interested in developing online coursework. At the time of data collection, these faculty continued to teach face-to-face classes without pressure to teach online.

A secondary contradiction occurred when IT professionals had a responsibility to maintain the servers (community rules) and, at the same time, to teach courses or work to assist faculty (demand from the environment). At the end of the period of data collection for this study, they decided to pilot test another learning management system that potentially would allay many of their server maintenance duties.

Another secondary contradiction occurred when students were asking for more online courses (demand from the environment) and faculty workloads limited the time faculty could devote to course development. This remained unresolved and at least one student from the study was enrolling at the University of Phoenix Online.

Another secondary contradiction occurred when the faculty desired to access more students living in remote areas but the rules governing funding for the Tribal college (Native count) made this controversial. This was an ongoing dilemma throughout the study mentioned by many who were interviewed.

A tertiary contradiction occurred when faculty had difficulty making the online coursework engaging. This contradiction was related to another contradiction that occurred when faculty needed support to develop online coursework but there were few resources available to assist them with this task. These contradictions motivated the ongoing meeting of faculty in an informal E-learning workgroup.

Each of these contradictions led to disturbances in both the internal and external activity systems. The period of data collection was too brief to see many changes due to the contradictions but there was movement towards this. I've addressed these contradictions in Chapter 6 with recommendations for action.

Table 5.2 Contradictions in the EAS

<p><u>Primary contradiction:</u> malfunction of a tool or selection of an inappropriate cultural tool or means of communication</p>	<p><u>Secondary contradiction:</u> occur when demands from the environment conflict with the rules of the community of the subject</p>	<p><u>Tertiary Contradiction:</u> when the outcome that the students are trying to achieve and what they actually achieved are different</p>
<p>1. Between faculty needing to create more online courses but not having the motivation (tool) to do so.</p>	<p>1. Demands from school to teach IT classes and rules from job description to maintain servers</p> <p>2. Demand from students to create more online courses but faculty job descriptions (rules) did not allow time to do this</p> <p>3. Demands from faculty and students to create more online courses and Native count rules</p>	<p>1. Faculty trying to create engaging online coursework but could not do so adequately due to lack of time, and experience.</p> <p>2. Trying to support faculty using technology but inadequate resources led to less support than needed</p>

In reality the IAS and EAS were interconnected as shown in Figure X. I have described the interconnections according to interactions, learning challenges, and contradictions experienced. Following this description, I show how breaking down the challenges into smaller sub-activity systems might allow the subjects to better determine future plans of action.

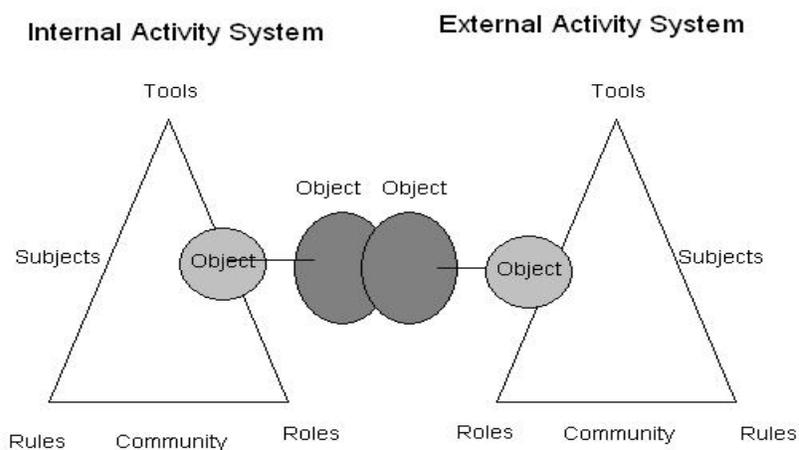


Figure 5.3. Two interconnected activity systems (modeled after Engestrom, 2001, p. 136)

In Figure X, the object produced by the IAS interacts with the object produced by the EAS. In this study, one example of this interaction was the desire of the subjects in the IAS to take online courses with the decision of the EAS to produce online courses. Another was the expressed need of the students for technology support and the decision to provide informal technology support. The third was an expressed need for some students to have support for online coursework nearer to home and the response of the Tribal college to this need.

Fourth Level Contradictions: Interconnected Contradictions Between the Systems

Both activity systems are dynamically engaged in actions toward objects responding to learning challenges described previously. Engestrom (2000) states, "a collective activity system is driven by a deeply communal motive" (p. 964). In this Tribal college system the communal motive is based upon the goals of the college:

1. To provide postsecondary education opportunities for Native Americans in the following areas: degree programs, vocational training, college transfer programs, community service, Native American culture and history, and adult education.
2. To provide a learning environment in that students develop skills in effective communication, critical thinking, cultural understanding, and citizenship.
3. To provide comprehensive student services. (Vision for the Tribal college)

These goals lead to contradictions when the mode of delivery of coursework is via technology. According to Engestrom (1999b), fourth level contradictions involve problems between activity systems. See Figure X above.

Fourth level contradiction 1: An object desired by the students was to be able to successfully complete the one course and be able to enroll in other online courses from the Tribal college but problems within the external activity system made accessing additional courses difficult. Many additional courses that had been developed at one time remained on servers as inactive courses. Contributing to this contradiction was the discovery that many faculty indicated that work loads and other pressures limited the amount of online work they could develop and teach. Many expressed the importance of teaching Native American students in the face-to-face classroom atmosphere. Faculty interviewed demonstrated passion for their content and teaching. This contradiction is seen in Figure 5.4.

