

**04/09/14  
PRESENTATION:  
ALASKA NATIVE  
STUDENTS  
ACHIEVING  
EXCELLENCE IN  
HIGH SCHOOL**

<TARGET><BILL></BILL><SUBJECT>04-09-14 PRESENTATION  
ALASKA NATIVE STUDENTS ACHIEVING EXCELLENCE IN HIGH  
SCHOOL</SUBJECT><COMM>SEDC28</COMM></TARGET>

# **Alaska Native Students Achieving Academic Excellence in High School**

**Jennifer Dahle Harrison**

**April 19, 2013**



# Problem Statement

- **Public Perception**
- **Two Research Questions**
  - 1) Are there high schools where Alaska Native students are achieving academic excellence?
  - 2) If so, are there community and school factors that positively affect Alaska Native students' academic performance?
- **Client: First Alaskans Institute**



# Background

- Traditional instruction methods
- Russian Schools
  - 1774 - St. Herman of Alaska - Kodiak
- 1878 - Religious Boarding Schools
  - Wrangell
- 1971 Lawsuits started against State-Operated School System - Kivalina
  - 1974 - Regional Educational Attendance Areas (REAA)



# Positive Deviance

- A few communities have already solved the problem.
- Example - High Dropout Rates in Rural Elementary Schools in Argentina (2002)
- When to Consider Approach

