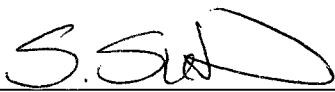


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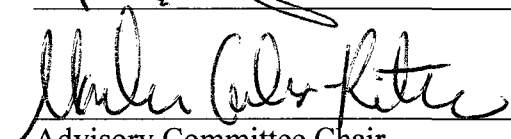
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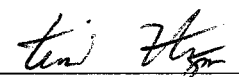
  
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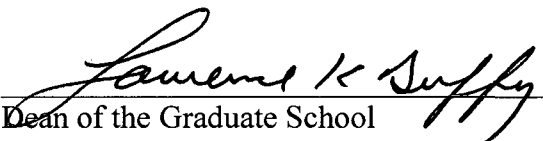
  
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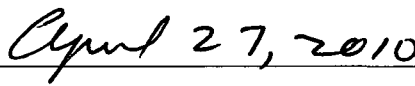
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AUTHENTIC ASSESSMENT FOR YUUYARAQ MIDDLE SCHOOL  
STUDENTS BASED ON THE YUUYARAQ CURRICULUM

A  
THESIS

Presented to the Faculty  
of the University of Alaska Fairbanks

in Partial Fulfillment of the Requirements  
for the Degree of

MASTER OF ARTS

By

Rachel Cikigaq Nicholai, B.Ed.

Fairbanks, Alaska

May 2010

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### Abstract

This study examines how the Yuuyaraq curriculum is being applied in the context of a middle school classroom in a small Yup'ik village in Alaska, specifically focusing on how to better assess the outcomes of the curriculum. In the early 1980s, the Yuuyaraq curriculum (YC) was revised to include the seasonal activities of the region, but lacked alignment with the assessments. By using the Participatory Action Research methodology, the researcher identified a problem, observed the situation, analyzed and interpreted the data, and developed an action plan. Data revealed that authentic assessments used in the Yuuyaraq curriculum can be assess Indigenous knowledge, how teachers' indigenous knowledge contributed to a classroom, and how rubrics are in need in a classroom to monitor student progress. The conclusions include various forms of authentic assessments used in the YC, how teacher's knowledge and practice contributed to a classroom that focused on her students' culture and identity and engaged them in a culturally relevant curriculum through the frameworks of sociocultural theory and Indigenous knowledge systems.

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## CHAPTER ONE INTRODUCTION

### *Introduction to Context*

When I was first assigned to teach a Yugtun Yuuyaraq class to 9<sup>th</sup> and 10<sup>th</sup> grade, I felt I that I wasn't highly qualified in Yup'ik to teach language and culture. It was my first year teaching at Tayarulek<sup>1</sup>. I used to practice and think of fun activities so that my students wouldn't get bored. The assessments I encountered in teaching only asked for skills-based assessments such as spelling words or one-word answer questions. In some cases, they didn't align with the lessons. My students created Yugtun authentic projects such as qaspeqs (kuspuks), taluyaq (blackfish trap), and mats. Since I wasn't experienced in creating assessments, I would have my students reflect on what they had learned about the projects they created and display them in the library with their process reflections. Mid-way through the school year, I developed a simple rubric where students had to circle just *yes* and *no* questions and write comments about what they would do differently to improve their projects if they were to create one again. The authentic assessment system I used was too simple for the high school students, but I used it to at least show their parents the progress their children were making. The inaccuracy of the Yugtun Yuuyaraq curriculum assessments has bothered me up until the time I engaged in this research.

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<sup>1</sup> All names and places in this research are pseudonyms.

It is challenging today to teach Yup'ik language and culture in the same arena of academic English mainstream in the era of No Child Left Behind. Many opinionated people point teachers in different directions based on how they think Yup'ik children should learn. Mostly, those who profess to know how to teach are not insiders to the language or culture.

In a Yup'ik Yuuyaraq classroom, when outsiders see students' create big projects such as fur hats, blackfish trap, sled, or grass mats, they tend to concentrate on the product itself. Those of us who were brought up to keep our Yup'ik ways of knowing, clearly understand that these projects were about more than the end product. Yup'ik values and beliefs are always embedded when creating such projects. During the process, there are certain sayings or certain ways we have to implement and make connections in respects to the environment and spirituality. Kawagley (1995) confirmed this traditional education as a way to understand carefully constructed observation through natural processes and that these are accompanied by thoughtful stories in which the lessons were embedded (p.10). At the same time, we are authentically assessed while creating these projects. Yugtun authentic assessments are the key to improving skills, creativity, and knowledge about creating projects.

Some people in education do not see or understand the process of creating the projects, but only see the projects as decorations. Misguidedly, they claim that the projects are just one of those Yup'ik arts and crafts. Often, they mistakenly assume that there is no link in learning behind the product developed. They might put them in

the category of “for fun” projects. These assumptions can lead to blame games where administrators or teachers worry that students are “left behind” in English and score below their grade level in their English standardized assessments. Because of this pressure, some Yup’ik programs in some villages have reduced their time frame for teaching Yup’ik language and culture.

As a Yup’ik education specialist I have encountered many people who blame Yup’ik programs for lowering state standardized test scores. To counter this claim, I have traveled to conferences, trainings, workshops, and engaged in a lot of research to understand how other Indigenous groups have created programs to improve assessments. Other Indigenous groups such as Maori, Navajo, and Hawaii have worked hard to help students succeed using their language as medium of instruction. In these programs, the students do make connections and transfer from their language to English. Yugtun authentic assessments are one of the key factors to get students generated in making connections from their background knowledge to understand and enhance in English standardized assessments.

### *Theoretical Framework*

The nature of this research is qualitative and sociocultural theory in nature. Vygotsky (1978) believed that learning evolves from interaction of people within their contexts. He said, “We need to concentrate not on the product of development but on the very process by which higher forms are established” (p. 64). O’Malley and

Valdez-Pierce (1996) confirmed authentic assessment are based in sociocultural theory because the tasks are meaningful, challenging, and engaging activities that mirror real-world contexts where the students are expected to perform their best. They argue that assessments need to look at the process as well as the product.

For this study, I am exploring how a teacher in a middle school classroom relies on Indigenous knowledge to inform her way assessing students within the Yupik region. Yupik people have always assessed learning. For Yup'ik people, assessment occurs daily to check for comprehension and understanding of “real life situations” whether they are in a natural, sociocultural, or spiritual setting (Barnhardt & Kawagley, 2005).

### *History of Yuuyaraq Curriculum*

To understand my study, it is important for me to share the history of the Yup'ik Yuuyaraq curriculum. Before Yup'ik Yuuyaraq became the curriculum for the district, in late 1960s and 1970s, the southwestern Alaska villages were under Bureau of Indian Affairs (BIA). Yup'ik orthography was introduced to some villages in the primary level and for others in the intermediate level. The curriculum used at the time was based from Developmental Yup'ik Language Program (DYLP). This program was designed by the collaboration by four school districts Kuspuk School District, Lower Kuskokwim School District, Lower Yukon School District, and St. Mary's School District.

By the mid 1980s, a group of regional elders, language educators, and language specialists redesigned the *Yuuyaraq* Yup'ik curriculum. *Yuuyaraq* was used because it means the Yup'ik way of life including being able to survive using the environment, spirituality, and language. The groups of elders' and educators from interviews and experience developed twelve units. These units cover topics through the Yup'ik cycle of six seasons. The six seasons include winter, pre-spring, spring, summer, pre-fall, and fall. These first sample lessons created by language teachers were not aligned to the formative and summative assessments. They also paced the lessons in two to three week intervals. Because the group wrote the curriculum in a step-by-step way, the lessons or activities, in some cases, were not relevant to various environmental differences of the wide regions of the school district. Because many teachers had concerns about the ineffective activities suggested in the curriculum, there was a push to revisit the old *Yuuyaraq* curriculum.

By 2001, a group of seven Yugtun educators from different regions, after reviewing the older *Yuuyaraq* curriculum, added five more units and developed a scope and sequence. The scope and sequence included all seventeen units within the six Yup'ik larger seasonal cycle themes. It also included topics to be taught and grade level from grades fourth to twelfth. The group of Yugtun educators also suggested various samples of lessons and assessments be created. Unfortunately, the sample lessons were not written until I came on board to the district office in 2003.



When I was hired to work as Yup'ik language and curriculum specialist, I was asked to develop sample lessons based from the scope and sequence developed by the group of seven educators. This came to be called the new Yuuyaraq curriculum. I was directed to develop sample lessons for each of the units using curriculum-mapping design by Jacobs (2004). This curriculum design I selected consisted of essential questions, contents covered, skills, process activities, resources used, and formative and summative assessment section. I developed three sample lessons for each unit so the students will not be taught repetitively each year. Also to encourage teachers not to repeat lessons each year, but choose what their students have not been taught what they needed to understand most. These lessons were only developed as sample lessons so that all sites could use the lessons that relevant to their regions or environment. At this present time, half of the units for all grades from fourth to twelfth are developed and the rest of the units are still in a process of development.

### *Rationale*

The purpose of the study was to understand and developed authentic assessments from growing demands by the Yup'ik Yuuyaraq language instructions in the district. The language teachers wanted more accurate and aligned assessments to include projects created by students. As a Yup'ik language and curriculum specialist I felt obligated to prioritize to conduct this research because one of my philosophies as an educator is to help students enhance in their Native language and culture.

Another reason why I decided to conduct this research came from the complaints by site administrators. There were numerous complaints by the site administrators that the Yup'ik Yuuyaraq classes at some sites were not productive. The students were reluctant to take Yup'ik classes because they were bored by doing paper pencil work. There were some sites that where students were only working on what was called "arts and crafts", not making progress in learning the Yup'ik language.

One of the utmost reasons why I was inspired to conduct this research was to inspire students to embrace their Yup'ik identity, language, and culture. I strongly believe that by embracing their identity first, it will help them to excel their learning in Yup'ik language and culture. Some Yup'ik students are deprived from learning about themselves especially those that were brought up away from their village, family, and their caretakers because of unfortunate outcomes will beyond their will.

### *Research Questions*

My research questions were rooted in understanding my job as a Yuuyaraq curriculum specialist at the district. To proceed with the development of the curriculum and assessments I wanted to know the following: 1) How does the Yuuyaraq curriculum align with the summative assessments? 2) What are the middle school teachers' perspectives on using the newly developed Yuuyaraq authentic

assessments? 3) How can the Yuuyaraq summative assessments be improved for future use by both students and teachers?

The reason why I decided focused on the first question was because I was in the process of developing the new Yuuyaraq curriculum and lessons. I was working on aligning the curriculum directly to the formative and summative assessments. I wanted to see the lessons plans created matched the assessments, so that the teachers teaching the curriculum will be able to see what lessons worked and what didn't. The previous Yuuyaraq curriculum lessons were not aligned and language teachers did not feel that the assessments were effective because they were not specific to the curriculum. Many of the assessments were more of paper and pencil directed and most of the finished projects created by students were not focused as assessments.

My second research question is mostly focused towards the teachers who were teaching the new Yuuyaraq curriculum that I developed. I wanted to see what the teachers thought about the suggested authentic assessments in which the projects were included as part of the authentic assessment. In addition, I wanted to see if the teachers liked the idea of including student input on projects like grass mats, survival cane, and slingshots. The suggested summative authentic assessments included in the new Yuuyaraq curriculum consisted of expressive writing, process writing, oral reports, and technology related projects such as brochures, posters, and video taping of elders. As opposed to the older Yuuyaraq curriculum, which only tested skills based

assessments such as spelling words, simple open-ended questions and were not based on the overall objectives of the curriculum.

The third research question was to help me get input from both the students and the teacher. I wanted to develop meaningful authentic assessments that would be mostly student directed as opposed teacher directed. This was based on the concept that if the students were included in designing the assessments the unit material would become an important part of their learning. As I developed the authentic assessments, I relied on how our elders have taught us about viewing the big picture by including cultural values and beliefs. The elders knew that as the students were creating or learning projects or at times when some objects were taught, the process of assessing to check for understanding and the level of student skills were important. By gathering input from students and teachers I hoped they would feel greater ownership thus increasing Yugtun learning integral with Indigenous knowledge.

### *Limitations*

The purpose of this study was to describe how the Yuuyaraq authentic assessments and curriculum were being applied in context specifically in the middle school at Tayarulek. Because of the qualitative nature of my study, my findings should not be generalized to other studies of Yup'ik schools, nor will others have the same results when implementing similar research. This research was first and foremost conducted with Yugtun teachers in mind, although other language teachers can learn

from my experiences as well. Based from this research, I wanted to use what I have observed, heard, and experienced to further revise and develop assessments to align with the Yuuyaraq curriculum.

My study will not cover how to develop appropriately the Yuuyaraq curriculum because of various regional issues. Since the Yuuyaraq curriculum and assessments are created as samples for the district of 26 schools, it is impossible to address details of what kinds of assessments work for each different regions.

The final limitation was that as the only researcher at the site, the thoughts and interpretations were filtered through my lens. As a Yup'ik speaker, my insider viewpoint can both contribute and limit the understanding of the classroom interactions and assessments.

### *Summary*

In Chapter Two, I connect my research questions to the relevant literature. First, I explore how Indigenous knowledge can positively influence education practices in the Yup'ik region. This literature is crucial to answer my first research question on how Indigenous knowledge impacts the development of Yuuyaraq curriculum and assessments. Second, I examine authentic assessment research because I am examining the process of developing the authentic assessments of the Yuuyaraq curriculum from teacher perspectives. Third, I explore the challenges of implementing Yup'ik program assessment of No Child Left Behind Act. Finally, I

share literature on teachers' perspectives who have utilized authentic assessments in their teaching contexts.

In Chapter Three, I describe how the research methods I employed are closely aligned with the research questions and theoretical framework of this study. For this study I am using a qualitative participatory action research design because I felt it was most appropriate for studying the Yuuyaraq curriculum and accompanying assessments that I helped design. The purpose of this study is to describe how this curriculum is being applied in context. From these observations and feedback from the participants, I describe how I collected and analyzed the data.

In Chapter Four, I share my analysis of the data collected from my study. To analyze my data I used the Constant-Comparative Method (Strauss and Corbin, 1990). First, I share results of what themes emerged about the various forms of authentic assessments used in the Yuuyaraq curriculum. Those themes include a) assessment; b) how teachers' knowledge and practice contributed to a classroom; c) how and when the teachers used Yup'ik and English languages; d) how the teacher intergrated Yup'ik values in the classrom; and e) the observations of the teachers' emphasis on process not product.

In my conclusion, Chapter Five, I will share my action plan as a result of my findings. That action plan includes a) completing the Yuuyaraq curriculum and developing more authentic assessments; b) training Yuuyaraq teachers to use the

curriculum and developing rubrics for students and c) training the Yugtun language teachers to document elders.

As a Yup'ik language specialist, my goal is to improve and promote authentic instructional strategies, develop more cultural materials, and integrate more technology driven interactive materials for students. As a Yup'ik language specialist, I need to train Yup'ik language teachers newly developed materials and effective language instructional strategies that will help promote Yup'ik cultural and language integrities for our students.

## CHAPTER TWO: LITERATURE REVIEW

### *Introduction*

In this chapter, I will make connections to my research questions from the relevant literature. First, I will explore how indigenous knowledge can positively influence education practices in the Yup'ik region. This literature is crucial to answer my first research question on how indigenous knowledge impacts the development of Yuuyaraq curriculum and assessments. Second, I will examine authentic assessment research because I am trying to understand the process of developing the authentic assessments of the Yuuyaraq curriculum from teacher perspectives. Third, I will explore the challenges of implementing Yup'ik program assessment of No Child Left Behind Act. Finally, I share literature on teachers' perspectives that have utilized authentic assessments in their teaching contexts.

### *Importance of Indigenous Knowledge for Assessment Practices*

Many studies have examined the nature of indigenous knowledge in education (Barnhardt & Kawagley, 2005; Kawagley, Norris-Tull & Norris-Tull, 1998; Lipka, Sharp, Brenner, Yanez, & Sharp, 2005). For this study, I am exploring research that discusses specifically how indigenous knowledge informs assessment within the Yupik region. Yupik people have always assessed learning. For Yup'ik people, assessment occurs daily to check for comprehension and understanding of “real life situations” whether they are in a natural, sociocultural, or spiritual setting (Barnhardt



& Kawagley, 2005). Assessment for the Yup'ik people is a life long process starting from infancy to eldership.