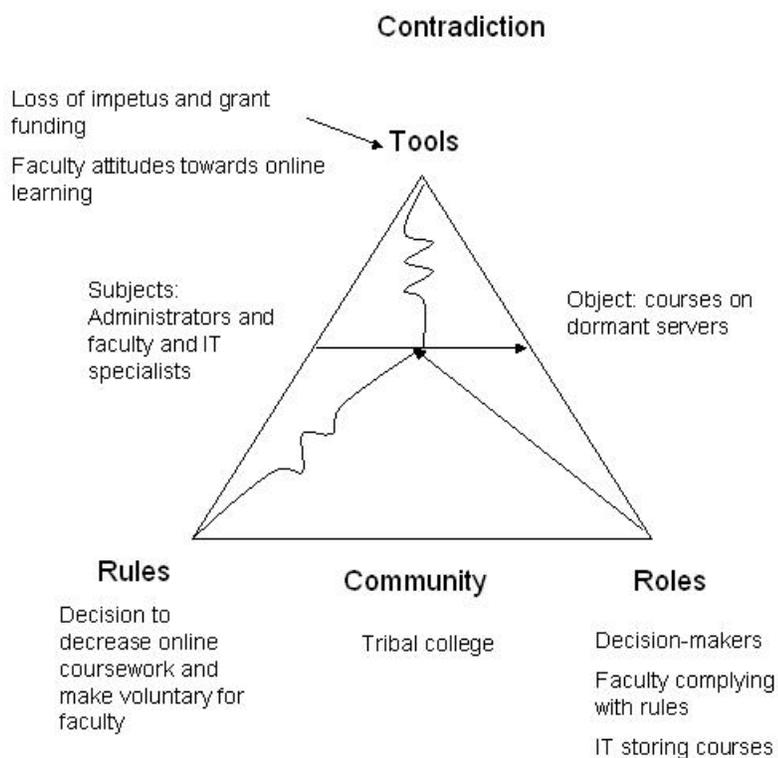


Figure 5.4 *Fourth level contradiction 1*

Fourth level contradiction 2: Some of the students and many of the faculty needed support with accessing technology and learning how to use the learning management system but there were few formal resources available from the Tribal college. When I asked faculty working with online courses where they go for assistance they told me they consult with an informal group of faculty engaged with online learning who meet regularly to discuss their work and provide support to one another. Many whom I interviewed were recalling the days

when there was a centralized support system for students needing assistance and faculty developing online courses. This system was largely funded with grant monies. As grant monies diminished, the development of online learning became the task of individual departments. There was no centralized incubator for new development. There is evidence from the data that people are rethinking the need for such a centralized source. This contradiction is seen in Figure 5.5.

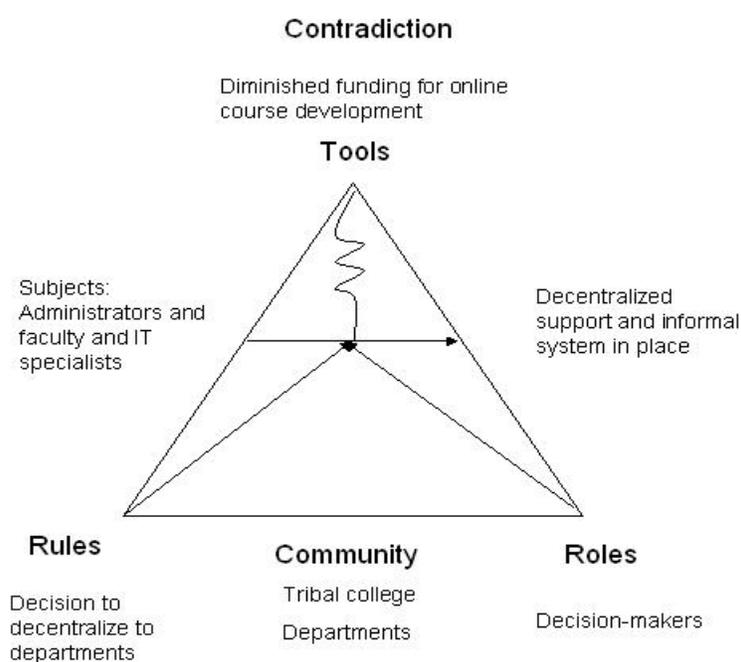


Figure 5.5. *Fourth level contradiction 2*

Fourth level contradiction 3: Some of the students, stressed by living separately from family and having difficulty finding work desired to be able live and work in a distant community and be able to take online courses from the Tribal college and achieve a degree. However, the support resources were primarily housed on campus and not accessible from a distance.

At one time, the Tribal college attempted pilot projects to reach Native American learners on distant reservations with online education. This goal was not fully realized due to many problems such as technology access, prerequisites needed by learners, and needs for support by the learners.

Additional difficulties emerged regarding Native count. In many of the interviews, participants talked about issues of Native count interfering with accessing Native students from distant reservations through technology. Because the Tribal college needs federal monies from their Native count and must maintain a count above 51% to exist as a Tribal college, problems arise when learners at a distance are taking courses at more than one Tribal college, for example. Who counts this student becomes the question. Further, if the Tribal college offers more distant online education and non-Natives enroll, their existing Native count is diluted, also impacting the college. This contradiction is seen in Figure 5.6.

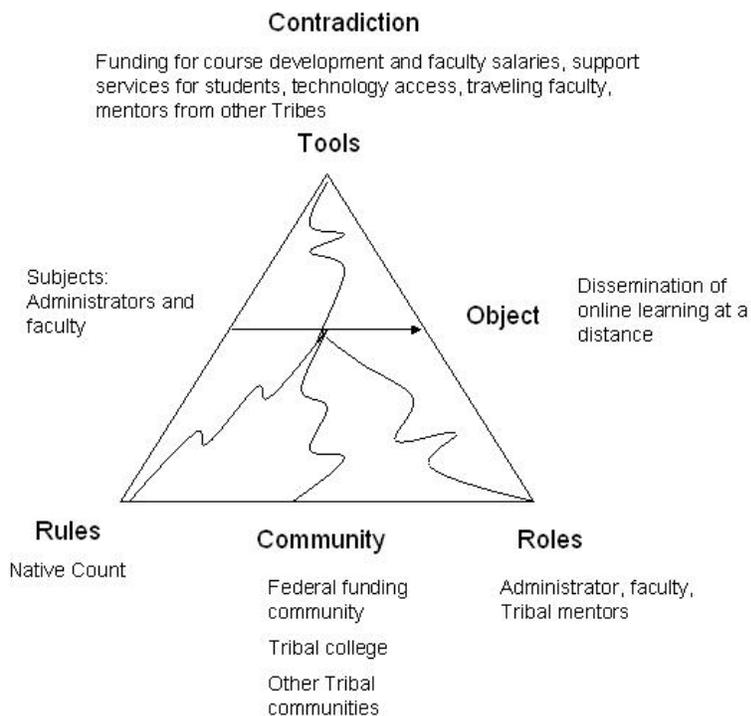


Figure 5.6 *Fourth level contradiction 3*

Summary of Chapter 5: Online Learning at the Tribal College

Three emerging findings from this studied were the focus of this Chapter 5. These findings responded to the two research questions for the study.