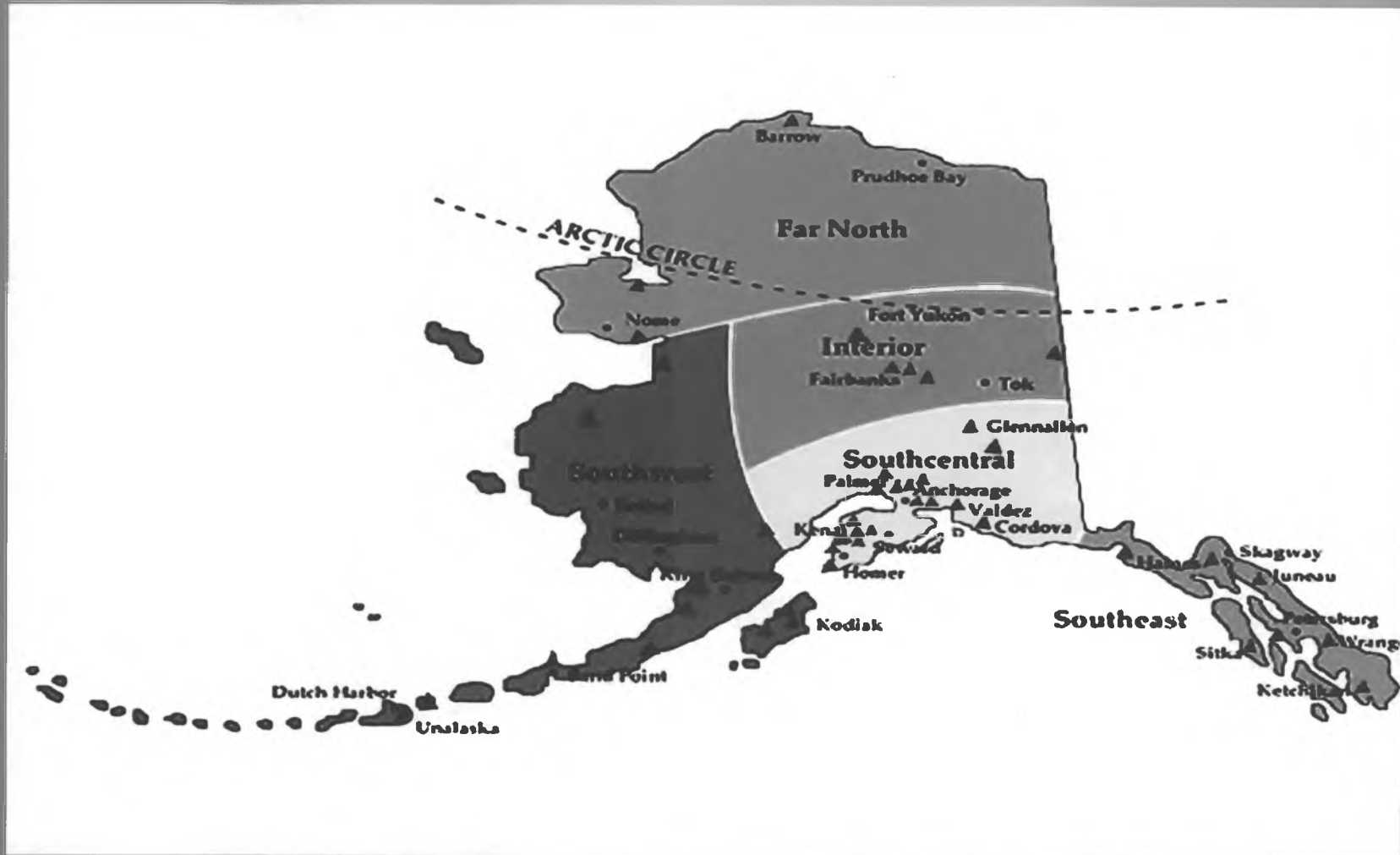


# Results - Alaska's High Schools

- **Positive Deviant High Schools**
  - Top 20% or 47 schools
  - 15% to 46% - Achieving Advanced Proficiency
  - 62% to 96% - Achieving a Minimum Proficiency or Greater
- **Answer #1 Research Question = YES**



# Positive Deviant High Schools



# NOT Statistically Significant School Factors

- **Funding**
  - State Aide
  - Expenditures PDM
- **Schools**
  - Accreditation
  - Attendance Rate
  - Type of Instruction
- **Programs**
  - 21<sup>st</sup> Century
  - ICE
- **School Districts**
  - # of Schools
- **Teachers**
  - Highest Level of Education of Teachers in School
  - % Academic Classes Taught by Highly Qualified Teachers
  - Student/Teacher Ratio



# Statistically Significant School Factors

- **Graduation Rate**
- **Schools**
  - Student Survey Return Rate
  - Enrollment Number
- **School Districts**
  - Type of School District



# NOT Statistically Significant Community Factors

- **Community Size**
- **Local Police**
- **Parent Survey Return Rate**
- **Voter Participation Rate**



# Statistically Significant Community Factors

- **Demographics**

- % of AK Native students in school
- % of community w/ Bachelor degree or higher
- % of community w/ HS Diploma/GED or higher

- **Language**

- % of community speaking an Alaska Native language
- % of students without Limited English Proficiency



# Future Research/Policy Options

- **Student Survey Return Rate**
- **Focus on Rural Education Attendance Area (REAA) School Districts**
- **Science**
- **GED Completion / University Distance Education**
- **Positive Deviance Approach - Learn from the People**



# The Power of Positive Deviance

Learn from the people

Plan with the people

Begin with what they have

Build on what they know

Of the best leaders

When the task is accomplished

The people all remark

We have done it ourselves

Wisdom of Taoist , Lao-Tzu , interpreted by Richard Pascale, Jerry Sternin and Monique Sternin



# Recommendation

- **Positive Deviance Dialogue**
  - Invite Interested Teachers & Parents
  - Scholarships
- **Provide Academic Data (3 years)**
  - Identify Positive Deviants Together
- **Sponsor Field Trips**
  - White Mountain, Nelson Lagoon, Maudrey J. Sommer School in Tanana, Nanwalek, Unalakleet, and others
- **Viable and Sustainable Solutions**



# Alaska Native Students Achieving Academic Excellence in Alaska's High Schools

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## Policy Report

Jennifer Dahle Harrison

4/19/2013

The general public believes that all Alaska Native students are performing poorly in small high schools; therefore, the Alaska State Legislature may propose to create regional boarding schools or close schools with less than 20 students to reduce costs. Information is needed in order to make an informed decision regarding any proposed school bills to improve academic performance in Alaska's public school system. This study investigated Alaska Native students' academic performance in 235 high schools during the 2009-2010 school year and compared academic excellence to school and community factors to identify if any relationships existed between the factors and high performing schools.