Why has assessment been an important part of the Yup'ik life?

*Yuungnaqsaraq* (the ability to survive and be self-sufficient using the natural environment) has always been the primary goal. For example, for Yup'ik people it is vital to know how, when, where, and what to use for subsistence whether it be gathering, fishing, or hunting. *Yuuyaraq* (the Yupik way of life) was encouraged because it helped us to survive and be self-sufficient. The characteristics of *Yuuyaraq* include living by example, respecting and utilizing Yup'ik teachings and sayings, loving and sharing, living in harmony, respecting everything in life, being empathetic, knowing *inerquutet* "do's" in personal characteristics as well as *alerquutet* "don'ts", being humble, respecting *yagyarat* (sacred prohibitions, prescriptions) and *ukvertaq* believing all of these things (John, 1998). All these were important values and beliefs, which were constantly assessed in order to guarantee survival. Whether it be assessment of an action or a product, if it did not meet Yup'ik standards, it would be corrected by elders with their words of wisdom or mother nature's way of punishing with consequences.

Elders pass down the Indigenous knowledge from experience (Barnhardt & Kawagley, 2005; Kawagley, Norris-Tull & Norris-Tull, 1998; Lipka, Sharp, Adams, & Sharp, 2007). This knowledge includes understandings of "place and power" (Deloria & Wildcat, 2001), or "the power that permeates the many persons of the

earth in places recognized as sacred not by human proclamation or declaration, but by experience in those places” (p. 13). Yup’ik people have geographic locations that are sacred because of their experiences in those places. They literally draw power from those places such as mountains, hills, rivers, and lakes. Elders in the Yup’ik culture, because of their wealth of experience and knowledge, speak about legends of *ircinrraat*, the “little people” that possess unexplainable power and dwell among mountains, hills, and lakes. People who are *yalriit* (under cultural prescriptions, or do’s and don’ts, to abstain from certain activities in respects to the spirits natural and spiritual realms) are not permitted to the sacred lands of the *ircinrraat* because of the negative force *mileqtuun* would follow that person. The consequences of *mileqtuun* (or throwback) may include bad luck in hunting for a period of time, illness, or death of a family member. Therefore, we as Yup’ik people can draw on the unique sustaining power of these sacred places.

How exactly were Yup’ik people assessed in the past? When assessing knowledge or ability gained, Yup’ik Elders often use the following terms:

*Yuvriqerlauk* (let’s check on what you have done).

*Kitak elpenek naspaaqerru* (try the task independently).

*Kitak piqerru* (try the task).

*Piyugngaan* (you can work on the task).

Interestingly, all the terms are addressed to one person. This indicates that the Yup’ik authentic assessments were mostly done one on one. Yup’ik people have used the

following assessment practices in everyday life: the process of observing, being guided, independent practice, and assessment of practice and/or assessment of an end product (Lipka, Sharp, Adams, & Sharp, 2007; Barnhardt & Kawagley, 2005). The assessors can be elders, community members, and parents who give constant positive praise, which express to the learners that they are doing well and encourage them to make improvements. This praise is important in the Yup'ik culture because it encourages and motivates learners to try harder to make improvements.

The outcome of strong, culturally relevant, meaningful assessments for students is enhanced by active involvement of parents, teachers, and community members. Shields (1997) has pointed out three needs from learning about assessments from Native American Schools: 1) to understand and make careful interpretation of the tests that are presently used, 2) demonstrate how content currently tested may be used to increase the relevancy and utility of the instructional program, and 3) advocate more widespread use of authentic forms of assessment as primary indicators of individual student achievement. This article is important to my study because the new Yuuyaraq curriculum developed in (June 13, 2001) lacked oral and written authentic assessments. The Yuuyaraq curriculum is unique because it incorporates an extensive amount of Indigenous knowledge in which authentic assessments are most of the time hidden, "it comes from the deep inside" (Yazzi-Mintz, 2007, p 78). For example, some observant Yup'ik children mature at a very young age and are able to grasp higher Indigenous knowledge where they come to know many of the values, beliefs,

cultural expectations, and teachings. A seven year old might be able to tell a story of how to butcher and discard properly the catch and demonstrate respect to the natural realm. This early grasping of Indigenous knowledge comes from experience with family or community members. In addition, families that go camping and do many subsistence activities, such as fishing, picking berries, and hunting with their children, give their children opportunities to experience, observe and expand their knowledge. Rameka (2007) discusses the philosophical framework of Maori proverbs that illustrate the values and beliefs that have always been at the center of Maori education and learning. Rameka argues that assessments must be “linked” to these proverbs. For example in the Maori tradition, there is no living as Maori people without proverbs. Similarly, values and beliefs in Yup’ik culture are more than actions and words. *Qanruyutet* (teachings or proverbs in respects towards spiritual, natural, and human realms) are already imbedded in the Yuuyaraq curriculum to make learning meaningful for students. *Qanruyutet* have always been part of the Yup’ik culture. It is one of the important indicators in Yuuyaraq because it strengthens identity. One example of *qanruyun*<sup>1</sup> is never to leave set fishing nets without checking them regularly, or you will spoil the current and future catch. Therefore, the result will be the fish will stop coming to that body of water and bad luck will come to that particular fisherman in the future.

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<sup>1</sup> Qanruyun written in a singular form meaning “saying or instruction”.

Deloria and Wildcat (2001) explains that Native education occurring in their own communities does not have a set of categories separated from one another, but everything has an intimate relationship to one another. The authors illustrated how their Indigenous education contains dimensions of knowing spiritual power or life force, which is a more complete way of making sense of the world. According to Barnhardt and Kawagley (2005), Indigenous people have their own ways of looking at and relating to the world, the universe, and each other. The context of this was taught early on to the Yup'ik children. The Yuuyaraq curriculum encourages asking elders of the community to act as resources. According to Barnhardt and Kawagley, the depth of Indigenous knowledge rooted in the long inhabitation of a particular place offers lessons that can benefit everyone. Elders resonate from their direct experience about the Yup'ik knowledge. For example, when elders are invited to the school they are told ahead of time to educate students about *qanruyutet* and as they teach the students to connect topics to natural, spiritual, and human realms. Elders' strong words of wisdom are embedded in the Yuuyaraq curriculum. It is because they speak from their experience. The elders instruct through warnings, precautions, or promote the wellbeing of younger generations to continue to generate healthy living as a Yup'ik person. Strong words such as *kenekngamken qanrutqataramken* (Because I love you, I am going to instruct you), were the first opening remarks elders would make to set the stage and attract undivided attention from the audience knowing that this indicates what follows will be an important comment or an instruction.

Gordon (1992) and Nelson-Barber and Trumbull (2007) emphasize assessment procedures that more appropriately reflect the ways in which people think, learn, and work, and that more accurately reflect the life space and values of the learner. Nelson-Barber & Trumbull further explain, “When assessment is not congruent with curriculum and instruction, it cannot produce valid inferences in student learning” (p. 135). Rameka (2007) proclaims that the assessments of children should encompass all dimensions of children’s learning and development and should see the child as a whole. This aligns with the way we bring up Yup’ik children traditionally. In my study, the Yuuyaraq curriculum was developed with the spiral hierarchy learning model (Bruner, 1972). The developmental spiral builds upon and integrates socio-cultural theorists of development and education (Bruner, 1972, Rogoff, 1990, Wertsch, 1998). The spiral hierarchy model of teaching and learning provides a dynamic alternative to linear models. The developmental spiral begins from the understanding that student learning is a developmental process. From the developmental perspective, students learn by doing; they learn what they do, which most often occurs with the assistance of other. For example, in the fourth grade Yuuyaraq curriculum, the students work on the thematic unit of traditional clothing, and create miniature clothing, such as small mittens. They learn which directions furs have to be and they practice the width of stitches. To further their skill and development, in tenth grade, a student is expected to create a real traditional fur parka as a group. They learn the types of patterns and the meanings of why the parka was designed and sewed in a way

that mirrors Yup'ik construction. Therefore, it is legitimate to create assessment based on this project, which will drive the curriculum to be developmentally and culturally appropriate.

For this study, I have created the sample Yuuyaraq assessments utilizing the thematic unit themes developed by the elders from the region, language teachers, and language specialists. Kawagley, Norris-Tull and Norris-Tull (1998) explain clearly why it was important to include elders and community members;

Yupiaq villagers see themselves as the prodders of knowledge. In their daily lives, these men and women are the observers of their environment. There are no special gatekeepers of knowledge. The elders of the community are repositories of traditional knowledge and they see it as their responsibility to educate the younger members (pp.137-138).

It was not easy to create assessment for the whole district region schools because of differences in dialect, geographic location, characteristics, and values and beliefs of the rural villages in the region. Watahomigie and McCarty (1994) explain the complexity of creating these assessments within Indigenous communities where there are many dialect differences. They say, “such a process can be complicated even stymied, by conflict related to regional dialect difference” (p. 27). An example of this complication is illustrated in a study by Watahomigie and McCarty when they worked to create a Hualapai literacy curriculum. The Hualapai language had not been previously written, and they found program staff members held differing views on

appropriate symbols to represent different sounds. To alleviate regional differences at the district where I work, we created assessment designs to serve as examples, thus, encouraging the language teachers to create changes to fit their needs to their environmental setting.

Barnhardt and Kawagley (2005) depict the understanding of learning processes within and at the intersection of diverse worldviews and knowledge systems. The native ways of knowing was well highlighted with the emphasis on Alaska Natives experiences. They captured the unique worldviews of Alaska Natives knowledge systems and categorized the emerging research associated with Indigenous knowledge systems in other fields. Although Barnhardt and Kawagley didn't call their examples *authentic assessment*, they closely resembled a way of assessing native ways of knowing in an authentic way. They are related to the Yup'ik authentic assessments that were developed for the Yuuyaraq. My study resembles their examples that explain how assessments should be administered emphasizing the process rather than the product. Along with Barnhardt and Kawagley, Anderson (1998) argues that learning entails "producing rather than reproducing knowledge" (p.10). This means the information that students learn are assessed from actual process of creating a product utilizing their environment. The learning is never complete or not static. For example, Yup'ik people know when to gather berries and edible plants depending on the weather and time frame of the season. We also know by looking at the geography of the river, currents, and flows where to set the net. We know that weather patterns



affect the fish run. For those of us that live along the Kuskokwim River, when we have north winds all through spring we know that salmon catch will be plenty. Assessments are rarely mentioned in native knowledge because we assess what we have learned by doing in a real-life situation. Barnhardt and Kawagley summarize how Yup'ik people acquire knowledge. "Indigenous people have traditionally acquired their knowledge through direct experiences in the natural world" (p. 11). Indeed Yup'ik people have authentic learning and assessment through direct experiences.

Many studies have examined the importance of Indigenous knowledge for assessment practices and have found that it has always been part of Yup'ik way of life. Values, beliefs, and elders' experiences have helped design the assessment which in fact indicates assessments were mostly done one on one. Involvement from by elders, parents, and community members help shape and design strong meaningful cultural relevant assessments. The assessments have to be congruent to the curriculum or lessons taught. Authentic assessments closely resemble the way of assessing native ways of knowing in an authentic way.

### *Authentic Assessment*

Authentic assessment is an alternative assessment that consists of any method of finding out what a student knows or can do that is intended to show growth and inform instruction, for example, being able to go out hunting own their own, cut fish

on their own, and navigate river on their own. It is an alternative to traditional forms of testing, namely, multiple-choice tests (Stiggins, 1991; O'Malley & Valdez Pierce, 1996). Yup'ik people are not alone in experimenting with ways to implement Indigenous knowledge into school curriculum and assessments (Watahomigie & McCarty, 1994; Rameka, 2007). For this study, I am exploring research that shows how teachers see success in students while utilizing various types of Yup'ik authentic assessments "while engaging in tasks that they perceive as having meaning and relevancy beyond evaluation" (Kamen, 1996, p. 2). This means giving feedback while students are doing their projects or tasks. For example, if children were making *akutaq* (Eskimo ice cream), and were stirring the lard or Crisco in a wrong direction, they were given feedback by their instructor utilizing the cultural standard of creating *akutaq* to always stir clock-wise.

Svinicki (2004) clearly illustrates the definition of authentic assessment using Wiggin's (1998) six characteristics of assessment, which include:

- 1) The assessment is realistic; it reflects the way the information or skills would be used in the "real world".
- 2) The assessment requires judgment and innovation; it is based on solving unstructured problems that could easily have more than one right answer and, as such, requires the learner to make informed choices.
- 3) The assessment asks the student to "do" the subject, that is, to go through the procedures that are typical to the discipline under study.

- 4) The assessment is done in situations as similar to the contexts in which the related skills are performed as possible.
- 5) The assessment requires the student to demonstrate a wide range of skills that are related to the complex problem, including some that involve judgment.
- 6) The assessment allows for feedback, practice, and second chances to solve the problem being addressed (p. 22-24).

Chang and Chiu (2005) in a two-year study developed various formats of authentic assessments to examine 9<sup>th</sup> grade students' scientific literacy. Focusing on the new curriculum for Taiwan, they focused on ways students could apply what was learned in the real-life situations. Three tests were developed including a multiple choice, an open-ended question exam, and a hands-on project that correlated with their national standards. The findings of this study demonstrated that authentic assessments based on projects were better in evaluating students' real life abilities in science than the multiple choice and open-ended tests. The low-achieving students performed better on hands-on tests and not so well on the other two. Therefore, if only one type of assessment had been used, the low achieving students would have been assessed lower than they actually could perform. In my study, I want to understand how authentic assessments are being used in a classroom setting such as described in the study so that we can improve the assessments for future use. Nelson-Barber and Trumbull (2007) also confirmed that experiential, "hands-on education in a real-world context common to Native communities has built into it the opportunity for true,

authentic assessment” (p. 139). For example, creating real life clothing (parka, mukluks, mittens), *taluyaq* (fishtrap), emergency survival shelters are common in Yup’ik region and will help enhance students’ knowledge to improve by practice.

As referred to earlier, Yup’ik people continue to examine and measure comprehension through direct experiences or tasks. Daily tasks are assessed to make sure what was taught prior was done properly and constant feedback helps the learner make improvements. Therefore, Yup’ik assessments are a form of authentic assessment. Like authentic assessment characteristics, most assessments occur through demonstrations, projects, hands-on activities, oral story-telling, and direct experience. The assessments are considered to be an “unbiased and objective way” (Rameka, 2007, p. 5) to provide feedback. Unlike standardized tests, Yup’ik authentic assessments give a lot of feedback and the assessments are real-life situations. They happen without a boundary, a cut-score, and without comparing one learner to another. The Yup’ik assessments continue until the learner reaches the acceptable cultural Yup’ik standards.

Unlike formal schooling, within the Yup’ik culture, assessment is not done utilizing paper and pencil to check for learning. When the learner demonstrates a task, the person guiding them determines whether the person has acquired knowledge or not through observation. If the task is performed proficiently, the learner will go to higher levels. If it was not done right, the learner will be instructed to make improvements. Even if the task was not done correctly, the learner will be guided again until they can

perform the task independently. This process of acquiring knowledge continues until a learner can perform independently. For example, to learn how to cut fish, a person has to practice with a smallest fish. First, the learner is encouraged to observe. Then he/she is guided for a period of time depending on the learner's developmental level. The more experienced person constantly praises the learner even if small mistakes were made until the learner becomes pretty good at cutting fish properly. The independent practice is when the instructor says that they are ready to cut fish. Even if the learner has reached independent level, they are still assessed by the more experienced on where to make improvements. This process continues until the instructor says that the learner will continue to cut fish or try a bigger fish to cut. The process of assessment continues until the learner is able to cut the biggest fish, king salmon. The thing that is helpful in this process is constant feedback from the instructor and the opportunity to observe the instructor who is proficient with the task.