1. What are the learning experiences of traditional Native American adult learners engaged in distance online education provided by a Tribal college?
2. What are the contextual influences upon these distance online learning experiences?

The first emerging finding, the importance of the role of the instructor, responded to both questions. The instructor was an integral part of the learning experiences of these students; the evidence from her work responded to the first research question. Her work included:

- Constructing a safe learning space within the online learning environment
- Approaching each student "mind to mind"
- Being "Auntie": Building nurturing relationships with students
- Using NWOK strategies for expression of content
- Providing feedback, scaffolding, and questions that facilitate movement to higher levels of thinking
- Assisting students to use their learning in their lives

There was considerable evidence that her work was also part of the response to the second research question. She was part of the context for their learning experiences as well. Her course design, her questions, her selection of content, her support of the students enriched the context for their learning. In addition, her work helping other faculty develop their online coursework and use the technology was a part of the larger context of the Tribal college that influenced the learning experiences.

This finding provides fertile ground for exploration by faculty and administrators involved with providing online learning for Native American or Indigenous learners. To be

able to teach in the way indicated by the findings from this study, the faculty must be able to "know" their students in ways that aren't usually employed in distance online learning. Pictures submitted by students or brief introductions will not suffice. Instead, faculty must reach out to each individual learner to discover unique and important information that can impact their learning. One potential way for this to occur is to contact each learner by phone and discuss the learner's personal background related to the course objectives. Interviewing these learners by phone in a friendly, caring manner can enable learners to share their prior learning experiences and interests through stories about their past experiences with other courses, life experiences relative to course content, and ways they might apply the content to their own lives.

The second emerging finding was the actual learning experiences of the students and responded to the first research question. The four themes for these learning experiences stemming from NWOK and indicated below provided a way to understand these learning experiences:

- Increasing capacity to contribute to the Native community
- Using one's own ways of learning to develop self-reliance and self determination from the learning experience
- Developing higher levels of understanding
- Developing knowledge about self

This finding has implications for faculty as well. The data from this study indicates that if these themes could be used to drive preparation of course objectives, selecting content and ways to present content, teaching strategies, and student assessment.

The third emerging finding provided a response to the second research question by describing the context for online learning provided by the Tribal college. The supports provide by the college included:

- Providing Infrastructure Support to Online Learning Efforts
- Providing Support Services for Students and Faculty
- Providing Technology Support to Online Learning
- Increasing Workforce Development Capacity

The implications of these findings are especially important for administrators and information technology professionals. Investments in these types of supports and ongoing assessment of student needs and use of the supports can increase student success.

In this study, I saw that the administrators, IT staff, faculty, and others were motivated to learn because of their strong desire to serve the students and fulfill the mission of the Tribal college. Contradictions that occurred because of lack of money, time, and other difficulties provided both positive and negative motivation to learn. But, using an entrepreneurial spirit and their commitment, they engaged in exploring opportunities, interacting both formally and informally and attempting new online work. These

observations provide the data essential to planning infrastructure support for online learning for Native American learners.

CHAPTER 6. CONTRIBUTIONS AND RECOMMENDATIONS

This study is an early step towards understanding the application of Indigenous epistemology in the online learning environment. Further, it enables an understanding of factors that contribute to effective online learning for traditional Native American adult students. The study has provided a descriptive response to the two research questions:

1. What are the learning experiences of traditional Native American adult learners engaged in distance online education provided by a Tribal college?
2. What are the contextual influences upon these distance online learning experiences?

In this final chapter, I provide a description of the contributions of this study towards the application of Indigenous epistemology within the online learning environment. In addition, I provide ideas for "next steps" for both research and practice towards expanding this work to wider audiences as well as developing this work in more depth.

Contributions of this Study to Adult Education for Indigenous Learners

This Tribal college has shown that the application of Native American pedagogy in the online environment can result in effective learning for traditional Native American adult learners and that it is possible to teach culturally responsive pedagogy through technology. The study has described the online learning experiences as well as the context influencing

those experiences for traditional Native American learners therefore responding to the two research questions of the study.

Some of the most significant contributions were those that stimulated new questions for study raised by the experiences of the learners described in this study. When providing online learning experiences for traditional Native American adult online learners:

1. What are the most effective communication strategies for enabling the experience of community within the online environment for Native American students?
2. What are strategies for enabling online students to cope with stress arising from learning that involves exploration of prior oppressive experiences?
3. What are supportive strategies for learners who are stressed by balancing time for learning with competing time-consuming roles within their home and Tribal communities?

Internal Case Recommendations

Taught by an instructor who embraced Native Ways of Knowing, both in content and through instructional strategies, the students engaged in critical thinking through NWOK strategies applied in the online learning environment. They achieved higher levels of learning as well as learned more about how to learn that is a lifelong skill and found ways to apply the learning to their own lives.

Internal Case Recommendation 1: Building Community in the Online Learning Environment. First, effective community building strategies for these students learning online could be addressed by offering hybrid courses or encouraging students living near campus to gather together a few times during the course. This may be especially useful in the courses such as the beading course where some were used to the tradition of beading within a community. For students living at a distance from the college, perhaps the instructors could encourage more engagement with other members of the local community during learning as some of these students were doing with relatives and friends. Efforts to build social networks online may also be helpful. I observed this type of effort in the online discourse from the beading class as students described their beadwork to one another.

Internal Case Recommendation 2. Assisting Students with Conflicting Demands between Family and School. The students in this study experienced strong demands from their families that conflicted with their needs to study. Because they seemed to all share these conflicts, perhaps one of the advisors or counselors at the college could prepare students for the demands of school and conflicts that can arise with family needs. Bringing students together to discuss strategies they were using to cope with multiple demands could be helpful. Building this discussion into each course orientation could enable problem solving as well.