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## Key Definitions

The following key definitions are from *The Power of Positive Deviance* by Richard Pascale and Jerry and Monique Sternin.

Positive Deviance Concept: In every community or organization, there are a few individuals or groups who have found uncommon practices and behaviors that enable them to achieve better solutions to problems than their neighbors who face the same challenges and barriers.

Positive Deviance Approach: Communities have assets or resources they have not utilized. The positive deviance process enables a community or organization to identify and amplify those practices and behaviors, measure outcomes, and share their successful strategies with others. It is used to bring about sustainable behavioral and social change by identifying solutions already existing in the system.

Positive Deviance Individual or Group: Special or uncommon behaviors and strategies that enable the person or group to overcome a problem without special resources.

Positive Deviance Design or Methodology: A methodology consisting of four basic steps; define, determine, discover, and design.

Positive Deviance Process: The entire journey encompassing the skillful use of experiential learning methods and skilled facilitation applied to the four steps of the design. It results in community mobilization and ownership, discovery of existing solutions, and emergence of new solutions as a result of community initiatives.

## Executive Summary

In order to understand the systemic issues that promote academic success, this policy report identifies those high schools where Alaska Native students are excelling and factors that may be helping them succeed. Lending urgency to this study is the fact that people are pushing for the State of Alaska to consider options to reduce education expenses, including closing small high schools and opening regional boarding schools - an idea that brings a century of horrible memories to the forefront. This policy report was created for First Alaskans Institute, which helps develop the capacities of Alaska Native peoples to meet the challenges of the future.

The first research question was – “Are there high schools in Alaska where Alaska Native students are achieving academic excellence?” After it was determined that the answer was “yes” then the second research question was – “Are there school and/or community factors that positively affect Alaska Native students’ academic performance in Alaska’s high schools?”

Utilizing a positive deviance approach, Alaska Native students’ academic performance during the 2009-2010 school year was compared for 235 high schools to identify the “positive deviant” high schools (top 20%). Graduation rates, school and community factors were compared for the high performing “positive deviant” (top 20%) and lowest 20% high schools. Graduation rates, three school factors, and five community factors are statistically related to academic excellence.

This policy report identifies seven potential recommendations for future research and policy options based on the statistically significant factors. It is recommended that the positive deviance approach be implemented to bring together teachers and parents to determine behavior and social changes that the “positive deviant” (top 20%) high schools and communities have already implemented that enable their students to achieve academic excellence while facing the same obstacles and limited resources as other high schools.

*Learn from the people  
Plan with the people  
Begin with what they have  
Build on what they know  
Of the best leaders  
When the task is accomplished  
The people all remark  
We have done it ourselves*  
(Pascale, Sternin, & Sternin, 2010, p. 193)

## **Problem Statement**

There is a public perception that all Alaska Native students in small high schools are performing poorly. Due to a decline in the State of Alaska's income from oil development, which funds the majority of the state's K-12<sup>th</sup> grade education, policymakers are looking at ways to cut education expenses. Policymakers were expected to propose various options during this current legislative session, such as creating regional boarding schools or closing schools with less than 20 students. These proposals did not advance before the end of this legislative session, but will probably be considered in the next session.

While some Alaska Native peoples support the idea of regional boarding schools, because they could ideally be designed and managed better than they were in the past; others are concerned that the state may return to conditions during the "pre-Molly Hootch" century (1878 – 1976) when there were no local Alaska Native people in control of education and a civilization-savagism paradigm infected the Alaska public school system. As an Alaska Native doctoral student wrote, "From Hawaii to New Zealand and Greenland, the most promising schooling models for Indigenous students suggest that local control and Indigenous self-determination is key to improving school outcomes." (Argetsinger, 2012)

The one lesson the State of Alaska should have learned is that compulsory boarding schools operating within a civilization-savagism paradigm do not work. Policymakers and

advocates of Indigenous self-determination over education need information in order to make an informed decision regarding any proposed boarding school bills and/or propose other related bills to improve academic performance in Alaska's public school system.