The example shared above connects to Vygotsky's zone of proximal development (ZPD) which is rooted in Sociocultural Theory. Johnson (2004) explains Vygotsky's three main principles to understanding the interconnectedness of children's learning. First, Vygotsky advocated for investigation, understanding and interpretation of social interaction. Second, Vygotsky argued that rational thought and learning originate in social activity. ZPD is "the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or

in collaboration with more capable peers” (p.109). Third, he explained how the role of language and society contributed to the development of higher consciousness. The way Yup’ik people assess has followed these principles long before Vygotsky introduced them to academia. For example, the idea of dynamic assessment using Vygotsky’s ideas mentioned and expanded by Poehner and Lantolf (2005) in their article closely depicts how the Yup’ik people administered assessment in their culture. Dynamic Assessment (DA) is a form of authentic assessment where the instructor mediates activity, gives feedback, and assessment is administered one on one or in small groups. Another key characteristic of DA that is found in Yup’ik assessment is the connectedness of instruction and assessment into the same process. Rather than separating teaching first and then assessing later, the teacher (more knowledgeable other) simultaneously teaches and assess – they are part of the same process.

Much of the research on authentic assessment has not examined or demonstrated the implementation of authentic assessment within a classroom or school setting. Instead, researchers have provided many exciting ideas and great tools of how authentic assessments can be examined to help both the teacher and students to take part in improving learning (Stiggins, 1991; O’Malley & Valdez Pierce, 1996; Shields, 1997; Anderson, 1998; Westra, 2003; Nelson-Barber & Trumbull, 2007). Using this literature that explains why and how to use authentic assessment, my study focuses on assessment and understanding how it is enacted within a real classroom setting.

*Challenges of No Child Left Behind*

Although authentic assessment mirrors the way Yup'ik people provide guidance, these types of assessments are not used within the school setting. I assume one of the reasons is pressure issued by the state and national polices to improve to their standards. Language programs are now forced to mirror the state standards that are not aligned with language acquisition and funding priorities. Rameka (2007) clarifies how the governments have positioned the Native assessments.

These ideas about the child and learning have been generalized and institutionalized to represent universal truths for all human beings, which this has served foster power ideologies and to fabricate a rationale for the marginalization of diverse peoples and cultures as backward and deviant (p. 5).

Forces such as NCLB have made it challenging to maintain and make improvements. The No Child Left Behind act of 2001, has had a “chilling effect” on bilingual education efforts everywhere, including Alaska Native and Native American programs (McCarty, 2008). The affect of NCLB on Indigenous people has been to shift Indigenous language programs in public schools to prioritize English language. Patrick (2008) highlighted prioritized of English in perspective under NCLB which resulted in a K-5 Navajo language program that was eliminated based on state recommendations.

In addition, Nelson-Barber and Trumbull (2007) explain how standardized tests supported by NCLB affect the entire educational process. They lament,

The unfortunate outcome of the NCLB legislation may well be that the educators of Native students move further away from culturally congruent curriculum, instruction, and assessment rather than increasing their use (p. 134).

This shift away from culture and language and appropriate assessments has had a significant affect in the Kuskokwim and Yukon region as well. A number of schools in the Yukon/Kuskokwim Delta have eliminated Yugtun language programs in primary grades to accommodate English language in order to meet Annual Yearly Progress (AYP) (Wyman et al., 2009).

In addition, NCLB was purported to reform education and improve student achievement through, among other mechanisms, demanding strict accountability for results of student achievement (U. S. Department of Education, 2004, as cited in Altshuler & Schmautz, 2006). In the Lower Kuskokwim region, standards-based reform was implemented district-wide, with content and performance standards guiding all instruction in English, with a primary focus on language arts, math, and science. The shift from valuing Yup'ik language and culture to more English-only classes was particularly apparent in the cutting and removal of Yup'ik instruction. This cutting of Yup'ik to increase English was at least in part a reaction to standardized test scores and to avoid federal and state penalties and to supposedly to



help Indigenous students “achieve to the same challenging state standards as all students” (U. S. Department of Education, 2007, as cited in Patrick, 2008, p. 78).

NCLB has a profound affect on instruction as well, especially for the non-certified Alaska Native teachers teaching in rural areas. These teachers who are working to become certified are often discouraged from taking praxis exams because of the high academic language needed in English. The praxis test calls for highly qualified teachers in English, but not in Yup’ik. Although it is not the intention of NCLB, the highly qualified mandate diminishes productive, quality teachers who know how to teach students because of similar background knowledge and experience. Beaulieu (2008) illustrates this situation. In his study of teachers who are defined as “highly qualified” by the statute, he found that most did not seem to have teaching skills to students and address linguistically and culturally background. Thus, teachers who know the culture are kept out of the classroom, while “highly qualified” teachers are not prepared to build on funds of knowledge native students and other diverse groups bring to the classroom.

The pressures of NCLB have degraded and lower the priority to uplift Yup’ik language programs. The shift away from culture and language has had significant affect on schools in the Yup’ik region. It has discouraged non-certified Alaska Native teachers teaching in the rural communities to seek to get certified. Despite discouragements the Yup’ik language teachers have had some positive encounters in the area of authentic assessments.

*Teachers' Perspectives of Authentic Assessment*

Teachers play a crucial role in implementing authentic assessment. Their viewpoints of authentic assessments make a difference because they are the ones in charge of the classrooms. As Yazzie-Mintz (2007) states “teacher too have lenses (often different than the student) that shape their view of teaching and view of the learner” (p. 74). This means teachers have important roles especially when it comes to curriculum and assessment development. They are the ones who are involved in children’s educational paths and know what students are able to accomplish through daily direct interaction in classroom.

In one study, Kamen (1996) describes an elementary teacher implementing various types and strategies of authentic assessment. He observed the teacher implementing the assessments and she reported how helpful various authentic assessments were for her class. The reason why the implementation was successful was because of the collaboration with the stakeholders (administration, parents, teacher, university faculty), and allowance of teacher flexibility and ownership in regards to using different assessment strategies. Kamen’s research methodology was somewhat related to mine because I collaborated with the Yup’ik language teachers to develop rubrics to assist with authentic assessments for her students.

Having developed the curriculum, I wanted to observe the teacher to examine if in fact the Yup’ik authentic assessments were utilized. I wondered if any

assessments were occurring while the students were doing the task. For example, when students were working on their projects of creating a fur hat, while they were sewing, the teacher often observed students' projects and give feedback, and the students didn't seem to notice being assessment because they were so engaged with their project. First, the teacher used positive statements such as, *assirpaa* (great job) *nutaan atam!* (that is awesome!) and then, finally, suggested improvements for the project. Her knowledge of the culture and Yup'ik language enhanced the students' abilities to learn and grow in an authentic way.

Supporting the idea that teachers' proficiency in their language and culture enhances the developed of appropriate curriculum and assessment, Yazzie-Mintz (2007) describes how three Navajo teachers brought their "Navajoness" into the classroom as they plan, assess and teach. She argues that

in addition to pedagogy being an essential part of the instructional plan, the teacher's personal history and degree to which she has acquired cultural knowledge in and outside of school—is an essential component in defining a culturally appropriate curriculum for classrooms in which Native students are educated (p. 80).

This educator's perspective of how much language and culture is reflected by Navajo teacher to her classroom is reflected in my study. The teacher I worked with brought her "Yupikness" to the curriculum and assessments. Thus, her perspective of the

assessments on the ground level was crucial to the continual development and improvement of these assessments.

In conclusion, authentic assessment, for Yup'ik people, is not a new kind of measurement, but has always been part of the Yup'ik way of life. Elders play an important role by teaching, sharing, and living by example for the younger generation because they possess greater knowledge about life from experience. Authentic assessment is a life-long process because all living things in life are considered sacred and respected. Authentic assessments are unbiased because they are hands-on real-life experiences. Constant feedback was an important mechanism to bring about improvements. The structured form of assessment mandated by state and federal governments in the academic arena does not seem to mirror the way Yup'ik people are assessed. Indigenous teachers are important factors when it comes to the development of assessments because they are the major assessors for the Yuuyaraq curriculum. Because they understand the local context and culture, as well as the students, they are able to measure what works and what doesn't.

Teachers are the main facilitators of designing authentic assessments that mirrors the way the Indigenous students should be assessed in collaboration with the stakeholders that have took part in creating the design. The proficiency of knowing language and culture ensures appropriate development of curriculum and assessments. Community involvement with the inclusion of elders helps strengthen the assessments based from greater knowledge about life from their experiences. For Yup'ik culture,

authentic assessments are not new and unbiased because they connect to real-life experiences. The assessments mandated by state and federal governments do not reflect the way the Yup'ik people are assessed.

## CHAPTER THREE: METHODOLOGY

### *Introduction*

In this chapter, I will describe how the research methods I employed are closely aligned with the research questions and theoretical framework of this study. For this study I am using a qualitative participatory action research design because I felt it was most appropriate for studying the Yuuyaraq curriculum and accompanying assessments that I helped design. The purpose of this study is to describe how this curriculum is being applied in context. From these observations and feedback from the participants, I will use the data to inform future practice. This will help me to develop an action plan of what can be done in the future to improve the use of the Yuuyaraq curriculum and assessments. I decided to use participatory action research (PAR) within the framework of qualitative research to understand my research questions which are 1) How does the Yuuyaraq curriculum align with the summative assessments? 2) What are the middle school teachers' perspectives on using the newly developed Yuuyaraq authentic assessments? and 3) How can the Yuuyaraq summative assessments be improved for future use by both students and teachers? In this chapter, I define qualitative research and PAR and how I am using them as tools to help me answer my research questions. I also discuss the setting, the participants, who I am as an instrument of research, the data collection methods I used and how I analyzed the data.

### *Qualitative Research*

The nature of this research is qualitative because it investigates the Yuuyaraq curriculum and assessments within a school setting. Qualitative research (Rossman & Rallis, 2003) has the following characteristics 1) takes place in a natural setting, 2) uses multiple methods, 3) involves thick description, 4) is emergent rather than prefigured, and 5) is interpretive. Qualitative research, according to Mills (2003), uses narrative, descriptive approaches to data collection as a way to understand how things are and what it means from the perspectives of the research participants. The descriptive qualitative approaches that I am using in my study include researcher journal, face-to-face informal discussions, classroom and community observations, photographs of projects, and audio recorded face-to-face semi-structured interviews.

One of the characteristics of qualitative research is that it takes place in a natural setting. It is conducted in a natural setting of the community or classroom, but not in a structured lab. My research took place in a small community school setting, a natural setting for the students and their teacher. I did not change the setting except to introduce the revised assessments for the Yuuyaraq curriculum.

Another characteristic of qualitative research is that it uses multiple methods. In my research I used student and teacher interviews audio recorded, classroom observations, artifacts (lesson plans, Yuuyaraq curriculum, summative assessments, and pictures of students), field notes, a developed survey and rubrics.

The third characteristic involves thick description (Geertz, 1973) of what is being researched or observed. In my research I wrote observation notes with in-depth descriptions of happenings in the classroom. I also took field notes to describe what I experienced while doing the research. For example, I noted what happened before and after Yup'ik Yuuyaraq class and transitions. In addition, I wrote detailed notes of the actions I observed while the Yuuyaraq classroom teacher. I wrote clear, specific notes describing the teacher's actions in the classroom.

The fourth characteristic of qualitative research is that it is emergent rather than prefigured. Emergent being that it occurs naturally without being planned. Prefigured meaning it was structured or outlined to expect to happen. In my research the actions in the classroom and outside activities occurred naturally. The interactions by students and their teacher came naturally without planning the outcome.

The final characteristic is that the data is interpretive. Interpretative meaning through my lens I observed, interviewed, and experienced the variety of interactions by students and their teachers in their classroom from regular classroom activities, projects, field trips, and elder interviews. In my research I interpreted what happened from data collected. The meanings were conveyed from the data collected from the research I conducted.



### *Participatory Action Research*

Participatory action research (PAR), as described by Wadsworth (1998) is a recognized form of research that focuses on the effects of the researcher's direct actions of practice within a participatory community with the goal of improving the performance quality of the community or an area of concern. Mill's (2003) defines it as any systematic inquiry conducted by teacher researchers, principals, school counselors, or other stakeholders in the teaching/learning environment to gather information about how their particular school operates, how they teach, and how well their students learn. According to Stone (2008) and Wadsworth (1998) the primary characteristics of PAR is creation of locally relevant-knowledge. As the primary researcher I had an active and critical role in designing and conducting the project rather than objectively documenting the process.

The characteristics of PAR according to Wadsworth (1998) include 1) taking direct actions within a participatory community; 2) identifying a problem; 3) critical reflection of the historical political and cultural context on the study site; 4) observation; 5) systematic approach to reflecting; 6) analyzing and interpreting the data; and 7) developing an action plan.

The first characteristic of PAR involves taking direct actions within a participatory community, which means bringing an action to improve the performance or quality of an area of concern. With my research, I brought the new authentic

assessments in the Yuuyaraq curriculum in an effort to demonstrate student growth. In the past, only spelling was assessed within the curriculum. The goal of the new assessments was to help create a more accurate illustration of student growth. In addition, my study's was to evaluate whether or not the assessments are aligned to the curriculum.

The next characteristic of PAR is identifying a problem. To identify a problem is to see what didn't work before and to implement a new idea and see if it will alleviate and fix the previous problem. According to Wadsworth (1998) it is a collaborative method to test new ideas and implement action for a change. It involves direct participation in a dynamic research process, while monitoring and evaluating the effects of the researcher's actions with the aim of improving practice (Dick, 2002; Checkland & Howell, 1998; Hult & Lenning, 1980). In my research, I identified the problem of ineffective and inaccurate Yuuyaraq curriculum assessments. First they were not aligned to the curriculum. Second, the assessments were not authentic. In the past, students were being assessed on interactive, hands-on activities with pencil and paper assessments. Therefore, the assessments were not valid because there was little correspondence between the curriculum objectives and assessments. In addition the way in which the assessment was being used had little consequential validity. In another words they were not used to benefit the teaching and learning process.

The third characteristic of PAR is it involves critical reflection on the historical, political, and cultural context of the study site. The Lower Kuskokwim

School District Yup'ik (LKSD) language teachers with collaboration with the elders from the LKSD region developed the original Yuuyaraq curriculum back in mid-1980s during summer bilingual institutes. They developed seventeen units. The original Yuuyaraq curriculum had lesson plans but no alignment or consistency with assessments of suggested projects in the curriculum. The original curriculum included only spelling word assessments. These did not measure holistically what was taught in the curriculum. In this research, I am using the Yuuyaraq scope and sequence developed by a team of seven, language educators from LKSD region, who developed the new Yuuyaraq curriculum based on the history, culture, values, beliefs, and lifestyles of the Yup'ik people. The team of seven created the scope and sequence with subjects to be taught, grade level, time frame, and suggested months when the subjects should be taught. In this research, I am using the unit lesson plans I created using the Heidi-Hayes Jacob's (2004) curriculum mapping model to make them more culturally appropriate. According to Wadsworth (1998):

It is a research in PAR ideally for local people by local people. Instead of someone outside of community to study and take away their own reports by their local people, it is designed to address specific issues identified by the local people, and the results are directly applied to the problems at hand (p. 3).

It was a privilege for me as an insider, as a former teacher and local member, to interpret the issues faced by teachers and students, and provide some possible

solutions to the problems by providing authentic assessments, which were culturally appropriate.

The fourth component of PAR is observation. Observation takes place in the community setting in a location that has relevance to the research questions. The researcher observes the participants in their setting rather than having the participants coming to the researcher. The researcher makes careful objective notes about what they see, such as informal conversation and interaction with the members of the study with as much detail as possible. For this research, I traveled seven miles down river to the school to observe the interactions of teachers and students, student reactions to the instruction, project observations, and assessments from unit lessons. These observations were clearly linked to answer my research questions. Through these observations I attempted to see if the Yuuyaraq curriculum was aligned to summative assessments. I also asked the teachers their perspectives about using the newly developed Yuuyaraq authentic assessments. Finally, I evaluated how Yuuyaraq summative assessments could be improved for future use by both students and teachers. By observing the assessments in the setting where they are being used, I gained important information about how the curriculum was being used.