Internal Case Recommendation 3. Coping with dissonance experienced from new learning. These students had some emotional reactions to the content they learned in the coursework. Data showed that students experienced anger reactions to seeing the lack of respect of people from another culture towards animals. Also, the students experienced dissonance when learning about strong Native American individuals when they had never encountered these stories in their earlier schooling. Realizing that dissonance can stimulate learning, I am not suggesting to remove these experiences; rather I acknowledge the strategies used by the instructor in the courses I observed that included: (1) thorough discussion of the dissonance using critical thinking and support and (2) using the dissonance to stimulate action of the students such as writing letters to advocates. However, further study could provide other ideas for enabling students to understand and cope with this type of new learning.

External Case: Questions and Recommendations for the Tribal college

Ambler (1999) recommended that the Tribal colleges be cautious with their efforts to prepare and disseminate distance online learning to Native American students: "With limited resources, they cannot afford to follow the siren of technology and rush blindly into major expenditures. They must scrutinize their missions, their students' needs, and their institutional capacities" (p. 6). In the process of examining their capacities, the Tribal college

could consider the questions raised by participants engaged in supporting the context for the students' learning:

1. What is the effect upon the workload of IT professionals of adopting an open source LMS?
2. How can faculty be provided adequate time and support to develop effective online courses for these students?
3. How can the Tribal college enable increased support for students living at a distance taking online courses?
4. How can the federal funding formulas address new issues arising for Tribal colleges providing distance learning?

Primary limitations to resolving these contradictions seemed to lie in funding constraints, faculty workload and attitudes towards distance learning, and lack of formal support to online course design. I address these limitations in the following three recommendations.

External Case Recommendation 1: Workload Study of IT professionals enabling Online Learning through an Open Source LMS. A workload study of the demands upon IT professionals when the college converts to an open source LMS may assist in discovering new issues arising because of this change. These issues may provide valuable information to assist in future planning towards IT support for the college, learners, and faculty.

External Case Recommendation 2: Faculty Workload and Support Needs. Evidence from this study showed a lack of campus-wide "buy-in" for online learning. The interviews revealed that some faculty prefer face-to-face encounters with students that some faculty did not have the experience or technology skills to teach online, and that faculty workloads were high and did not allow for the development time to prepare online courses. The lack of formal centralized support for Tribal college faculty developing distance learning seemed to be a contributing factor to this lack of faculty support for online learning.

There is the possibility that more faculty would participate in developing and teaching online courses if there was more formal support available. A centralized online learning laboratory could become not only a support mechanism for faculty, but also an incubator for new ideas and pilot efforts. Faculty could experiment with new software and ideas for using Native American pedagogy in the online environment. The current efforts of the E-learning working group could become part of this lab experience, providing a way to provide collegial support as well and develop new approaches to teaching.

External Case Recommendation 3: Support for Distance Students. In earlier experiences with pilot projects, the participants described an absence of support for students living far from the college that seemed to lead to less than adequate responses to the distance educational efforts. The distance students needed mentoring, tutoring, assistance with writing, and personal support.

Strategically developing partnerships with distant Tribal groups as well as other Tribal and community colleges could assist in providing this much needed support. Along with developing these partnerships, the college could consider the practice described by Berkshire and Smith (2000) of bringing distance students to the campus for a few days at the beginning of the quarter to engage in community building, orientation to the learning management system, and problem solving individual concerns. This orientation could involve

1. Housing on campus with childcare
2. Providing a nurturing welcome to the Tribal college experience
3. Individual time with a mentor
4. Advising and counseling
5. Lab time to develop mastery with the learning management system
6. Analysis of their personal computing systems and loading of courseware
7. Introduction to the course(s) and instructors

8. Opportunity to meet other students in their classes
9. Social opportunities such as a Powwow hosted by other students

External Case Recommendation 4: Federal funding formulas and Distance Learning.

The federal funding formula based on Native count was developed prior to the massive dissemination of distance education by major universities in the last few years; Advocacy could provide new opportunities for policy revision. Why should the Tribal colleges not be able to compete for Native students with such institutions as the University of Phoenix Online?

Recommendations for Further Research-Based practice

I have much interest in furthering the work I've begun with this research. Because there is a need for more research targeted towards Native American online learning to advise future practice in this arena, I plan to direct my future endeavors towards action research in Native American settings. Among the directions I intend to pursue are:

Recommendation for Further Research 1: The Importance of the Role of the Instructor

Teaching Online with Native American Students

It is possible that the primacy of the importance of a caring, nurturing instructor has evolved because of the earlier schooling experiences of the Native learners have been at times quite negative and colonial in nature. It is also possible that the importance of the instructor is higher in importance because the learning takes place via technology. This

requires further exploration in subsequent research. This new research could involve a qualitative narrative inquiry of students representing from a similar population that involved retelling stories of past school experiences both positive and negative. However, because we know that the past K-12 experiences of these students have been, for the most part, less than optimal, it may be well advised for instructors to work towards becoming the "Auntie" represented by the instructor in this study.

It is also possible that the importance of the instructor is higher in importance because the learning takes place via technology. This requires further exploration in subsequent research. To discover if this is a possibility, future research could involve more in depth interviews and observations of the students using technology in their learning with two populations; one that lives near the college and can easily access the instructor and one that lives at a distance and does not have face to face contact with the instructor at any time.

Further, to test the findings from this research about the primary role of the instructor, one could perform a similar study with an instructor who has a persona less like "Auntie" and more like the generic online instructor who is an effective teacher but has less of a nurturing approach.

Recommendation for Future Research 2: Increasing the experience of Empowerment and Voice through Online Learning

In this study, I found that some of the learners experience a new sense of empowerment and voice from the online learning courses. Similarly, I had the unanticipated experience of eliciting more personal information from the students using telephone interviews than face to face. Both of these could be serendipitous findings; in fact one might assume before reading these findings that the technology of either the computer or the phone would decrease such learning experiences or communication. Is it possible that the anonymity of distance increased the learner's experience of empowerment and ability to share deep thoughts? Many of these students related oppressive experiences from face to face encounters with teachers in earlier schooling. Further research could determine if these empowering experiences were just a variance resulting from these particular courses and this instructor or if actually there is a role for anonymity with these students.