**Research Questions:**

- 1) Are there high schools in Alaska where Alaska Native students are achieving academic excellence?

If the answer to the first research questions is "yes", then the second research question will be:

- 2) Are there school and/or community factors that positively affect Alaska Native students' academic performance in Alaska's high schools?"

If there are community and school factors that positively affect Alaska Native students' academic performance in high schools in Alaska, then the public education debate might be able to shift to discussing how to improve those factors instead of assuming that large regional boarding schools are the only answer.

Jerry Covey, an educational consultant with experience as a top state official, recently completed and published research that focused on the reading and mathematics scores at the district-level for all students. He concluded that generally the state's smallest, remote districts perform worst in those two areas. Covey believes that small schools provide a second-rate education and proposes that the state should provide smaller, regional boarding schools. (Demarban, 2012) In order to supplement Jerry Covey's work and provide additional information, this policy report focuses on the academic performance scores of Alaska Native students at the school-level in reading, writing, mathematics, and science. The research portion of the policy report explores the relationships between different school and community factors and academic performance. The school factors include student/teacher ratio and type of school along with other factors.

Some education advocates, like Jerry Covey, assume that students attending the new proposed boarding schools will perform better academically. However, this assumption does not take other factors into consideration, including the fact that most students attending any of the existing boarding schools have voluntarily chosen to attend that school. The Alaska Department of Education only publishes academic performance when at least three students are reported in any cell, so there is no way for the general public to know how students in very small high schools are doing academically. (Alaska Department of Education and Early Development, 2003) Hence, it is very difficult to assess the performance of these very small schools, and therefore very difficult to say for certain that they are underperforming. Large boarding schools may be less expensive than having many small high schools, but looking at this option from only a financial viewpoint does not take the social and cultural costs into consideration.

The targeted audiences for the proposed research information are First Alaskans Institute and the education advocates and researchers that will obtain information from their website – [www.firstalaskans.org](http://www.firstalaskans.org) and/or their magazine – *First Alaskans* magazine.

“First Alaskans Institute helps develop the capacities of Alaska Native people and their communities to meet the social, economic, and educational challenges of the future, while fostering positive relationships among all segments of our society. The Institute does this through community engagement, information and research, collaboration, and leadership development. First Alaskans is a non-profit charitable organization whose purpose is to advance Alaska Natives”. (First Alaskans Institute, 2013) Their vision is “progress for the next ten thousand years. True to identity, heritage, and values Alaska Native peoples are informed and engaged in leading the decisions that shape the future and their values include integrity, respect, Native knowledge, and responsibility”. (First Alaskans Institute, 2013)

Established in 2000, First Alaskans Institute has been interested in Alaska Native education since at least 2001. Alaska Native peoples have already paid the social and cultural costs of mandatory large boarding schools that required students to live far away from their family in a foreign environment and they successfully fought against this concept and the racial discrimination that occurred during the implementation of it in the 1970's through a settlement agreement between *Tobeluk v. Lund*. (1976) Therefore, to avoid the sins of the past, Alaska Native peoples must be included in any major discussions and/or legislative debates before any policy changes to the State of Alaska's current high school educational programs are developed. The "positive deviance" analytical framework utilized in this policy report supported this need by identifying which communities could provide the most crucial feedback in this dialogue on reforming Alaska's public school system, because it identified which schools are already successfully educating their Alaska Native students. Due to First Alaskans Institute's focus on advocating for quality educational and culturally-appropriate schools for Alaska Native students, this policy report only focuses on high schools where Alaska Native students are enrolled.

The deliverable is this policy report that identifies high schools where Alaska Native students are excelling, positive relationships between community and school factors and Alaska Native students' academic performance in Alaska's high schools, potential policy and future research options based on the results, and a recommendation for First Alaskans Institute's education advocacy network and partners.