The fifth component of PAR involves systematic approach for reflecting as discussed by Mills (2003). For this component, I asked how I could collect data systematically to answer my research questions. I decided to monitor the effectiveness of the new Yuuyaraq curriculum and teaching strategies by audio recording during

Yup'ik lessons twice a month for four months. Also I interviewed both the language teacher and three randomly selected students. I systematically reflected in my researcher's journal my observations and impressions with each visit.

The sixth component of PAR has to do with analyzing and interpreting the data (Mills, 2003). To continue the effectiveness of my research on the new Yuuyaraq curriculum and authentic assessments, data was collected through student and teacher interviews, authentic assessments, and classroom observations. I interpreted the data to understand more about the effectiveness of new Yuuyaraq curriculum and authentic assessments.

The final component of PAR according to Mills (2003) is developing action plan. After all the data is collected and analyzed, an action needs to be taken to refine, make improvement, or maintain the Yuuyaraq curriculum and teaching strategies. I created a plan to change a curriculum that existed before into a curriculum with assessments that will strengthen the Yuuyaraq curriculum. Based on this research I want to use what I observed, heard, and experienced to further revise and develop assessments to align with the Yuuyaraq curriculum.

### *Review of Related Research Methods*

In this section, I describe similar research and the methods the researchers used to conduct their studies. Other native researchers like Brayboy and Deyhle (2000) have conducted their fieldwork as ethnographic qualitative researchers collecting data

using participant observation, interviews, examination of institutional documents, and focus groups. They mostly relied on participant observation and reflective interviews for data collection. Their analysis of their data occurred in interactions between the participants in their studies. Like Brayboy, I am an insider researcher because I collected data in my home community and in the school where I attended and taught. As an insider, I am able to illustrate and portray the environment in a way that an outsider cannot. Because of my knowledge of the community, I understand the ways behind the local practices that are not easily understood by outsiders.

Another Indigenous scholar, Rameka (2007), used Kaupapa Maori theory as her overarching philosophical framework. She used two interrelated projects aimed at creating professional support primarily for Maori childhood services based on the development of exemplars of assessments from Maori perspectives and contexts. She also used her doctoral thesis on early childhood using Maori learning and assessment framework development, learning stories, early childhood curriculum, and traditional Maori proverbs to draw on important messages from the past on Maori values, understandings, and behavioral expectations. Her research is reflected connected to mine. The curriculum I am using in this research has many connections to Yup'ik values, beliefs, behavioral expectations, and many Yup'ik proverbs embedded in being a Yup'ik person. My fieldwork framework is qualitative participatory research rather than overarching philosophical framework. But what was unique about her

methodology was her approach as an insider clearly defined many proverbs as teaching strategies.

### *Context and Setting*

#### *Village Setting*

In this section, I describe the physical and historical location where my study took place. The Yup'ik village, Tayarulek, meaning the one with maretail grass, is located southwestern part of Alaska on the Kuskokwim river, 60 air miles inland from the Bering Sea. Tayarulek lies in the heart of Yukon-Kuskokwim region, the traditional homeland of the Yupiit, or Yup'ik Eskimos (Fienup-Riordan, 2005). Tayarulek has existed since the late 1800's. The history of the village, according to village elders, started off as a seven family village of immediate and extended family members. It was known as a summer and winter site, since the occupants of the village moved the majority of the time for fall and spring camps to gather a year of food supply for survival for cold months ahead. The village of Tayarulek was once 100% fluent Central Yup'ik speakers. Tayarulek, now, is a rural Alaskan village with a population of 390 people 98% are Yup'ik Eskimo U.S. Census Bureau (2000) and 2% are other than Yup'ik Eskimos. At least 60% of the population speaks and understands Central Yup'ik language fluently.

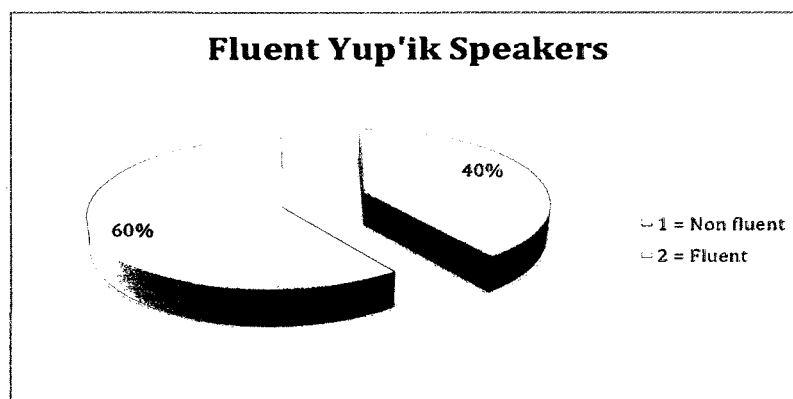


Figure 1: Yup'ik Speakers

According to Fienup-Riordan (2005), the subarctic tundra environment of the Bering Sea coast supports rich flora and fauna. An impressive variety of plants and animals appear and disappears as part of an annual cycle of availability on which Yup'ik people focus both thought and deed. Most of the Tayarulek community members rely on subsistence they fish, trap, and hunt mainly fish from the Kuskokwim River because they fish year long on the river for all kinds of fish in different seasons. Subsistence way of life is the “backbone” of the village.

According to Kawagley (1995), subsistence success not only reflects the ability to live off the land but also signifies someone who is respectful of the tundra, waters, and the animals. During spring the Tayarulek community member fish for whitefish, pike, blackfish, lush, and sheefish. The abundance of birds such as ptarmigan, geese, swans, and various types of ducks are another source of food during spring season. Trapping or hunting mink, otter, muskrat, jackrabbits, snowshoe rabbits, beaver, wolf,



and foxes are done during early spring for their furs or food. Caribou is another source hunted during early spring for spring supply of food.

The summer harvests for Tayarulek people are intensely busy. They are involved in cutting and smoking all types of salmon: king, chum, red, and silver. Since the peak of salmon arrival to Kuskokwim four short weeks, the Tayarulek people try to dry as many during the abundance or peak times of salmon runs. During this time of the year many people spend majority of their time at their fish camps tending their dried fish. In addition, Tayarulek people busy during the summer months with the abundance of plants. A variety of edible plants are gathered for the cold months ahead. Salmonberries, officially known as cloud berries, blueberries, wild raspberries, currants, high bush red berries, low bush red berries, rose-hips, wild rhubarbs, sour docks, marestalk grass, stinkweed, chamomile, and other edible plants are gathered for food and medicinal uses for months ahead.

Fall time is the time to hunt. The locals hunt moose, caribou, ducks, geese, swans, whitefish, pike, and blackfish to store for the up coming long winter months to use for feasts and Russian Christmas or “Slaaviq”. During the winter months, the Tayarulek people continue to fish for whitefish, pike, and lush on the Kuskokwim River. Snowshoe rabbits are also snared during the winter months. At least 50% still rely on subsistence the whole year.

Few paid jobs are available in the village. Those that are available include local school and pre-school, governmental organizations, and village Corporation (a

profit corporation to gain money developed under Alaska Native Claims Settlement Act of 1971, ANCSA). Some of the village occupants obtain work by commuting back and forth to and from Bethel, the hub town for most of the rural villages. It takes to at least 20 minutes to commute to and from Bethel. There are some seasonal labor jobs, but these lasts only short term.

Most everyone in the community of Tayarulek is related to one another through immediate and extended families. Family is an important aspect of the community. The values of sharing, love, community wellness, family harmony, values, and beliefs are portrayed and are evident through many events in the villages.

Tarayulek is known as a village that still practices *yagyarat* (prescription of following values, beliefs, taboos, and rituals in respects to being Yup'ik). The term *yagyarat* has never been defined properly only bits and pieces of it and has not been understood by many who do not practice it. It has many specifications and purposes. The elders from the community say that *yagyarat* has been our way of period of healing and cleansing our inner spirits through abstaining from certain foods and actions.

The religion that dominates the village is Russian Orthodox. At least 90% are Russian Orthodox and the remaining 10% are Moravian. The religion plays a big part of the community of Tayarulek. Community events are usually scheduled around church events.

### *School Setting*

Tayarulek in the Lower Kuskokwim School District (LKSD) was one of 26 other schools. LKSD was one of the largest districts in Alaska covering at least 22,000 square miles, and serves over 3,800 students with grades ranging from Kindergarten to 12<sup>th</sup> grade. The Tayarulek School was located at the middle of the village. Both elementary and high schools were connected into one big school building. The total number of students, at the time of my research, attending the Tayarulek School was 166 Kindergarten to 12<sup>th</sup> grade students. At the time of my research there were 119 elementary students (K-8<sup>th</sup> grade) and 47 high school students (9<sup>th</sup>-12<sup>th</sup> grade). The Tayarulek Schools had a total of thirteen certified teachers and twenty-three classified staff.

Tayarulek School offered Yupik and English academic and content area classes. The primary grades were taught using Yup'ik immersion, in which academic and content areas are all taught in Yup'ik language. The medium of instruction in English started in intermediate grades up to high school. The only content area required for all grades to take was Yuuyaraq Yup'ik class. Yuuyaraq class was designed to maintain Yugtun language and culture. The Yuuyaraq curriculum was geared for grades 4<sup>th</sup> to 12<sup>th</sup> with seventeen units to cover in curriculum. Each unit depending on the grades had three different model lesson plans. The lesson plans were designed using the Jacobs (2004) curriculum mapping design. Since each site in

the LKSD region had different characteristics, dialectal and land geographic differences the district curriculum specialists encouraged them to localize the curriculum to meet their needs. The Yuuyaraq curriculum suggested at times the instruction should be held outside school either on a field trip to gather materials, to interview an elder, do survival practices, or attend other community events. Most of the activities in Yuuyaraq curriculum recommended hands-on or project-based summative assessments. Since this new Yuuyaraq unit was new the summative authentic assessments had been developed. The Yuuyaraq curriculum was still in a process of being developed and it was being piloted to all sites. Once the whole curriculum was finished, the committee of Yup'ik language teachers planned to assess the curriculum and decide how language (orthography and grammar) would be integrated into the unit as well as the authentic assessments.

#### *Teacher Participants*

Table 1 is the matrix of teacher participants in the study. It includes their gender, first language, content area, and years of experience in the classroom. All names used in the study are pseudonyms.

Table 1: Teacher Participants in Study, Fall 2008

<b>Teacher Participants</b>	<b>Gender, Ethnicity, Age</b>	<b>Language</b>	<b>Content Area</b>	<b>Years of Teaching</b>
Mrs. Evan	Female, Yup'ik Eskimo, 35	Central Yup'ik	Reading, Writing, math, social studies, science, Yuuyaraq,	10 years
Mrs. Nicholai	Female, Yup'ik Eskimo, 60	Central Yup'ik	3T-10 <sup>th</sup> grade Yuuyaraq	25 years

Both of the Yup'ik language teachers that I collaborated, observed, and interviewed were originally from Taryulek. Mrs. Evan was one of the three certified native teachers from the village who also graduated from the village school. She had ten years teaching experience. She also had four children; two boys and two girls. Her husband worked at the school as one of the primary language teachers. Mrs. Evan taught 5-6<sup>th</sup> grades in academic and content areas.

She grew up following the footsteps of her parents and listening to her grandmother's advice. Mrs. Evan remembered growing up listening to elders' advices, and described how these elders used to go to the school and talk to everyone.

This practice of elders coming to the school was declining because many elders lived in the village. But the echoes of these elders still remained. Mrs. Evan still carried on the torch of educating the students about Yup'ik language and culture.

Mrs. Nicholai is one of the oldest Yup'ik language teachers. She taught Yuuyaraq classes for the last three years in grades ranging from 4<sup>th</sup> to 12<sup>th</sup>. Although she did not teach some grades, I wanted to include her as one of the participants to answer some of my research questions because she have taught Yugtun language for over twenty years. I interviewed her twice during her planning time.

#### *Student Participants*

Mrs. Evan's classroom consisted of 14 students ranging from 10 -14 years of age. Two-thirds of Mrs. Evan's students had Individualized Educational Plans (IEPs) in English academic classes. Below are the student participants' background, their age, grade, and their dominate language. These students were randomly selected by their Yuuyaraq language teacher to be part of the research.

Billy is the first male child of his family. He was in 5<sup>th</sup> grade and attended all his school years at the Tayarulek School. Billy's first and dominant language was Yup'ik. Like other Yup'ik first language students, he first learned how to speak Yugtun at home. Yup'ik was the primary language in his primary grades to up third grade. Billy was one of the top academic achiever placed in a 6<sup>th</sup> grade classroom. Billy was the only one in the class that spoke Yup'ik fluently during the Yuuyaraq

Yup'ik class. He had the ability to translate for some students that did not understand Yup'ik very well.

Joe could listen and understand basic concepts to get by in Yup'ik well. But he could only speak Yugtun using basic survival words just to get by with others who were more fluent. Joe had an IEP in Mrs. Evan's English classes in reading, writing, and math. He didn't have an IEP in any content areas such as Yuuyaraq. Joe loved to attend his Yuuyaraq class as evident by the following statement. When asked what his favorite class was he replied "Yugtun, cause it is better, doing Yup'ik stuff, learning stuff, ... and Yup'ik stuff" (interview, 12/17/08).

Table 2: Student Participants in Study, Fall 2008

<b>Student Participant</b>	<b>Gender</b>	<b>Grade</b>	<b>Age</b>	<b>Dominant Language</b>
Billy	Male	5 <sup>th</sup> grade	10	Central Yup'ik
Joe	Male	6 <sup>th</sup> grade	12	Central Yup'ik
Sally	Female	6 <sup>th</sup> grade	13	Central Yup'ik

According to his Yup'ik teacher Joe performed better in Yup'ik than in his other academic classes. He was the only male in his family with four other sisters. According to his Yuuyaraq teacher he enjoyed to participating during Yuuyaraq and

loved to work on projects. He performed and participated in Yuuyaraq class more than his academic English and other content area classes because it was hands-on and project-based according to his language teacher.

Sally came from a large family that was dominant in the Yup'ik language. Even so, Sally understood oral Yup'ik well, but she could not speak Yup'ik fluently. While Sally did not to read or write in Yup'ik, she liked to work on hands-on projects like knitting, sewing, and creating the survival cane. According to her teacher she performed and participated during Yuuyaraq more than in other content areas. Sally preferred that Yup'ik be taught with more hands-on projects and visits to elders.

#### *My Place as Researcher*

My heart has always been where I grew up, went to school, and solidified my true identity of being a “Yup'ik” person. I will proudly say that I am from the village of Tayarulek where I learned many Yup'ik ways and tools to survive in both Yup'ik and modern ways with the values and beliefs echoed from my ancestors who diligently cared about me to carry and pass along Yup'ik language and culture. Through the years of teaching, observing, developing curriculum and materials for Yup'ik programs, and especially getting accepted into Second Language Acquisition Teachers Education (SLATE) program funded through the University of Alaska Fairbanks (UAF), I have come to realize and understand the complexities involved in Yuuyaraq curriculum and the development of assessments for students in learning Yup'ik



language and culture in the school. The area of Yup'ik language and cultural curriculum has never been researched by anyone in our LKSD region and I wanted to contribute. I believe that the authentic assessments are tools to help support our Yup'ik language teachers who desired that assessments be addressed in the Yuuyaraq curriculum. As a Yup'ik researcher I feel I have the "insider" knowledge to understand the schooling. As Brayboy and Deyhle (2000) have pointed out that "insiders" writing ethnographic accounts of their own group have issues with which they must deal, but these issues do not mean they cannot conduct good, rigorous research. Rather, they must address the issues in a manner that shows integrity and awareness of some of the complicated issues facing them. Also, as insiders they have knowledge that outsiders cannot ever really understand.