Recommendation for Future Research 3: How Place Influences Learning in Online Learning for Indigenous Learners

Evidence from this study showed that learners, when learning outside the walls of the classroom in their home communities, engaged members of their family and the community in their learning process. Also, learners expressed satisfaction from learning at home. But a larger question remains. For Indigenous learners, how does learning by technology while remaining on their home reservation or in their lifelong community affect their learning? Are they able to apply the learning to their home community? Are they able to learn more

effectively because they are not removed from their home community? These and other questions require further exploration.

Recommendation for Future Research 4: How this Study Translates to other Native American and Indigenous Populations

It is not possible to generalize from this type of small qualitative study. Further research is required to determine how Native American or other Indigenous learners experience learning in the online environment.

Recommendation for Future Research 5: How Non-Native colleges and Universities could Implement the findings from this Study

Native American students when attending non-Native colleges and universities often experience difficulty and many do not graduate. It may be important to study how the findings of this study would translate to a non-Native college or university.

Plans for my Future Practice Resulting from this Study

At this time in my professional develop I plan to undertake my long term goal of assisting with the development of remote rural access to online learning for specific Indigenous populations. This work, however, cannot be done effectively without continually assessing the educational and political context described in this study. Therefore, I plan to engage in practice accompanied by action research to engage in dissemination of online learning to remote populations of Indigenous people through

- Preparation of workforce development and training via technology for remote populations of Indigenous people
- Development of a nation-wide collection of open access web-based learning objects appropriate for Indigenous learners modeled after or in cooperation with merlot.org
- Extensive dissemination of this work and future research to other professionals who can expand the directions of the work
- Working as a political advocate for Indigenous education via technology

Conclusion

This study is an early step towards understanding the application of Indigenous epistemology in the online learning environment. Further, it is a significant step towards understanding factors that contribute to the effective online learning of traditional Native American adult students. The study has provided a descriptive response to the two research questions:

1. What are the learning experiences of traditional Native American adult learners engaged in distance online education provided by a Tribal college?
2. What are the contextual influences upon these distance online learning experiences?

In this final chapter, I provided a description of how the findings from this study assisted in understanding the application of Indigenous epistemology within the online learning environment. In addition, I have provided ideas for "next steps" for both research and practice towards expanding this work. Future work in both adult education practice and Indigenous education research is needed to more fully understand these findings and their implications as well as to discover new strategies that will enable such effective learning for Native American learners.

Postscript: Notes from the Tribal College

The instructor and my mentor through out this experience read the entire dissertation on behalf of the Tribal college respecting the Indigenous guidelines described in Chapter 3.

She said:

Nancy, I just finished reading your dissertation. It is very Strong in both the native view as well as the western view and can hold up in both. I laughed. I cried, and I was excited to see what you have done with the interviews and the content. It is wonderful to learn how the students thought of the courses and their own learning. I know they are empowered.

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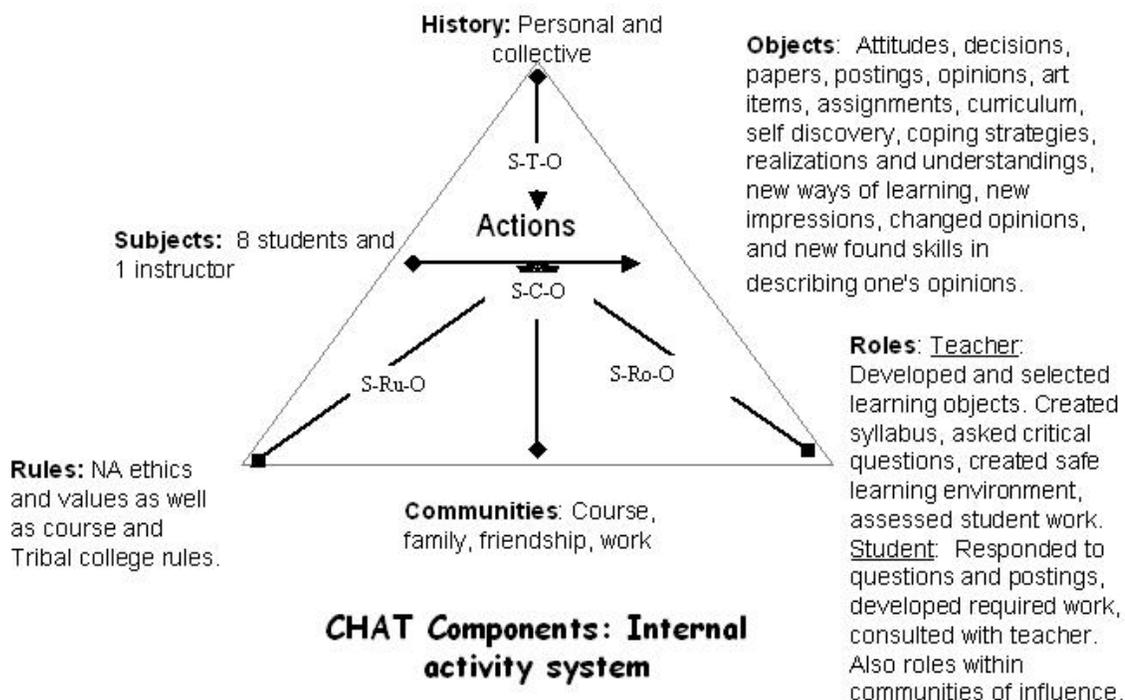
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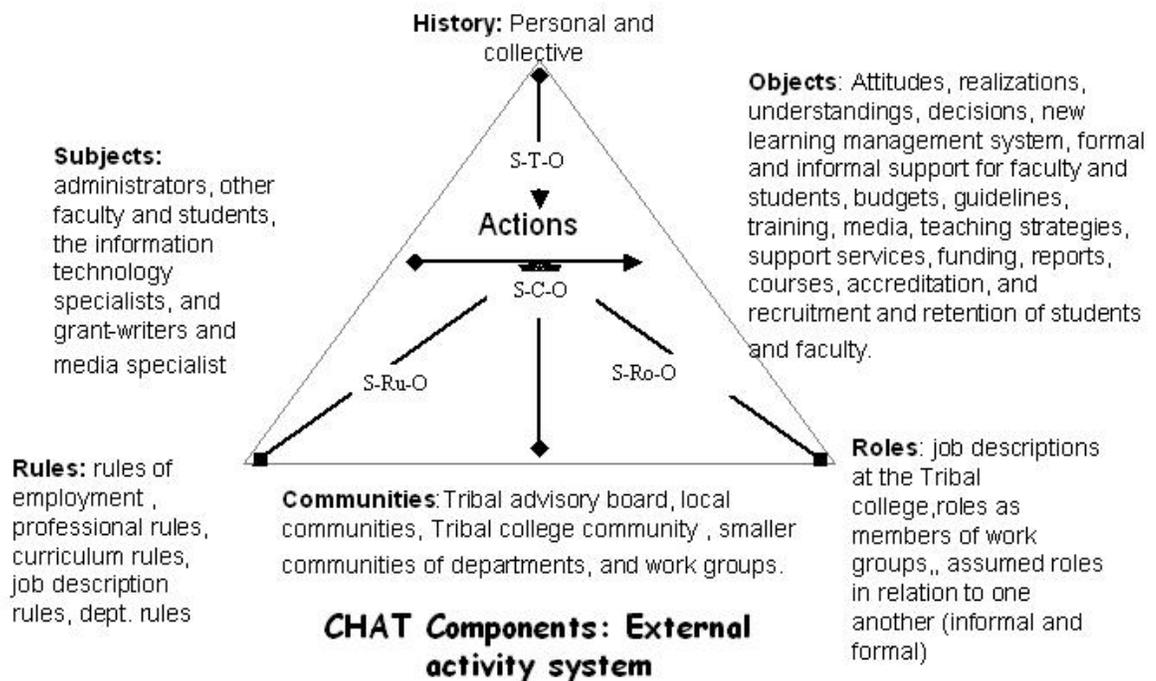
APPENDICES