## **Background and Conceptual Framework**

In a recent article in *First Alaskans* magazine, titled "These Wouldn't Be Your Father's Boarding Schools", a report by Jerry Covey was summarized by Alex Demarban. The main

issue identified is that “the state is failing Alaska Native students and the small rural schools many of them attend”. (Demarban, 2012, p. 95) Jerry Covey stated that state policy has led to reduced enrollment and reductions in teachers, because the state supports 30 correspondence programs and three state-wide boarding schools that are pulling students out of local schools. He proposed a hybrid solution that would create smaller, regional boarding schools that would be locally controlled, offer year-round instruction and a flexible schedule that allowed students to regularly return to their villages and stay enrolled in their local schools. (Demarban, 2012)

In order to provide a balanced discussion, the same edition of *First Alaskans* magazine also included an article titled “‘Sivutmukta’: Let’s Move Forward” by Timothy Aqukkasuk Argetsinger. He reminded us that the State of Alaska already tried to establish regional boarding schools in 1966 and by 1969 “the Alaska Commission for Human Rights found high rates of teacher turnover, apathetic students below grade level, and teachers from out of state who were unfit to teach in a cross-cultural setting.” (Argetsinger, 2012, p. 101) Argetsinger concluded that we should not continue the colonial schooling models that did not work in the past; instead the State of Alaska should work directly with communities to achieve their visions for education. “The majority Inupiat North Slope Borough School District is a solid example of an Alaska public school district that recognizes the importance of earning community trust and developing partnerships in the process of improving student outcomes.” (Argetsinger, 2012, p. 103)

This policy report continues the current public administration discussion regarding possibilities for community-based education in Alaska by identifying individual schools where Alaska Native students are excelling academically and determining if there is any school and/or community factors that may have influenced their academic success.

In order to determine academic performance, the results from the Alaska Department of Education's Standard Based Assessments (SBA) were used. However, results are not published when fewer than five students are tested at a grade level or when two or fewer students are reported in an individual cell. Therefore, schools without published results were not included in the database for this policy report.

Since this policy report focused on locating individual schools where Alaska Native students are excelling, only the percentages of students achieving an advanced proficiency or proficiency in reading, writing, math, and science were used. Unfortunately, Alaska public school districts, upon approval from the Alaska Department of Education, may administer the science portion of the Standard Based Assessments (SBA) outside the regular testing window. This caused discrepancy in the percentage of students tested and often resulted in less students tested on Science than the other subjects.

The three types of data included in this project were 1) academic performance; which included percentages of Alaska Native students demonstrating advanced proficiency and proficiency in reading, writing, math, and science; and graduation rates, 2) school factors, which included items that a school can change like education levels of teachers, and 3) community factors, which included items a community can change, like voter participation. The three types were broken down into 11 themes or domains with 32 total factors considered in the project:

#### Academic Factors

- Graduation
  - Graduation Rate
  
- Standard Based Assessment Scores
  - Reading Advanced Proficiency (SBA) average for all grades
  - Reading Proficiency (SBA) average for all grades
  - Mathematics Advanced Proficiency (SBA) average for all grades
  - Mathematics Proficiency (SBA) average for all grades
  - Science Advanced Proficiency (SBA) average for all grades

- Science Proficiency (SBA) average for all grades
- Writing Advanced Proficiency (SBA) average for all grades
- Writing Proficiency (SBA) average for all grades

#### School Factors

- Funding
  - Expenditures Per Daily Membership of Students
  - State Aide Entitlements (Foundation Program - per student for district where school is located)
- Individual Schools
  - Accreditation
  - Attendance Rate
  - Enrollment Number
  - Student Survey Return Rate
  - Type of Instruction (traditional (four walls), correspondence/Internet-based, boarding school, and alternative schools for at risk students)
- Programs
  - Participation in 21st Century Community Learning Center Program
  - Participation in ICE (Initiative for Community Engagement)
- School Districts
  - Number of Schools in School District
  - Type of School District (borough/municipality/city or regional educational assistance area (REAA))
- Teachers
  - Highest Level of Education of Teachers in School
  - Percentage of Core Academic Classes Taught by Highly Qualified Teachers
  - Student/Teacher Ratio