Because of my experience as a native in the community, I claim to have the experience and knowledge of what needs to be examined with the Yup'ik programs in our school district. As a native researcher I have carefully placed myself as an observer, who understands behaviors and language discourse in Yup'ik while students and teachers interacted in the classroom. I share my identity as a Yup'ik first language speaker with rich cultural knowledge very well enacted by parents, grandparents, and elders of strong Yup'ik language and culture background. The point here is that any researcher should not only respect the particular culture, traditions and priorities of any community from which they draw research participants, but must also take into account how that culture and those traditions and priorities may

impact whether and how data collection occurs, how questions are received, understood, and responded to (Demmert, McCardle, McCarty, & Leos, 2006). Because of my background, I am able to understand the context and history. My growing up experience is richly illustrated with many Yup'ik values, beliefs, *yagyaraq*s (prescriptions, prohibited to some actions, rituals), knowledge, and ways of knowing. This comes by the way of my father's upbringing who went to formal schooling up to 3<sup>rd</sup> grade because subsistence activities had to come first, and my grandmother who had a rich background in Yup'ik knowledge and wisdom from her experiences. At an early age I was taught to subsist, first through observing, then by practicing on my own until I knew how to cut fish with perfection as described by elders. It was the same process with sewing and cooking. What really helped me to become proficient in what I learned was the guidance of my parents, grandparents, and elders who would encourage us positively to know about our *Yuuyaraq* "our Yup'ik way of life" in order to survive. I have been very honored and privileged to learn many tools, from my ancestors. Now I'm in the position to pass along the knowledge and wisdom to the students and children in the community. Historically, these skills and the application of those skills were passed on from one generation to the next as part of a process for insuring survival and continued development and change as new knowledge introduced additional challenges (Demmert, McCardle, McCarty, & Leo, 2006). Because I have taught the *Yuuyaraq* class in Tayarulek, I have broadened my knowledge of how, what, and where it should be taught. With this experience I

learned how to develop lessons, which are culturally appropriate. In addition, I know how to present different learning strategies learned from our Yup'ik elders' ways of teaching. I know what should be included in the lesson and what should be taught to different age groups of students. Also, I have learned that the Yuuyaraq should not just be taught in the walls of a classroom but outside where the real classroom exists.

### *Data Collected*

According to Mills (2003) data collection is a “systematic approach to monitor and reflect” (p. 9). Rossman and Rallis (2003) further added, “data collection is a deliberate, conscious, and systematic process” (p. 179). Through teacher and student interviews, classroom observations, field notes, artifacts (pictures of student projects), open ended surveys, and authentic assessment using rubric, I explained, described, and analyzed what happened during a middle school Yuuyaraq Yup'ik classroom. To further explain, Rossman and Rallis (2003) explain that qualitative researchers use systematic “techniques to capture actions, words, and artifacts so they may scrutinize these data to learn about social phenomena” (p. 177). Below is the matrix, which captures and outlines how data was collected reflecting to my research questions.

I decided to conduct the research on the Yuuyaraq curriculum in my hometown because I taught there for my first 10 years of my teaching career and because I felt comfortable working with my own people. I knew I would have more understanding of the situation as an “insider.”

Table 3: Data Sources

<b>Research Questions</b>	<b>Data Source #1</b>	<b>Data Source #2</b>	<b>Data Source #3</b>	<b>Data Source #4</b>	<b>Data Source #5</b>
How does the Yuuyaraq curriculum align with the summative assessments?	Interview (teacher)	Classroom observations	Artifacts (lesson plans, Yuuyaraq curriculum, summative assessments)	Field notes	
What are the middle school teachers' perspectives on using the newly developed Yuuyaraq authentic assessments?	Interview	Field notes	Classroom observations		
How can the Yuuyaraq summative assessments be improved for future use by both students and teachers?	Interview teacher and students	Classroom observations	Artifacts Rubric for student projects, Pictures of student projects, pictures of students doing the projects		Field notes

My hometown, Tayarulek, is located southwest Alaska, with a population of about 390 people, which 100% are Yup'ik-Eskimo. This verifies as Wadsworth (1998) has proclaimed earlier that, research is designed to address the specific issues identified by local people, and the results are directly applied to the problems at hand.

To begin my research, I first interviewed Mrs. Evan to understand and explain any concerns she had about doing research in her classroom. During this time we randomly selected six students to participate in the study. From these six, three would be the actual ones I would interview and observe, while the other three would be alternates. I interviewed the language teacher four more times afterwards as a way to understand my research questions and to verify information pertaining to the research. The very first interview was audio recorded and I also took field notes. I interviewed her two more times during the next two months about the Yuuyaraq curriculum and best practices. The last interview took place after I had observed a project-based assessment. In addition, I followed up with her for clarifications through via e-mail.

The next process of data collection I did was to observe the class during Yuuyaraq class. I observed the class time with a total of six observations. I first observed informally the first two and after that I audio recorded and took field notes while observing. The class observation I can remember was when we went out for a field trip was so soothing for all of us was going out to the deep willow area to create a project *ayaruq*, a survival cane, well known survival tool for Yup'ik Eskimos.

I observed and audio recorded the dynamic and authentic assessments.

Dynamic assessments are interactive approach assessments that focus on the ability of the learner to respond to intervention based on best practices (Lidz & Jepsen, 2000).

Authentic assessments are alternative assessments, which are drawn from real-life experiences (O'Malley & Valdez Pierce, 1996). Dynamic assessment was when; their Yup'ik teacher one-by-one in a classroom orally assessed the students. The teacher used authentic assessments at the end of the unit after the students created the projects. The data was collected to see if the Yuuyaraq class is helping students in other classes to understand other subjects using Yuuyaraq as a grassroots of funds of knowledge as a base. Also, the data was important to see if there is a connection for student progress or success.

After the first classroom observation, I interviewed three student participants: Joe, Billy, and Sally. I interviewed them during their class time in an empty room where they were able to concentrate on the questions I asked. They were given a chance to answer in Yugtun, English, or both. Most of the time, the students would answer in both languages. I wanted them to be comfortable answering the questions so I let them chose the language or combination of languages to speak and also let them pick wherever they wanted to sit. I interviewed the participating students four times. I interviewed students as a way to triangulate the data so I could understand the questions not only from my perspective or the teachers' perspectives but also the students' perspectives, as they were the ones using the curriculum.

I took field notes starting from day one when I went to the classroom to inform students' and language teacher about the consent and assent forms. I took field notes before, during, and after class times so I could capture any action, word, or activity. Taking field notes helped me to remember the chronological order of what I did for each trip I made to the school to conduct my research. The constant reflections in my field notes helped me to make connections throughout the process.

The last part of my data collection was collecting or creating artifacts. First of all, I took pictures of student projects and their field trip outside. I wanted to capture the project so that when I described the projects it would be full of illustrative details. This helped to illustrate the real life projects and signifies the validity of success by students in Yuuyaraq classroom. The next two artifacts, which I have created were an open ended survey for each unit from Yuuyaraq curriculum which the teachers used to evaluate the unit lesson and assessments, and an authentic assessment rubric for students to fill out after their authentic summative assessment projects. The rationale for these artifacts is to see if Yuuyaraq is aligned with the summative assessments and for future improvements to the curriculum and assessments.

### *Data Analysis*

To analyze my data I used Constant-Comparative Method (Strauss and Corbin, 1990). First, I read and re-read my interview notes, observational notes, and field notes. Next, I revisited, coded, and carefully examined the data collected. Then, I

modified what I coded and organized them into various categories, which became my topics. After that, I modified my categories or topics by prioritizing from the most important to the least. I had to revisit my categories or topics again and remove some of the data, which was not important or less interesting. Finally, I identified the main concepts from the categories that stood out the most from my data collection.

When I analyzed my data I had to rethink and pick out the most informative parts, or those that more clearly connected to my research questions. Some of the interpretations from the data collected also mirrored the artifacts collected, which lead to more powerful ideas.



## CHAPTER FOUR: FINDINGS AND ANALYSIS

### *Introduction*

In this chapter, I share my analysis of the data collected from my study. To analyze my data I used the Constant-Comparative Method (Strauss and Corbin, 1990). First, I share the data and how I analyzed it based on my research questions. I will share results of what themes emerged about the various forms of authentic assessments used in the Yuuyaraq curriculum. Second, I will share how teachers' knowledge and practice contributed to a classroom that focused on Yup'ik culture and identity which answered the research questions. Finally, I will share the culturally relevant curriculum themes that emerged from my interviews with teachers and students and my own observations.

### *Assessment*

Through student interviews, teacher interviews, and my observations, I will share what themes emerged about the various forms of authentic assessments used in the Yuuyaraq curriculum. They include project-based assessment, paper and pencil assessment, modified dynamic assessment, and how rubrics were needed.

### *Project-based Assessment*

Students enjoyed project-based or hands-on assessments more than any other assessments. During the hands-on assessments, students created real artifacts that the

elder showed them. At one point in the year, an elder had visited the school and demonstrated how to create grass mats. The students then made mats their own. One student expressed his feelings about project-based assessment, “I like project-based tests because it’s fun” (interview, 11/07/08). Another student insisted that, “project-based tests are easier” (interview, 11/07/08). It is important to understand that although the students are reporting that the projects are “fun” and “easy”, the projects are complex and take a great deal of patience and skill. The students are working on real-life hands-on projects using what they have gathered from their environment. The students are reporting that they are “fun” and “easy” for a variety of reasons. One, they are receiving consistent positive feedback from the teacher. Second, they know that the focus on the projects is practice to become proficient. In other words, the focus is on the process not the product. Third, they are given ownership of the project. Even though they make mistakes in the process, they are given the support they need to continue to try again. Fourth, the projects directly relate to their own culture, ancestors and environment.

One of the student participants shared further evidence of her engagement with project-based assessment. During an interview, she told me that she “likes to draw pictures” about the projects created during their assessments to illustrate what was learned in this process. She is referring to the vocabulary tests. Sometimes, students are assessed about their knowledge of vocabulary words which relate to the unit themes. The task is to illustrate and label their creations with the correct Yup’ik

words. This kind of approach was to check to see if students had learned and comprehended the targeted vocabulary words.

Mrs. Evan knows from her experience that the students “learn most from doing it” and “they learn most from working on the projects themselves” (interview, 11/08/08). Therefore, the artifacts the students are creating are more than projects. The process of creating artifacts teaches students to be skillful, patient, creative, artistic, and to understand the history and survival skills need for the traditional Yup’ik way of life. Also they are learning “*qanruyutet*” about the projects. Indeed they are gaining key knowledge of Yup’ik cultural history, lifestyle, and values. All of these aspects are interwoven in the process.

Hands-on/project-based assessments are not just crafts or artifacts the students create. These items they create have connections to the past. The items we use from the environment tell a story of how intelligent, patient, skillful, creative, and resourceful our ancestors were in respects to utilizing the land. Interestingly, Mrs. Evan helped her students to make these kinds of connections while taking assessments.

*Pilinguallrit igarcet'laranka qaillun ciemek ayuqeltassiigcelluki ak'a tamaani maa-irpak-llu canek atulauciat. Ellaitnun-llu igautelluki cat umyuaqellrit ak'a atulallrit, qanrutekevkarluki qaillun pilinguallrat, qaillun-llu aturciqellrat ellaita.*

When I give project-based assessments I usually have my students write comparing past and present. I usually have them list what they remember how the item was used in the past, their process of creating the item, and how the students will utilize the item created (interview, 11/8/08).

Through a reflective writing assessment, the teacher encouraged her students to explain what values and beliefs they learned in the process of creating the items or from the elders' visits. It is significant to note how connections to the past helped students understand the curriculum content and motivated them to continue creating meaningful items. This process helped them to connect to the Yup'ik way of life. O'Malley and Valdez Pierce (1996) point out the importance of including students in the process of assessment because it allows students to become involved in their own learning. When students are engaged in meaningful activities that are likely to result in products worth sharing with others and retain them for review. They suggest that in authentic assessments it is critical to allow students to self assess because it gives them ownership of their own learning. By reflecting on and assessing their own work, students get the opportunity to apply criteria to work and to set learning goals to make improvements. Reflective writing has never been a part of the Yup'ik way of life, but has recently been used in an academic setting. However, reflective writing is one of the methods to reconnect the process learned and therefore easier for students to retell what was comprehended.

During one of the interviews with Mrs. Evan, she told me that she had administered reflective writing assessments to her students. In the reflective writing assessments she had her students explain what they have learned from creating projects, the comparisons of past and present, and how they would utilize the item created. She said that the students are used to reflective writing after creating projects or at the completion of a unit (interview, 3/25/09). In their study on Indigenous knowledge system Barnhardt and Kawagley (2005) confirmed that

knowledge systems are constantly adapting and changing in response to new conditions...at the same time, it is the diversity and dynamics of Indigenous societies that enrich our efforts as we seek avenues to integrate Indigenous knowledge systems in a complementary way with the system of education we call schooling (p. 10-11).

#### *Paper and Pencil Assessment*

Paper and pencil assessments are a method of assessing key knowledge, skills, and procedures especially used in standards based assessments. These assessments usually occur by each child writing down answers independently to demonstrate their understanding of concepts at a certain level. Ironically, paper and pencil assessments were the only assessment included in the previous Yuuyaraq Curriculum even though the curriculum used other elements of Yup'ik local practices. Even though I feel paper and pencil assessments are less effective than project based assessments, I

decided to include them in my interviews so that I could understand how students felt about various kinds of assessments. I wanted to see if they were able to comprehend the goals of the curriculum. I examined research on effective assessment practices (O'Malley & Valdez-Pierce, 1996) and my own experience as a Yup'ik person with Indigenous knowledge to inform this decision. In addition, I got the teachers' and students' feedback. Paper and pencil assessments in the previous Yuuyaraq curriculum focused mainly on spelling words, which did not replicate the instruction. The assessments did not focus on the projects created by students. But now, with the new Yuuyaraq curriculum, alternative ways that students can be assessed are available which do not exclusively put the emphasis on paper and pencil assessments. The teachers, both Mrs. Evan and Mrs. Nicholai, welcomed the alternative assessments as they did not feel the previous paper and pencil assessments were effective. Mrs. Evan explained her observations and insights during an interview "I think paper-pencil assessments are tedious, students get bored easily, and they don't perform as well than talking about their project assessment" (interview, 11/7/08).

Based on interviews and observations, I discovered that the students were not comfortable with paper and pencil assessments. I interviewed three students and all three said that they did not like paper and pencil tests. Most expressed the difficulty of putting their answer or ideas in writing because "its hard" and they were more "comfortable" with oral presentation or demonstration. When they are orally presenting they freely describe the process of completing their projects. During an

interview, one of the students described that what he had created was like in the past as though it was fresh in his mind adding gestures while he was explaining (journal, 11/8/09). Their projects or items came to life when the students described them compared to when they wrote about them. This skill may have been picked up through observation of elders. Through my experience with elder visits, from personal experience, and personal observations, I have seen and heard elders talk or tell stories and it shows through their eyes, gestures, and thick detailed descriptions and explanations when they talk like they are in the moment, in the picture. Kawagley, Norris-Tull, & Norris-Tull (1998) explain in their study the importance of how Indigenous knowledge is passed down orally from the elders. Elders comfortably speak from their direct experience relating and showing the connectedness of everything to the Yupiaq worldview. They explain how Indigenous knowledge had always been passed down orally from generation to generation, and added how this method had been replaced by teachers in the rural areas. They pointed out how Indigenous knowledge is taught by modeling the process through direct experience.

The interview with Mrs. Nicholai, who teaches upper Yuuyaraq classes, confirmed that “*murilkellemni assikenrularait mikelnguut qanrutkelteng pilinguarluteng-llu pilteng igallermegni*” (from my observation, students like to talk about their project verbally rather than pencil-paper assessment). But Mrs. Nicholai shared that “*kiingan qacinarqellrianek piaqamta kiingan spelling test-arqata atularaput*” (we only use paper-pencil method for spelling tests) (interview, 11/18/08).

What Mrs. Nicholai is expressing is that spelling words are not enough. There is more to the Yup'ik words and if only words are taught the true meaning of the context will not be learned. What she means is that learning how to spell words in Yup'ik class has importance, but learning the meaning of the word is more of a value because the word can have deeper meaning or have more than one meaning. Some Yup'ik words have more than one meaning or it might consist or carry sacred sayings, which is part of “*inerquun*” or “*alerquun*”. Similarly, Yazzie-Mintz (2007) explains that “there is also deep, specific cultural motivation and meaning from the words” (p.84). Thus, a simple list of spelling words does not teach the deep meaning of the word.