APPENDIX A: ACTIVITY TRIANGLES SHOWING INTERACTIONS OF COMPONENTS

Tools: Hardware, software, and internet. past life experiences, history, emotion, and real world examples. time for coursework, life demands, learning supplies, questions for critical thinking, planning tools, previous life experiences, tacit knowledge of the instructor, reflections, self assessment, faculty feedback, faculty support, beliefs and values, observations, theory, and trust, Tribal college guidelines for curriculum



Tools: : curriculum guidelines, hardware and software, internet access, prior experiences, ideas, library resources, textbooks, websites, real world examples, consultation from experts in student retention and writing, online teaching expertise, passion for teaching, entrepreneurial spirit, understanding of student life issues, help received from others, expectations for students, and media support, motivation



APPENDIX B. INTERVIEW QUESTIONS

Individual Learners

1. What are you studying in school? How is this going to help you in your future? How does what you're learning help you with that future. Be as specific as possible. What is the reason you are pursuing forestry as a profession?
2. What are the reasons you are taking this class at the Tribal college? For what reason are you taking it by distance learning? How do you hope the class will meet your expectations? What have you gained from taking other classes at a distance?
3. What do you hope to learn from other learners taking the course?
4. Are you able to relate to the content, particularly, the cultural content in your past distance learning courses? If so, what and how?
5. How do you share your life experiences with others online? If so, what have you shared? How did you decide what to share?
6. How have you applied the learning from your distance classes to your own life? If so, how. What in the learning enables you to do this?
7. How is the feedback you receive from your online teachers helpful to your learning? Not helpful? What kinds of feedback do you find most helpful?

8. What content do you find meaningful? How do you apply that content in your coursework?
9. What personal, Native or work related materials do you bring into the course? How do you select these? Explain these materials
10. How do you work with other learners online? What work do you do together? Tell me about your experiences doing this.
11. What is expected of you in this online course? How do you make sense of these expectations?
12. What makes sense to you in this course? What doesn't make sense? What helped you make sense of this?

Faculty:

1. How did you come to teach distance online learning?
2. How did you come to work with Native American learners at this Tribal college?
3. What representations of native culture do you think are important to bring into the learning? How did you discover that these representations were important? What is the history of your including them in your course?
4. What representations would you like to use in the course, but can't for some reason? What prevents you from using these representations?

5. What do you find most rewarding about working with the Native American learners in the online context? What do you find most difficult about working with the Native American learners in the online context?
6. What do you think motivates the learners in your course? What do you think the learners find difficult about your course?
7. What do you believe or value about working with these learners?
8. How does the mission of SKC influence your decisions about this course?
9. How do IT professionals influence your decisions about this course?
10. How do administrators at SKC influence your decisions about this course?
11. How do other rules (federal, Tribal) influence your decisions about this course?
12. Tell me how you see the history and evolution of the SKC distance learning program.
13. What decisions are you making now and have to make in the future?

Administrators:

1. What do you envision for this Tribal college distance learning program? How do you support the distance learning program?
2. How do you connect the distance learning program to the mission of the Tribal college?
3. Tell me how you see the history and evolution of the SKC distance learning program.
4. What decisions are you making now and have to make in the future?

Information Technology Professionals:

1. How do you work with the distance learning program?
2. What decisions are you making now and have to make in the future?
3. What have you done in the past with the program? How does that influence what you do today?
4. What is important about the distance learning program here?
5. Tell me how you see the history and evolution of the distance learning program.

APPENDIX C: DEFINITIONS

Culture. A bounded unit that upholds a collective set of traditions, beliefs, values, and way of life.

Distance online learning: The teacher removed geographically from the learner and not immediately accessible to the learner. The learners connect with the instructor and other learners through asynchronous communication. Internet connections enable the technology that disseminates distance online learning.

Culturally connected online instruction. A coined phrase meaning that the pedagogy is culturally appropriate.