It is important to note the importance of continuing oral assessments because it will enhance Yup'ik oral development. It will encourage students to speak the language and enhance proficiency. It is also important to include reflective writing because it is an important skill to help students recall what was learned, not just memorizing spelling words.

### *Dynamic Assessment*

One of the most interesting methods of assessing I found from this study was the way Mrs. Evan assessed her students after each unit. When I asked her how she assessed her students for formative and summative assessment in her Yup'ik class, her response was that she goes around student to student and asks questions about what they have learned from the unit or lesson, what the items were used for, and included



her own observations (interview, 11/13/08). When it's time to share project assessments in class "students can tell me more verbally" and what they have created is "meaningful for the students" because they are "proud" about their accomplishments (interview, 11/8/08). What the teacher did is I would call a form of modified dynamic assessment (Poehner & Lantolf, 2005). Poehner and Lantolf (2005) define the characteristics of dynamic assessment as a systematic way, whether formal or informal, to assess with mediation aimed at development of a learner. The development depends on the abilities and maturation of the learner. Constant feedback is given and assessment and instruction are inseparable. Yup'ik authentic assessments have similar characteristics. Similarly with Yup'ik assessments, the teacher knows the learners' ability to demonstrate what was used by the students. This is emphasized with direct experience not dependent on their age. For example, if a student is able to cut fish at a young age without guidance they have mastered that level. Therefore, the child will not be guided unless she gets to another level with bigger fish. Constant feedback is given while the children are being assessed. Positive feedback encourages the learner to work harder and make improvements. The assessments were given one-on-one where the teacher created a nurturing atmosphere.

The teacher asked each student open-ended questions while they were working on their projects. In my journal I wrote,

The students were quiet, relaxed, and very engaged working on their projects while she was administering the authentic assessment. The students didn't even seem to notice her roam around the classroom administering the authentic assessment. I was very surprised her assessments were done this way (journal, 10/15/08).

The teacher utilized her "Yup'ik-ness" when instructing and assessing her students. In other words, she brought to her classroom the kinds of assessment she experienced from her own upbringing and informal Indigenous education from elders. For Yup'ik people assessments were done one-on-one giving consistent feedback along the way to help the learner make improvements (Lipka, Sharp, Adams, & Sharp 2007; Barnhardt & Kawagley, 2005).

Another example of the teacher using dynamic assessment, I observed, was when the teacher remembered to give one of the special needs students his assessment. The assessment administered was based on the plant unit the class covered and included elder's Indigenous knowledge of plant uses. He happened to come in after the break, and she remembered that she had not administered the test with him. When she informally asked him questions he provided explanations that were more detailed than her mainstream students provided. The Yugtun language teacher and I were very surprised by the answers this child gave. He answered all the questions and he was the only one student in class that gave the answer *piineq* (grass insulation for the mukluks). The language teacher and I were very surprised because this was one of the

uses the elder had discussed. So this child, who was identified as special needs, was able to make connections from prior knowledge (journal, 10/15/08). It is unlikely that this knowledge would have been acknowledged with paper and pencil assessment alone. Using dynamic assessment, the teacher made it clear that students' learning about Indigenous knowledge counts in this classroom. She had full trust that this student would have something to contribute.

The Yup'ik-ized dynamic assessment approaches are likely to work in any classroom, whether with regular or special needs students, because the Yup'ik assessments "entail instruction and vice-versa" (Poehner & Lantolf, 2005, p. 261). It is important to know that in authentic assessment the instruction has to be integrated with the assessment. Using this Yup'ik-ized dynamic assessment, the teacher aligned assessment to the curriculum directly. But we both discussed how more direction within the curriculum on authentic assessment would be helpful. In this next section, I will discuss how we began that process.

### *Rubrics Needed*

One of the primary characteristics of PAR involves taking direct action to improve the performance or quality of an area of concern (Wadsworth, 1998). That is why in this study, it was important for me to collaborate with the participating teacher to develop a rubric that might be useful for students. I found that rubrics were needed not only to guide the tasks, but also to provide more accurate illustrations of student

growth. During third interview with Mrs. Evan, she suggested that “*assessment-aaq rubric-aanqerquneng tuarr’ assiryalria*” (I think it would be better if there were assessment rubrics) in Yuuyaraq Yup’ik class (interview, 2/12/09). The Yuuyaraq curriculum is a draft and does not include any forms of assessments, but has examples of suggested assessment activities. As a result of this suggestion Mrs. Evan and I created a sample rubric (see Appendix D).

The rubric we designed is a “student driven” self-assessment for the end of the Yuuyaraq units for middle school (interview, 2/12/09). The rubric would consist of three elements to be evaluated, including Yugtun speaking, Yugtun writing, and projects or hands-on demonstrations. The grading scale consists of four levels using percentages: 0-50% meaning not present, 51-60% meaning emerging, 61-80% developing, and 81-100% proficient. First, the student uses the rubric as a self-assessment and checks off the appropriate box for each element and comments about his/her status. The teacher and parent can also give feedback by commenting on this self-assessment sheet. It was Mrs. Evan’s idea that the Yup’ik class needed some sort of accountability for students to monitor their learning. By collaborating with the teacher, we were able to begin the process of developing more tools to enhance the assessments for the curriculum. With this process we developed the elementary rubric, and on my own I added the higher-grade levels for junior high and high school. The rubrics are not set on stone, but are changeable according to the teachers’ needs of assessment. During the fall of August 2009, I shared all the rubrics developed to the

whole district as samples asking teachers to utilize samples and develop their own that fits their environment or needs for their Yuuyaraq curriculum.

### *Teacher Knowledge and Practice*

In this section, I share how Mrs. Evan's knowledge and practice contributed to a classroom that focused on Yup'ik culture and identity. Based on my interviews with teachers, students, and my own observations, I identified four main themes. First, I will talk about the language use in the classroom. Second, the way home-school Yup'ik values were intertwined with the curriculum. Third, the way the teacher emphasized process not product in classroom instruction. Finally, how collaboration was orchestrated between the teacher and researcher.

### *Language Use*

Mrs. Evan, the main teacher, is a fluent Yup'ik language speaker. The strength of her language showed in her classroom. Mrs. Evan spoke Yugtun throughout the Yuuyaraq Yup'ik class. During my interviews with Mrs. Evan, she stated that "*Yugtun qalarutengnaquralaranka*" (I always try to speak to my students Yugtun all the time) (interview, 11/13/08). I observed that she speaks to everyone in Yup'ik during the scheduled Yup'ik time whether or not the students are speaking back to her in English. One of the reasons why she encourages students to speak Yup'ik during her Yup'ik class, beyond trying to develop the Yup'ik language and culture, is because she knows that Yup'ik is the "language of comfort" (interview, 11/13/08). What she

means is that students' body language and behavior change along with the language.

After my first classroom observation I wrote the following excerpt:

What I noticed was most of the students when they had all English social studies class they were interruptive and couldn't stay still. When they made the transition to Yugtun class they seem to get more relaxed like they just sat on the couch and they were less interruptive and more engaged (journal, 9/16/08).

From my personal experience and observation, the building of trust, experience, and deeply rooted exposure to language and culture from infancy and beyond, creates this comfort zone for the children. Yup'ik seems to help them relax and get focused. It reminds them to show respect because parents and grandparents always speak the language and these are the people whom the students respect the most. Mrs. Evan she confirmed my interpretation without me mentioning to her first about my own observations. She stated "When we transition from English to Yup'ik and vice-versa, I have noticed the difference in the way the students act, the way they behave, and how they're talking" (interview, 11/13/08). Mrs. Evan knew what was needed in her classroom for students to impose their Yup'ik language proficiency and knowledge of the culture.

Similar to my observation in Mrs. Evan's classroom, it is important to emphasize how Mrs. Evan had different lens from her students, especially when it came to prepare for assessments and lesson planning. Yazzie-Mintz confirmed this

type of observation stating that, “teachers too have lenses (often different than the student) that shape their view of teaching and view of the learner” (p. 74). Teachers too many shared lenses with their students. Any indigenous language teacher who has similar experiences as the students or shares a common culture will better understand the needs of their students, their behavior, and what will help their students to be successful no matter what developmental the child holds. In addition, when the teacher speaks the Indigenous language of the children, she can create a bond with them in a different way than if she doesn’t. Although students react to the language around their environment, their environment affects the language spoken by students as well. The Yup’ik language spoken in classroom stimulates students’ behavior or action. When students hear Yup’ik spoken in classroom, it helps them to relax and able to participate because Yup’ik is the language spoken by grandparents and parents of the students most of the time.

The language proficiency of students will impact the development of the Yuuyaraq curriculum. I noticed that most of the students in the class did not speak Yugtun proficiently, but spoke mostly using Yup’ik “base-words” (interview, 11/8/09). Base-words are shortened words like in the word “*meqsugtua*” (I want to drink water) to “*meq*” (water) the base of the word. Instead of saying the whole sentence in Yup’ik students say the base of the word most of the time. The students who are not proficient in Yup’ik use base-words just “to get by” peers and their

teacher who spoke Yugtun more fluently. Wyman (2004) found this same pattern in another Yup'ik village with similar demographics.

Despite the language struggles within the classroom, Mrs. Evan remains positive and wishes to spread her Yup'ik knowledge and continue to speak the language during the Yup'ik time. Yazzie-Mintz (2007) discussed the proficiency of Indigenous knowledge determined culturally appropriate curriculum and pedagogy within different educational contexts. The more teachers knew about cultural and language, the more closely their classroom mirrored the home culture and in turn met the needs of the students. Mrs Evan utilized Yup'ik knowledge using indigenous knowledge.

#### *Yup'ik Values Integrated in the Classroom*

The way Mrs. Evan orchestrated her classroom, instruction, and teacher-student interaction clearly showed that she brought her background knowledge and upbringing to her classroom. During one of the interviews with Mrs. Evan shared that she “*qaneryaraneq qanruyutnek-llu aturlua anglillruunga, kia qatpagacuitellruanga.... angayuqaagma maurluma-llu qalarutaqlua inerqualua*” (was raised through Yup'ik teachings, values, and beliefs. No one raised their voice to me..... My parents and my grandmother talked to me about “do's” and “don'ts” in life) (interview, 2/12/09). The teacher mirrored her upbringing in the classroom. Her deeply rooted Indigenous knowledge about child rearing reflects who she was as a



certified teacher. She was patient, calm, and very caring towards the students. The notes from my journal describe how noticeably she portrayed her cultural and language background

I really admired the language teacher, she has a great way of doing student rapport and the way she portrays herself to the class is so evident with rich cultural background. I have been thinking about the ways she has been approaching students and her voice volume. She is not so loud, but very calm. Even if the students were loud she would answer them with a calming volume (journal, 11/13/08).

The way Mrs. Evan approached her students and engaged in student-teacher rapport seemed to be connected to her background. Her approach connects with how Lipka, Sharp, Adams, and Sharp (2007) describe the merging of Yugtun authentic cultural and language instruction with academic math in English to create a third space for authentic biculturalism. The authors portrayed the use of authentic Yugtun learning and knowledge and shared descriptions of characteristics of a Yugtun teacher. The authentic assessment shared in the context included using math to create parka patterns. These descriptions related to what I saw in Mrs. Evan. They explain that “the discourse and the classroom dynamics, paying attention to how the teacher coordinates her words and her actions; how she brings in cultural ways of teaching and adjusts to the school environment, and how and what the students respond around her, shows a great deal of respect by both” (p. 100). Similar to the study shared, in Mrs.

Evan's classroom the home and school connection were one of the important components in a classroom. This teacher connected to her students' home environment through her Yup'ik-ness.

In another study, Shields (1997) observed that to understand assessments in American Indian schools one must carefully interpret the tests presently used, demonstrate the relevancy and utility of the instructional program, and especially to advocate for more use of authentic forms of assessments that involve community and home involvement to enhance student achievements. Mrs. Evan made sure and used "other indicators of authentic student learning include the involvement of the home and the community in the activities of the school" (p.106) in her classroom. That is why her students were engaged and felt right at home when it was time for Yup'ik class. I observed that most of what was embedded in their classroom, for example, what the students saw, felt, smelled and heard were part of their home environment. I noted the following list in my journal

- the students' finished class work is hung on the walls,
- the classroom is set up with tables for group work rather than individual desks,
- materials like grass and branches are on the side of the classroom wall,
- Yugtun conversations by teacher and two one-on-one teacher aides,
- elder or resource person presence,

- and carefree positive behavior and attitudes of respect by students and staff described the classroom as Yup'ik environment as possible (personal journal, 9/16/08).

This examples on this list are what helped students to have more ownership in their classroom. It made it feel more like home because the students' work and projects were displayed everywhere. Not only the way decorated, but also how they were allowed to be in the room helped them to feel comfortable. They freely sat on the floor or somewhere where they could concentrate on their work. The comfort the students felt in this classroom was demonstrated through their body language, respect for the teacher, and engagement with the activities.

#### *Emphasis on Process Not Product*

The Yup'ik way emphasizes learning about the process of how to accomplish something through observation, gathering of materials, and creating the object with guidance. Sharing the process of gaining traditional knowledge with her students was important for Mrs. Evan. Like Barnhardt and Kawagley (2005) explained, Mrs. Evan sees the importance of Yup'ik gaining knowledge from the outside environment. She made sure that elders were scheduled when she created her lesson plan at the beginning of each unit. During an interview she mentioned “*assiryartuq alerquutnek ilangqerquneng unit-aat, nalqigucimalaryartut kiingan wangnek pivkengateng taugaam allanek yugnek tegganernek-llu*” (it would be so nice if Yup'ik values and

beliefs were added to units, that way we will have other resource knowledgeable people and elders come talk to students about don'ts not only coming from me) (interview, 11/13/08). The teacher demonstrated many times the importance of adding local resources and knowledge to the unit themes. She also agrees that knowledgeable people and “elders use the Yup'ik language to describe the pieces, their symbolic meaning, and process” (Lipka, Sharp, Adams, & Sharp, 2007, p. 103). By using the local knowledgeable people and elders she is able to bring in-depth contextualized information of “*alerquutet*” (cultural practices that should not be done) depending on child's spiral hierarch development level into the classroom. The teacher in combination with the elders and knowledgeable others work together to make sure that *alerquutet* is presented based on the child's level. These cultural practices (knowing what to do, when to do it, and what to avoid) are necessary when creating a hands-on task or projects or even pertaining to the seasonal preparations.

According to my interviews of two Yuuyaraq Yup'ik language teachers, Mrs. Evan and Mrs. Nicholai, the process of teaching Indigenous knowledge has primarily four characteristics; 1) observation, 2) guided practice with constant feedback, 3) independent practice, depending on developmental ability, and 4) assessment. The assessment is ongoing process from observation to the end of product. All this process depends on the Indigenous knowledge and relates closely to the spiral hierarch learning of a child. Bruner (1972), Rogoff (1990), and Wertsch (1998) explain spiral hierarch model of teaching and learning as a dynamic alternative to linear models.

The developmental spiral begins from the developmental process. Students' learn by doing; they learn what they do, which most often occurs with the assistance of other. The developmental spiral builds upon and integrates sociocultural theories of development and education. So, this spiral learning contributes to the developmental level of a learner. Each development level is approached differently depending on the child's ability.

Observation is the first step in learning Indigenous knowledge. During an interview with Mrs. Evan, she commented that "*ciumek tangvalartut*" (first the students observe) the demonstration of a hands-on project or task. This is the direct translation but in actuality it is more than observation. During the process the demonstrator will assess to check for understanding and ask some questions. Second, "*naspaavkarluku, taugaam qanruqu'urluki*" (the learner is guided to try the task with constant feedback). During this guided task the learner will hear constant praise or positive remarks as encouragement to make improvements, although some mistakes were made. Sometimes depending on the developmental level, the learner is in this stage for a while. Third, "*ellmegnek naspaaluteng*" (independent practice) is given only when the learner has mastered steps needed to get to this level. In this level the learner is given constant feedback. Finally, "*yuvrirluku elitellra*" (assess the task or what was learned from experience) (interview 9/16/08). This is to assess to see if the learners are able to perform, demonstrate, or create projects on their own without

assistance. This process of learning native knowledge “entails producing, rather than reproducing knowledge” (Anderson, 1998, p. 10).