Indian country. This is colloquial and refers to lands owned and managed by legally recognized Native American Tribes in the United States (from Cohen in Horse, 2005). Indian country is “country within that Indian laws and customs and federal laws relating to Indians are generally applicable. It is the territory that is owned or controlled by Native Americans and Alaska Natives (p. 67).

Indigenous. Descriptive of people who live in a place where they have their origins as a people. They live on lands that belong to their culture. There are Indigenous groups of people worldwide.

Native American:. Descriptive of people who have a “certified degree of Indian blood” (CDIB) from a specific tribe in the United States. The blood CDIB was invented by the federal government, but tribes individually determine blood quantum. Native Americans are also named American Indians.

Traditional Native American people. These Native Americans live within close contact of other members of their tribe on Tribal lands or reservations. Their Tribe has specific traditions and beliefs and language. These people practice the traditions of their Tribe as an integral part of their lives. They may or may not speak their Native language.

Tribe. A group of Native Americans, who as a group, have sovereign status with the U.S. Federal government. A federally recognized Tribe can negotiate treaties with federal government. Tribal authority determines who is a member of the Tribe because Tribes are sovereign nations.

Ways of Knowing. This refers to world view and beliefs about the origins of knowledge and the learning. It consists of both epistemology and pedagogy.

APPENDIX D. CHAT PRINCIPLES GUIDING THIS CASE

The first three principles of CHAT developed by Engestrom (2001) are important to this analysis. It is the first principle of CHAT, according to Engestrom (2001) that an activity system is "a collective, artifact-mediated and object-oriented activity system, seen in its network relations to other activity systems, is taken as the prime unit of analysis" (p.136). The data indicates that the participants of the external segment of this case study interact within their external activity system (EAS). Therefore, this analysis according to this first principle, is a systems analysis.

The second principle guiding CHAT analysis is that "an activity system is always a community of multiple points of view, traditions and interests" (Engestrom, 2001, p. 136). It is in the examination of the interactions of these voices that data emerges that responds to the two research questions. In this study the voices of the students, faculty, administrators, IT specialists, grant-writers and developers, and others join together within their respective activity systems and between the two systems.

The third principle guiding this analysis is "historicity" (Engestrom, 2001, p. 136). One can understand activity systems such as this case only when one examines what has occurred over time within the system. "History itself needs to be studied as local history of the activity and its objects, and as history of the theoretical ideas and tools that have shaped

the activity" (Engestrom, 2001, p. 136). In this case, the participants have individual and collective histories that are important data for consideration. The Tribal college beyond the EAS of this study, has a collective history with online learning that is also important to consider.

According to Engestrom, activity systems encounter "learning challenges" that motivate them to action (Engestrom, 2001, p. 139). I present the evidence for Finding 3 in terms of four learning challenges or themes for the Tribal college External Activity System:

- Providing infrastructure support to online learning efforts
- Providing support services for students
- Providing technology support to online learning
- Increasing workforce development capacity

Through CHAT analysis, these learning challenges refer to CHAT components interacting to produce objects and actions. In the CHAT framework, these components are subjects, objects, actions, tools, and community with rules and roles. First I will define these components using examples from the External Activity system. This will lead to describing the findings relative to the four challenges as interacting components within the EAS.

APPENDIX E. CHAT FRAMEWORK COMPONENTS

Components described in Chapter 2 include subjects, objects, actions, and community. Mediators include tools, rules of communities, and roles of communities.

CHAT framework: Subjects. According to Jonassen (1999), "the subject of any activity is the individual or group of actors engaged in the activity." In this study, in the external case or the external activity system (EAS), the subjects are the administrators, other faculty and students involved with online learning, information technology specialists, grant-writers, and a media specialist. These subjects carry with them their own history.

CHAT framework: Objects. Jonassen (1999) states, "the object of the activity is the physical or mental product that is sought" (p. 63). To be an object, a belief, piece of work, or other representation must transform during the activity and be something with that the subject works. Changes in the object move the "subjects toward accomplishment of their goal or an outcome. Because this transformation process continues to motivate activity, the object of activity focuses the intended actions of the object. The transformed object is the motive of the activity" (p. 65). In this study, work towards each of the objects of learning led to a response to one of the four learning challenges expressed above. Objects in this study acted upon by the subjects in the EAS also took the form of attitudes, decisions, realizations, and understandings. In addition these objects included decisions, budgets, guidelines,

training, media, teaching strategies, support services, funding, reports, course designs, accreditation, and recruitment and retention of students and faculty.

CHAT framework: Operations and actions. Operations and actions are two levels of activity of the subjects that they must accomplish to achieve an object or outcome.

Operations are basic to any action and include such basic maneuvers as using software and hardware or incorporating learning objects into a learning management system or reading an online article. When one is a novice at a task, these basic operations are actually actions to the individual because they involve chains of even more basic operations such as reading reports, reading rules and regulations, and reviewing basic course content or even locating a computer, opening the software, or obtaining a password. Actions involve "chains of operations" (Jonassen, 1999, p. 63) and include such higher order maneuvers. Actions in the EAS included developing curriculum to establish learning parameters, interactions with administrators to develop services for students and faculty, writing grants to secure funding, developing reports to satisfy federal requirements, maintaining or developing technology systems, and providing technology access for faculty and students.

CHAT framework: Tools as mediators of actions. The tools in an activity system are the instruments, materials, models, theories, emotions, representations, observations, or information and knowledge that alter the activity, and in turn, are altered in the activity (Jonassen, 1999) and it therefore mediates the actions of the subjects. According to Jonassen

(1999), Leont'ev (1974), believed that tools mediate activity that connects a person not only with the world of objects but also with other people" (p. 75).

In the EAS, the participants used tools such as curriculum, hardware and software, internet access, prior experiences, ideas, library resources, textbooks, websites, real world examples, consultation from experts in student retention and writing, online teaching expertise, passion for teaching, entrepreneurial spirit, understanding of student life issues, help received from others, expectations for students, and media support. Other tools utilized were Native American rights of self determination from federal law, fiscal support to the Tribal college, Tribal college capacity for maintenance of online courses, and development of new online professional pathways and resources for students, and Native American history (past and present).