### *Collaboration*

As part of the methodology of PAR, I collaborated closely with the teacher during the course of my data collection and analysis. One element of the curriculum that we discovered together was the need for a rubric. The previous Yuuyaraq curriculum did not have any sample rubrics for the Yugtun Yuuyaraq class. During an interview, Mrs. Evan came up with suggestions that the rubric should include three elements: 1) Yup'ik oral language use; 2) Yup'ik writing; and 3) project assessment. She wanted the rubric to be more a student driven so the students would have more ownership in the rubric (interview, 2/19/09). Most of all we both agreed the rubric be student friendly so the student would be able to comment freely about their status in Yuuyaraq class.

First, both of us thought if oral language use was included in the rubric it might promote students to speak Yugtun in class. We both thought it might help students to practice and keep trying to speak the Yugtun language. Second, we thought it might help their writing once they start practicing the language. We also thought it might be helpful to write what they have learned in Yugtun. Third, we both thought including projects might help them to describe in-depth their projects and be able to express what they learned from the projects. Most of all we wanted the students to show

success and be able to share and show their parents what they accomplished in Yup'ik class.

I designed the rubric using Mrs. Evan's suggestions and kept in touch through via email (see Appendix A). All the details and elements reflect Mrs. Evan's inputs. When the draft was done in March 2009, the plan was for Mrs. Evan to try it with her students, but decided that it was too late in the year and decided to try it next school year. She wanted to teach students how to use it first, before she started using it as an assessment tool for each unit (personal communication, 3/25/09). In addition, she wanted time to explain the self-assessment rubric to her students. She was excited for this as she felt it would help them to be responsible for their own learning. The self-assessment rubric will also help the teacher with recording and make changes in the design of the curriculum to fit the needs of her students.

### *Culturally Relevant Curriculum*

In this section, I share the culturally relevant curriculum themes that emerged from my interviews with teachers and students and my own observations. First, I will share how creating a project is incorporated in a classroom that highlights both traditional and current ways of Yup'ik living. Second, I will share how local resources are imbedded in the curriculum. Finally, I will share how preparing materials for the classroom became a tension for the teachers.

### *Incorporating Both Modern/Traditional Indigenous Knowledge*

Based on interview data, the teachers often commented on how Indigenous knowledge and the modern ways are always connected no matter the changes that take place in a curriculum. This is common particularly in this classroom. In this Yuuyaraq Yup'ik classroom I observed numerous items or projects demonstrating traditional knowledge from the past such as a ayaruq (survival cane) and from the present (pot holders). I saw these projects in the student cubbies, hanging on the wall of the classroom, or laying on the side the classroom.

From classroom to instruction, the reminders of the past and present echoed during Yuuyaraq Yup'ik class. The teacher emphasized the importance of the connections between the modern and the traditional. When I started my study in the fall the students were in a unit on plant gathering that emphasized learning about various types of plants. The teacher and students had already gathered two types of grass. They were laid to the side of the room to dry. The two types of grass were dried grass (*piinerkaq*) and tall coarse grass (*cururkaq*).

The elder came and talked to the students about the various types of grass and their uses. The elder demonstrated the grass mat project with the students as they observed. She would assess students by asking “*tangrran?*” (can you see?) and “*nallunriran?*” (are you getting it?). The elder is checking for understanding while demonstrating and at the same time wants undivided



attention so that when it is time for students to practice they will be able to know what to do. It was noticeable when the elder said “*wangkuta waten elitellruukut tangvagluta ciumek*’ (we learn by observing first), the students paid a little more attention. The elder notices that there was no seashore (*kelugkaq*) to tie and hold the grass together, she substituted this to a wool yarn. Although there was a substitute the original idea of creating a grass mat did not change (journal, 10/8/08).

The elder modeled utilizing the environment to create something that can be made at the same time substituting needed materials to present items.

Mrs. Evan explained how they adapted their projects by using materials available in the community. The project helped the students learn how to continue important traditions even if all the materials used traditionally were not available. In an interview she said, “The students were working on grass mats and because we don’t have the one type of grass we need to make those baskets, we substituted with a yarn” (interview, 11/8/08). The teacher demonstrated how traditional ways of creating could be continued even if the traditional products were not longer available. Even with the use of yarn, the students were motivated and engaged to work on their grass mats and grass baskets.

Indigenous ways of knowing are “*nutemllaat*” meaning the original ideas or thoughts that are expressed through “*qaneryarat*” (teachings or proverbs) learned generation after generation. Although nothing is static in life, the core of

“*qaneryaraq*” never changes, but is adapted to new modern ways. All things sacred or not, verbal or not, actions or behaviors, creations or products, skills or talents, and all walks of Yup’ik life are part of traditional knowledge connected to the spiritual, human, and natural realms (Kawagley, 2006). Barnhardt and Kawagley (2005) describe how interconnected Indigenous people, particularly the Yup’ik people, adapt to their environment around them. They demonstrate resourcefulness of utilizing the land. For example, the Yup’ik people continue to pass down original ideas (Indigenous knowledge) through subsistence hunting, fishing and gathering, weather readings and predictions, navigation using river, landmarks, lakes, and streams, and creating all types of artifacts through oral stories, direct experiences, and modeling.

I saw important interweaving of traditional and modern on another day when we went outside to gather materials to create a sling shot (a modern hunting tool) for a hunting unit. Instead of creating a traditional hunting tool, the students chose to create a more modern hunting-tool. First, the students learned about the various types of traditional hunting tools and terms in class. The students visited the elder who shared about values and beliefs about hunting tools especially *alerqutnek* (dos and don’ts) about caring for their catches. Back in the classroom during the week, the students were told that they were to cut a certain kind of tree in a Y-shape. The class as a whole assessed what materials they would need. At least two students volunteered to bring old rubber tires and the teacher provided the leather and string from school

(journal, 3/25/09). The old rubber tires used for sling were cut 1 x 5 inches, 2 pieces for each Y-shape. But these tires were recyclable to create something that was useful.

What was amazing about this classroom was the teacher supported the students consistently. Whether by listening to a story or acquiring cultural language and knowledge through direct experience about the past, students various levels were addressed through positive constant assessing that reassured them that they would get proficient from constant practice and as they matured. When I interviewed the students, they all expressed that they “enjoy elders talking to us and they were fun to listen to.” Students’ knew the information presented by elders and knowledgeable people were passed down from “real experiences.” It was common for the elders to instruct not only with how the process was done currently, but also to bridge information to the past. Before they gave their instruction, the elders and knowledgeable people told students that they were about to share what they have learned. When I observed one of the elder visits to instruct students about various uses of grass, she started off by saying “*niitelallemnek murilkellemnek-llu nasvitqataramci augkut ciuliamta elicungcalallritnek makut atulallratnek*” (I am going to show and instruct you from what I use to hear and observe how our ancestors utilize grass) (journal, 10/08/08). Students like to hear real experiences and make comparisons of what materials are used currently and what used traditionally. The oral histories retold by the elders and the knowledgeable people boosted student interest in learning. Making connections from the past to the present provides students

to think outside the box. They begin to understand that what was created in the past can still be of use now with alternative materials and assessments.

Nelson-Barber and Trumball (2007) in their study about current Indigenous assessments and education report that schools in the United States do not capture or build from Indigenous students' prior knowledge. Current policies, such as the No Child Left Behind Act of 2002, have interfered with many opportunities to create appropriate assessments for Indigenous students. In their study, Nelson-Barber and Trumball found how "experiential, hands-on education in a real-world context common to Native communities has built into it the opportunity for true, authentic-assessments: High quality performance equates with survival" (p. 139). In addition, they emphasize that using elders and community members as resources within the curriculum encourage students and younger generations to succeed in their own communities, helping them to develop culturally based "funds of knowledge" (see Lipka et al., 1998; Moll, Amanti, Neff, & Gonzalez, 1992, Nelson-Barber & Trumball, 2007). While Mrs. Evan created a classroom where students' learned from their elders and used local community resources, not all teachers will make this effort. Reasons include the emphasis on high stakes standardized tests, class time-frame issue, and lacking the local culture capital.

### *Local Human Resources*

In Tayarulek, the practice of bringing elders into the classroom has not changed. The school values Yup'ik knowledge in classrooms. During one of the interviews with Mrs. Nicholai, she explained that “*taigaqata tegganret allat-llu cenirtellriit, elitnaurat quyalartut, piyugteqluteng, utaqasciiganateng-llu*”(When elders and other visitors come to our classroom students are happy, engaged, and excited) (interview, 10/07/08). Students seem to know when elders and other knowledgeable people visit, they will be able to connect to the past. Watahomigie and McCarty (1994) in their study about the Hualapai way of schooling explained how the program evolved to focus on Indigenous educators. Reflecting the community environment to illustrate the rich culture in school helped enhance identity and expanded student potential for new learning. This study and my own observations points to the advantage of allowing elders and knowledgeable people to be part of schooling. This inclusion will encourage students to know who they are as Yup'ik and help them to connect past to present stabilizing the foundation of their identity. Learning, understanding, and knowing about values, beliefs, language, and culture help stabilize identity (Barnhardt & Kawagley, 2005).

When I interviewed the teacher to find out how elders were contacted and invited into the classroom, Mrs. Evan explained,

*tegganret aturyugaqamki allmun unit-aamun piaqamta, qayagaularanka*

*qanercuutetgun, qanrulluki-llu camek elitnaullemtenek, elitengnaqlemtenek-llu. Iliini kiularaatnga ikayuryugnganilua wall' ikayurciigatnilua....*  
*Assikenrularait tegganret cenirtevkalteng, maavet elitnaurvigmun*  
*taiyuumiitelartut qalurut'laamegteki Agayutmek.*

When I need to utilize elder's knowledge in a new unit, I call elders to check to see if they are interested in sharing knowledge to students. I usually call them ahead of time to see who is interested. They usually respond either they can help me or not.... The elders are more comfortable in having students visit them than visiting to the school because they like to connect spirituality when they give instructions to the students (interview, 10/07/08).

Mrs. Evan sometimes finds it hard get elders to be a part of the classroom due to their confidence in topic area, their health reasons, and preferences in place. There are elders in villages with varying specialties in different fields. For example, some elders are experts in subsistence and food preparations, some may be experts in weather reading, seasons, hunting, and craft making, or some will be expert in all fields. That is why sometimes when elders or knowledgeable people are contacted, they hesitate to participate because they do not want to give wrong information for areas where they have less experience. That is why elders like to group with other elders to talk or instruct students because they know their strengths and weaknesses and they can rely on each other. According to Fienup-Riordan (2005) when elders speak they are recalling to the past, but speaking primarily about the present. Elder's oratory is

simultaneously “authentic” and “innovative”, reproducing “with a difference” (p. xxxv). She continues that by stressing the importance of “following one’s parents, holding onto one’s language and traditions, and working together ‘with one mind,’ the elders’ contemporary narrative references to the past are active efforts to shape the future—a future in which they believe Yup’ik culture should be recognized and valued” (p. xxxv).

### *Importance of Being Outside*

It is easy to find and gather materials needed from around the environment for plants and wood, but hard to get furs and lumber. It is hard to get materials like furs and lumber because these have to be ordered ahead of time. Therefore, most of the time, the teachers use fur scraps and lumber scraps to create projects. Students seem to enjoy going out when it is time to gather materials needed from outside. One of the students I interviewed stated “*assikaqa ellamun anlleq*” (I enjoy going out on fieldtrips) to gather materials needed for a project (interview, 11/13/08). Going out on fieldtrips seems to calm down the students because they were able to breathe the fresh air. I noticed after fieldtrips out to gather materials the students were more focused and relaxed. After they went out and created a project on *ayaruq*, they smiled a lot (survival stick/cane) (journal, 12/10/09). One of the elders in the classroom explained that going out for fresh air was always encouraged for any age because going out to the wildness or nature helped mind, body, and soul. She explained that

*Ellamqilleq mikelnguut assirissuutek'larait. Aquiraarluteng ellami utumaqercet'laraat ayuquciiq. Enemetsiiaagqameng inerciigalilartut taugaam ellamun anngameng ca pekcesciigat'lutkelteng anlluku. Wangkuta imumi ellami aquivkangnaquralallruakut arcaqerluku uksumi*

Fresh air helps children to calm down and helps them to focus after being outside. Going outside allows children to burn energy, which kept them from releasing it, inside. We used to be allowed to play outside as much as possible especially during winter months (personal communication, 3/25/09).

So going out before any important task such as an assessment or big projects might help students to perform better. Perhaps this strategy might help students to reflect better when getting ready for assessment. Nelson-Barber & Trumball (2007) explained that “it is useful to reflect on the ways that Native people traditionally gauged improved learning-ways that can be incongruous with widely acted, more mainstream ways of demonstrating learning” (p. 139). This is a practice that could easily be incorporated into the classroom. Perhaps bringing students out for a wildness walk before or during assessments, when students have behavior problems, and before starting big projects, will help students to perform better in assessments or any other challenging tasks. But obstacles like bad weather, the time-frame of assessments, and lack of time to meet standards might prevent teachers from bringing students out.

In conclusion, by observing and interviewing teachers and students in a classroom that implemented the newly developed Yuuyaraq curriculum, I discovered



some key elements that are significant for conducting assessments within the classroom. As a Yup'ik language specialist I was able to work collaboratively with the teachers to develop rubrics and guidelines that will further expand and improve the assessments for this curriculum. In the next chapter, I share recommendations and implications for these findings.

## CHAPTER FIVE: CONCLUSIONS AND ACTION PLAN

The intent of this study was to describe how the Yuuyaraq curriculum was being applied in context, particularly in the middle school at Tayarulek. The final component of PAR according to Mills (2003) was to develop an action plan. After all the data is collected and analyzed, an action plan needs to be developed to refine, make improvements, or maintain the Yuuyaraq curriculum and teaching strategies. I have created a plan to add to a curriculum that existed before into curriculum with assessments that will strengthen the Yuuyaraq curriculum. The conclusions from my study include importance of various forms of authentic assessments used in the Yuuyaraq curriculum, how teacher's knowledge contributed to a classroom that focused on Yup'ik culture and identity, and culturally relevant curriculum themes that emerged based from interviews with students and teachers and my own observations.

### *My Action Plan as a Yup'ik Specialist*

To strengthen the Yup'ik Yuuyaraq curriculum my goal is to: 1) finish last half of Yuuyaraq curriculum; 2) develop more authentic assessments; 3) utilize technology and integrate to Yuuyaraq curriculum; and 4) train Yup'ik Yuuyaraq teachers to use the curriculum and newly developed materials and assessments.

### *Complete Yuuyaraq Curriculum*

First of all, the Yuuyaraq curriculum is still in progress. Nine units were developed for grades 4<sup>th</sup> to 12<sup>th</sup>. I am currently working on the last eight units. To

avoid repetitions, I have created three sample lessons for each unit and grade. Based on this study, I have suggested in some lesson plans to go out on field trips to gather materials early in the year. These can then be used over the long winter months. I have also suggested that some lessons be taught outside the classroom setting to allow real-life cultural projects or visit an elder for further instruction or utilize elders as resources (Barnhardt & Kawagley, 2005).

#### *More Authentic Assessments Needed*

My second action plan is to develop more authentic assessments. Based from my observations and collaboration with Mrs. Evan, I have developed some rubrics (see Appendix D-F). In Appendix D, I used a suggested design by Mrs. Evan. She wanted the Yup'ik language spoken in class, writing in Yup'ik, and projects included in the rubric. In this design, the grading scale from consists of the following criteria: *not present*, *emergent*, *developing*, and *proficient* are included with indicators and percentage scale. In Appendix E, I used the previous design, but created a more elaborate rubric that included more indicators. I developed and wrote the rubric in Yup'ik because Yugtun teachers suggested these be made during the 2009 fall in-service. Appendix F is a rubric for projects geared for grades 7<sup>th</sup> to 12<sup>th</sup>. It was suggested during fall in-service by a group of Yugtun Yuuyaraq junior high and high school teachers. We wrote it in Yup'ik focusing on a project or item created by the students.

As a result of this study, I am currently in a process of developing and refining a variety of authentic assessments. Some authentic assessments are done, but not yet revised. Since many of the units call for creating traditional projects or items from students' environment, there are yet many authentic assessments to be created with the input from stakeholders including students, teachers, administrators, and community members (O'Malley & Valdez-Pierce, 1996).

#### *Incorporate Technology Into Yuuyaraq Curriculum*

Based on this research and conversations with the Yuuyaraq teachers, technology needs to be integrated to the Yuuyaraq curriculum as a way to boost the interest of students who are now technology savvy. I plan to train Yugtun language teachers to take time in creating meaningful lesson plans and integrate technology.

Some of these include:

- elder documentation through photography or video
- digital storytelling
- creating brochures
- writing and printing a Yugtun Newsletter
- student reflection blogs
- develop and share student work using online website

To do this I will schedule training this coming fall with Erin Kavanaugh, curriculum department technology specialist, using via Video Television Conferencing (VTC) or

schedule trainings for each site for Yugtun teachers to use different computer programs. I will also train Yugtun teachers when I travel to sites on some computer programs they can utilize during their Yugtun instruction.

### *Train Yugtun Yuuyaraq Teachers*

My final action plan goal is to train the Yugtun Yuuyaraq teachers to use the curriculum, the new materials developed, and the authentic assessments. There are more and more students in many of the villages that are now in a brink of language shift and loss (Wyman, 2004). It is vital to train the Yugtun language teachers to incorporate the best practices in second language acquisition. I plan to train the Yugtun language teachers' to use researched second language teaching methods such as hands-on activities, gestures, visuals, and action allowing for both comprehensible input (Krashen, 1985) and output (Swain, 1995). To implement second language acquisition teaching strategies, I distributed and made available research articles about second language acquisition during fall of 2009 district wide in-service and posted some articles in Yup'ik to share on the LKSD website. To implement best teaching strategies, I will suggest teachers to observe at immersion school in Bethel, or invite Carol Oulton, Sally Samson, and Cathy Moses to present and share their thesis which include best teaching strategies during fall district wide in-service or through via VTC.

One of my goals is to provide Yugtun teachers with suggestion on how to implement culturally appropriate events and resources in their classrooms. These

include local celebrations (dance festivals), seasonal subsistence activities, inviting local elders and knowledgeable people into the classroom, and utilizing other community activities to enhance direct experience for students (Barnhardt & Kawagley, 2005; Vygotsky, 1978). To do implement culturally appropriate events, I will develop sample lesson plans of different regions' events to model how community events could be reflected or included through their instruction. To demonstrate how elders' can be utilized, I plan to share disc samples already done by one site this past fall. To gather more ideas and information on various ways to implement community events and resources, I will brainstorm with teachers during one of the district Yugtun trainings sometime during fall.

Finally, I plan to explain to the Yugtun teachers the importance of teaching and assessing students their developmentally appropriate levels. First, I plan to share ideas demonstrating how the materials or assessment created can be aligned to the instruction or (Nelson-Barber & Trumbull, 2007) students' developmental level (Bruner, 1972, Rogoff, 1990, & Wertsch, 1998). To make this happen, I will model using the current Yuuyaraq curriculum and developed authentic assessment how the lessons taught should align with the curriculum during one of the trainings this coming fall. To make sure assessments and materials used are developmentally appropriate, I will share and show the scope and sequence of the new Yuuyaraq curriculum and explain why and how it was developed to make activities or processes developmentally appropriate.

*Summary*

In summary, my research findings demonstrated that the most effective assessments are those that recognize that students' direct learning experiences in the Yuuyaraq curriculum are continually in process. The process of learning enhances the students' ability to build their skills, patience, creativity, and to be resourceful with their environment. The students are given ownership of their own learning through project-based assessments, writing about their own learning through reflective writing, and oral communication in the language. In addition, these projects need to be directly related to their own culture and environment.

I also emphasize that static, pencil and paper type assessments do not mirror the method of assessing authentically or with Indigenous knowledge because they only focuses on an independent method of assessing basic knowledge, skills, and procedures at one time and place. Both students and teachers find static assessments less appropriate especially when measuring Indigenous knowledge. Dynamic assessment seems to work well for both students and teachers because it is done verbally and encourages students to engage more because of the nurturing interaction. This type of assessment approach benefits all kinds of students including special needs students.

The biggest contribution to the success of this middle school class was teacher's knowledge and practice that focused on Yup'ik culture and identity.

Although English academics were prioritized, the Yuuyaraq Yup'ik class had evidence of culture and language integration, which came from the teacher Mrs. Evan. This teacher connected to her students' home environment and showed her "Yup'ik-ness." The process of gaining traditional knowledge was important for Mrs. Evan from using outside world. Elders and knowledgeable people were scheduled in her lesson plan at the beginning of each unit. The continuation of process of teaching and learning Indigenous knowledge was emphasized through process rather than product.

Finally, the research process PAR was key to moving this research from showing to action. Through this collaboration with the teacher and the middle school, we found that rubrics were needed. By collaborating together, we were able to develop rubrics to be used throughout the curriculum. Most significantly, we developed a relationship to continue this ongoing process of curriculum development and assessment.



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APPENDICES

Appendix A  
IRB Approval Form



**Institutional Review Board**

809 N. Kayisuk Dr. Suite 212, P.O. Box 757278, Fairbanks, Alaska 99775-7278

(907) 474-7809  
(907) 474-6444 fax  
fyrb@uaa.edu  
www.uaa.edu/irb

April 30, 2008

To: Martilee Coles-Ritchie, PhD  
Principal Investigator

From: Bridget Stockdale, Research Integrity Administrator  
Office of Research Integrity

Re: IRB Protocol Application

Thank you for submitting the IRB protocol application identified below. This protocol was determined to qualify for expedited review under federal regulations 45 CFR 46.110(F)(7). Therefore the review of your protocol application was done by representative members of the IRB. On behalf of the IRB, I am pleased to inform you that your protocol has been approved.

Protocol #: 08-28  
Title: *Authentic Assessment for Yuuyaraq Middle School Students based on the Yuuyaraq Curriculum*  
Level: Expedited  
Received: April 21, 2008 (original)  
April 30, 2008 (revisions)  
Approved: April 30, 2008  
Renewal: Continuing Review must be completed by April 30, 2009.  
Note: We recommend you submit all continuing review documents approximately one month prior to the due date to prevent delays in your research.

*Any modification or change to this protocol must be approved by the IRB prior to implementation. Modification Request Forms are available on the IRB website (<http://www.uaa.edu/irb/Forms.htm>). Please contact the Office of Research Integrity if you have any questions regarding IRB policies or procedures.*



Appendix B  
Parent Consent Form

**Yugtun Yuuyaraq Authentic Assessment  
Informed Parent Consent Form**

Your child is being asked to participate in a research study about the Yugtun Yuuyaraq Authentic Assessments within the Lower Kuskokwim School District (LKSD) located at Napaskiak School. The goal of the study is to find out if the instruction and assessments are aligned and if the new assessments show a more accurate picture of what students understand and know.

If you choose to have your child participate in this study, I will observe and interview your child during his/her Yuuyaraq class time.

**Risk and Benefits of being in the Study/Confidentiality:**

There are no foreseeable risks in your child's participation in this study. Your decision to have your child participate (or not) will not affect your child's grades in class or anything else they do in class. The information gathered will be kept confidential and your child's real name will not be used.

**Uses of the Information:**

The information collected will be used to inform LKSD language program development and may be shared through conference presentations and journal publications with other communities and researchers concerned about Native Language curriculum or programming. All data collected (tapes, transcripts, notes, etc) will be stored in a secure location at the University of Alaska Fairbanks (Brooks 306). Only people listed on this Informed Consent Form will have access to the data collected.

**Voluntary Nature of the Study:**

Your child's participation in this study is voluntary. Your child may decide to stop participating in the study at anytime. If you or your child want to stop participating in the study, the information gathered will be thrown away.

If you have any questions, please ask me. If you have any questions later, please contact my advisor or me:

Rachel Nicholai

[fsrbn@uaf.edu](mailto:fsrbn@uaf.edu)

907-543-4819

Marilee Coles-Ritchie

[ffmc@uaf.edu](mailto:ffmc@uaf.edu)

907-474-6263

If you have any questions or concerns about your rights as a research subject, please contact the Research Coordinator in the Office Research Integrity at 474-7800 (Fairbanks area) or 1-888-876-7800 (outside the Fairbanks area) or [fyirb@uaf.edu](mailto:fyirb@uaf.edu).

**Statement of Consent:**

I know what this study is about and I have had my questions answered. I want my child to be part of the study.

If appropriate:

Please check the box that applies:

- My child **can** be tape recorded  
 My child **cannot** be tape recorded

\_\_\_\_\_  
 Parent Signature

\_\_\_\_\_  
 Date

\_\_\_\_\_  
 Child Signature

\_\_\_\_\_  
 Date

Appendix C  
Teacher Consent Form

**Yugtun Yuuyaraq Authentic Assessment  
Informed Teacher Consent Form**

You are being asked to be a part of a study about the Yugtun Yuuyaraq Authentic Assessments within the Lower Kuskokwim School District (LKSD) located at Napaskiak School. The goal of the study is to find out if the instruction and assessments are aligned and if the new assessments show a more accurate picture of what students understand and know.

I will conduct an interview with you to discuss language instruction using the Yuuyaraq curriculum and the use of new assessments. If you decide to take part, you will be observed and interviewed about your Yuuyaraq Yup'ik class.

**Risk and Benefits of being in the Study/Confidentiality:**

There are no foreseeable risks in your participation in this study. The information gathered will be kept confidential. Your name or the name of your school or village won't be used in any reports or publications.

**Uses of the Information:**

The information collected will be used to inform LKSD language program development and may be shared through conference presentations and journal articles with other communities and researchers concerned about Native Language curriculum or programming.

All data collected (tapes, transcripts, notes, etc) will be stored in a secure locations at the University of Alaska Fairbanks (Brooks 306). Only people listed on this Informed Consent Form will have access to the data collected.

**Voluntary Nature of the Study:**

Participation in this study is voluntary. You may stop participating at any point. If you decide to stop participating, none of the information you provided will be used in the study.

If you have any questions, please ask me. If you have any questions later, please contact me at:

Rachel Nicholai

[fsrbn@uaf.edu](mailto:fsrbn@uaf.edu)

907-543-4819

Marilee Coles-Ritchie

[ffmc@uaf.edu](mailto:ffmc@uaf.edu)

907-474-6263

If you have any questions or concerns about your rights as a research subject, please contact the Research Coordinator in the Office Research Integrity at 474-7800 (Fairbanks area) or 1-888-876-7800 (outside the Fairbanks area) or [fyirb@uaf.edu](mailto:fyirb@uaf.edu).

**Recording of Information:**

\_\_\_\_\_ You may use a tape recorder to record the interviews. I understand that a tape recorder will provide a more accurate account of what was said. I understand that I have the right to ask that the tape recorder be turned off at any time.

\_\_\_\_\_ You may NOT use a tape recorder to record the interviews.

**Statement of Consent:**

I understand the procedures described above. My questions have been answered to my satisfaction. I have been provided a copy of this form.

This information is for:

\_\_\_\_\_ Rachel Nicholai's Thesis Study on Yugtun Yuuyaraq Authentic Assessment Master's program study & others (researchers, local leaders, educators, community members, etc.)

\_\_\_\_\_  
Print Name (participant)

\_\_\_\_\_  
Print Name (Obtaining Consent)

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

Appendix D  
Yuuyaraq Summative Self-Assessment

Atren \_\_\_\_\_ Erneq \_\_\_\_\_

Unit \_\_\_\_\_

**Instructions:** Place a check mark under the appropriate description that matches your key elements covered during Yuuyaraq class. This is a self-assessment grading rubric.

Yuuyaraq Summative Self-Assessment				
Grading scale	0-50%	51-65%	66%-80%	81-100%
	Not present *Does not speak Yugtun in class. *Does not write Yugtun in class. *Does not finish projects.	Emerging *Speaks some Yugtun in class. *Writes using some Yup'ik in class. *Project is partially done.	Developing *Speaks Yugtun most of the time in class. *Writes using Yup'ik most of the time. *Most of the project is finished.	Proficient *Speaks Yugtun all the time. *Writes in Yugtun all the time. *Completes project all the time
Language Spoken Do I speak Yugtun in classroom?				
Writing Am I writing in Yupik?				
Project I get my projects done				

Student comment:

Parent comment:

Teacher comment:

Student signature \_\_\_\_\_ Parent signature \_\_\_\_\_

Teacher signature \_\_\_\_\_ Date \_\_\_\_\_

Rubric created in collaboration with Mrs. Evan 4-6<sup>th</sup> grade (Spring, 2009)



Appendix E  
Self-assessment rubric for grades 4-6<sup>th</sup> grade (Fall, 2009)

Yuuyarami Yuvriuteka **Grades 4-6th Yuuyarami Unit-aat Iquatni Yuvruin**

**Atqa:**

**Erneq:**

**Maligtaquarkan:** X-iirki qanrutkekii calallren Yuuyarami. Qanerkangerquvet-llu igarluten.

0-50%

51-65%

66-80%

81-100%

**Not Present**

**Emerging**

**Developing**

**Proficient**

\*Qanyuinii Yugtun

\*Qanek'lagalua

\*Qanerturagluni

\*Qanerturaraqlua

\*Igayuinii Yugtun

\*Igaklagalua

\*Igarturaglua

\*Igarturaraqlua

\*Calianka taqsuinaki

\*Taqeklagluki

\*Taqiucarpialluku

\*Taqiutaqluni

**Qalartelqa**

**0-50%**

**51-65%**

**66-80%**

**81-100%**





Yugtun qalaquralartua





Yugtun qalarut'laraqa elitnauristeka allat-llu





Yugtun qanrutkelaranka caliallrenka wall' callrenka  
Igalqa





Igalartua Yugturrlainaq





Yugtun igaryarat elisngaanka

Pilingualqa/Calingualqa

Pilinguallrenka calinguallrenka-llu taqiutelaranka





Wangnek calinguaryugngariunga

Qanerkanka:

Appendix F  
End of Yuuyaraq Project Rubric

**End of Yuuyaraq Unit**

**Project Rubric**

Atren \_\_\_\_\_

Erneq \_\_\_\_\_

Calinguallren \_\_\_\_\_

**Directions: Qaquitellren calian tangerrluku kankut yuvruitet kiugiki piyunartacirpetun. (1 meaning least to 5 most)**

**Project Scoring Rubric**

**Yuvriun 1: Tegganret ayuqucirturillret elicetellruatnga callerkamnek caliarkamni**

<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
not useful	less useful	somewhat useful	more useful	very useful

**Yuvruin 2: Pinqegcaarluku piyunartacimtun caliaqellruaqa caliaqa**

<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
not useful	less useful	somewhat useful	more useful	very useful

**Yuvruin 3: Elitellruunga inerquutaitnek/alerquutaitnek caliallma tungiinun**

<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
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not useful      less useful      somewhat useful      more useful      very  
useful

**Yuvruin 4: Elitelqa aturyugngaqa wangnek pilinguarlua ayuqcirturtaunii**

**1**                      **2**                      **3**                      **4**                      **5**

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not useful      less useful      somewhat useful      more useful      very useful

**Yuvruin 5: Allat nallulriit ayuqcirturyugnganka elitellemnek pilinguallemnek**

**1**                      **2**                      **3**                      **4**                      **5**

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not useful      less useful      somewhat useful      more useful      very useful

**Allat qanerkanka:**

This rubric is a sample created for grades 7<sup>th</sup> to 12<sup>th</sup>, to assess their projects. Created fall of 2009.

Appendix G  
Student Project Pictures



Students practicing creating grass mats using grass and wool yarn as a substitute for *tapernaq* (seashore grass) taken fall of 2008 in a 5/6<sup>th</sup> classroom.



Students cutting willow trees prior to creating *ayaruq* survival canes during their Yuuyaraq unit on survival skill taken fall of 2008.



A student showing a finished sling-shot project a modern hunting tool created during Yuuyaraq class spring of 2009.