Chat framework: Communities. The context of an activity system is formed by the communities in that the subjects act. This community "negotiates and mediates the rules and customs that describe how the community functions, what it believes, and the ways that it supports different activities" (Jonassen, 1999, p. 6). However, each of the subjects in both activity systems belonged to various communities that influenced their actions. Jonassen (1999) further states that subjects are always in the process of altering their "beliefs to adjust to the socially mediated expectations of different groups" (p. 66). He also states that the different expectations of these groups can produce conflict among and within subjects such

as role conflicts. It is in the process of working through these conflicts that the activity system takes part in "transformational activities required to harmonize those contradicting expectations" (Jonassen, 1999, p. 66).

The community of an activity embodies the cultural communities that provide a context for the Tribal college and the distance learning system. This context includes not only the social community but also the rules of the community and the roles or division of labor that are part of the community. In the external activity systems, the participants received influence from several communities and assumed different roles and rules within these communities depending upon the community of reference. Some of these communities included the Tribal advisory board, the local communities near the college, and the Tribal college community comprised of smaller communities of departments and work groups.

CHAT framework: Rule mediators of actions in communities. According to Jonassen (1999), "Rules mediate the relationship between the subject and the community or communities in that they participate. The models, procedures, or methods that are culturally accepted in any context can also mediate activity" (p. 75). For example, one of the goals of the college is to provide a learning environment in that students develop skills in effective communication, critical thinking, cultural understanding, and citizenship (the "4 C's"). Ensuring that the graduates are becoming good citizens, are thinking critically, have an awareness of culture, and a sense of their place in the community, is a strong goal of this

school. These "4 C's" direct the syllabi for all courses and therefore provide the framework for the design of objectives and assignments.

In the external case, the rules of employment at the Tribal college governed how participants functioned. Whether in formal or informal communities, all participants act according to the rules sanctioned by the communities. At times the rules among the communities that a subject affiliates with may produce conflict leading to the need to resolve a contradiction.

A guiding rule or principle for action at this Tribal college was the Mission of the college. According to College documents:

The mission of _____ is to provide quality postsecondary educational opportunities for Native Americans, locally and from throughout the United States. The College will strive to provide opportunities for individual self-improvement to promote and help maintain the cultures of the _____ Tribes of the _____ Indian Reservation. The vision of the _____ College is to foster curricula and vocational certification, and associates and bachelors degree programs that meet the unique needs of the Native American population. While the college encourages diversity, its primary purpose is to serve the needs of Native American people.

Individuals within the EAS also have a vision of the ways this mission could be enacted. For example, one person interviewed said that at one time there was the idea that online learning

would give Native Americans living in more rural areas access to education if they didn't have a Tribal college in their area. Another said that this Tribal college could become a leader of all of the Native American institutions of higher education in online learning.

CHAT framework: Role mediators of actions in communities. Roles or the division of labor within communities guide subject actions within these communities. In the external activity system, participants assumed roles matching their job descriptions at the Tribal college. In addition they assumed roles as members of work groups. They also assumed roles in relation to one another such as administrator supervision of faculty or department head supervision of IT professionals. Because of the closely networked climate of the Tribal college campus and the years of history the participants had working together, many of the more rigid roles one might expect from academic hierarchies were less obvious. For example, many of the participants had spouses and adult children working in many roles for the Tribal college. The participants in the external activity system affiliate with the Tribal college community, the Tribal community, their Tribal college departmental community, and a small informal community known as the E-learning task force. All communities seem to hold to the belief that there is great value in the Tribal college experience. The departmental communities represented by participants in this study include Native American studies, environmental science, nursing, social work, information technology, education, administration, development (media). The E-learning community is comprised of those

interested in providing e-learning and consists of faculty and staff who meet regularly to discuss guidelines, practices, new initiatives, and technology and help one another adapt to new practices.

CHAT framework: Historical perspectives. According to Jonassen (1999), "Activity is a historically developed phenomenon. That is, activities evolve over time within a culture. In order to understand the dynamics of a particular situation, it is necessary to grasp the changes or evolutions of that situation over time" (p. 66). Considering the history of the Tribal college and distance online learning is a way to also understand the external segment of the case. The subjects have life experiences they bring; the tools they use have history; the objects they produce are related to this history. The issues they encounter in their learning depend, in part, upon this history.

In the external case history influences the ways the Tribal colleges function and are able to provide a culturally enriched curriculum and higher education experience for Native American students. The legacy of self-determination is evident in the work of the Tribal colleges with their students. In addition, history influences the willingness and expertise available to develop online courses. This college has a history of involvement with online learning. There is evidence of entrepreneurial involvement over many years. Inspired by a man with extraordinary vision for reaching out to Native American people in remote locations, this college has developed approximately 300 online courses. As they have

worked towards development of more online offerings for Native American students, this college has a legacy of successes and failures. They know where the barriers are and have been able to overcome some of the challenges. The future will tell the story about the other online course barriers.

The successes in this history consisted of new online course development, consensus model of decision making, facilitation of centralized support to faculty and students, modeling the successes of other online endeavors at other colleges, accessing extensive funding for development, development of a college-owned learning management system, and recruitment of students from distant reservations. Barriers included fiscal constraints after the grants were completed, loss of key developers and promoters, lack of buy-in from some faculty and others, inadequate preparation of distance students for online learning, challenges of ensuring accurate Native student count, finding support from local Tribes for student mentoring, poor technology skills of some of the students and faculty, requirements for students to travel distances to apply for student loans in person, and the challenges of acquiring program accreditation.

It seems that no decision is made at this school without tapping the lessons learned from the past. The positive lessons have enabled the college to continue the development and delivery of online courses. Faculty continue to develop new online teaching strategies, IT specialists continue to maintain and search for learning management system alternatives,

administrators continue to decide to consider new initiatives. However, the negative lessons have discouraged growth of online offerings, dissemination and marketing of courses, outreach to other Tribal colleges, buy-in of some key people, and access to other grant and foundation funding. Towards the end of the data collection for this study, there was some evidence of a resurgence of interest in online learning, providing more support to students and faculty, re-examining courses stored on old servers, and design of new professional courses towards Native American workforce development.