#### Community Factors

- Community Demographics
  - Community Size
  - Percentage of Alaska Native students in the High School
  - Percentage of Community Members with Bachelor's Degree or Higher
  - Percentage of Community Members with High School Diploma or Higher
- Community Services
  - Local Police
- Language
  - Percentage of Community Members Speaking an Alaska Native language
  - Percentage of Students without Limited English Proficiency

- Parents
  - Parent Survey Return Rate
- Voters
  - Voter Participation Rate

In order to compare a variety of community and school factors with academic performance, this policy report focused on information available to the public for the 2009-2010 school year on the Alaska Department of Education's website, for 2010 on the Alaska Department of Commerce, Community, and Economic Development's website, for 2010 on the Division of Election's website, for 2010 on the US Census Bureau's website, Alaska Department of Public Safety's website, and Association for Alaska School Board's Initiative for Community Engagement's (ICE) website.

During 2009-2010 school year there were 506 public schools and 290 schools with at least one student in high school (Grades 9<sup>th</sup> – 12<sup>th</sup>). (Alaska Department of Education and Early Development, p. 2010) Test results were obtained from the Alaska Department of Education and Early Development's *State of Alaska Report Card to the Public* website. There were two high schools without any information provided and two schools that been closed since the 2009-2010 school year, so no test results were provided. There were 16 high schools with too few students tested for the results to be published. There were 35 high schools that either did not have any Alaska Natives students enrolled or there were too few Alaska Native students tested for the results to be published. A total of 235 high schools were compared for this report. It is an assumption of this policy report that correlations can be drawn between the schools that are part of the research and those schools that were too small for academic performance to be publically reported. By investigating the relationships between school and community factors and the

academic performance of Alaska Native students in high schools, policymakers will be able to focus the limited funding on areas that will have the greatest impact.

Since this project is utilizing secondary data, the reliability of the information is dependent on the State of Alaska employees that have collected the data and inputted the data onto their departments' websites. Due to limited time and in order to compare communities to each other, if all the data is not available for an individual school or their community, then they were not included in the database. Out of the original 290 high schools, 55 high schools were not included due to lack of publically available information on academic performance. The proposed management policy options were based on the strength of the relationship between the school or community factor and academic performance.

## **Literature Review**

### **History of Education in Alaska**

For millennia, Alaska Native peoples taught their children what they needed to survive in Alaska. Adults taught their children how to behave through oral stories that provided entertainment as well as teaching important values and traditions. Elders and parents working together in a permanent village or temporary camp ensured that children learned the lessons. This method of instruction was successfully implemented in some communities into the 1900s.

The first non-Native teachers arrived as priests in the 1700s to teach the Russian Orthodox religion. The priests tried to force the Alaska Native peoples to change certain aspects of their culture that they considered contrary to Christianity, like shamanism. (Kan, 1999) However, the Russian Orthodox priests maintained more respect for the language and culture of the Alaska Native peoples than the American missionaries that followed them into Alaska.

Traditionally, the Russian Orthodox Church used the language of the people for proselyting. The priests' first tasks when establishing missions in new lands was to learn the local language, design an alphabet, translate liturgy and scriptures, and establish schools to train others. From the Orthodox point of view, one can be socially, linguistically, and ethnically different from other members of the church locally, nationally, and worldwide. (Dauenhauer, 1980)

There are many examples of how this multi-ethnic attitude played out in Alaska. In 1774 Russian Orthodox missionary Father Herman (later canonized as Saint Herman) started a bilingual school in Kodiak that taught in both Aleut and Russian. In the 1820s, Father Veniamenov (later canonized as Saint Innocent) started a bilingual school in Unalaska. When he moved to Sitka in the 1830s, he created an alphabet for the Tlingit language and authored bilingual textbooks in Tlingit and Russian. Father Jacob Netsvetov, an Aleut man who was ordained an Orthodox priest (and also later canonized a Saint), developed a writing system for the Yup'ik language and translated books into Yup'ik when he was sent to proselyte in their territory in the 1840s. Richard Dauenhauer has suggested that Father Netsvetov was probably the author of the anonymous Russian/Aleut dictionary, which was the largest Alaska Native language dictionary of the 1800s and one of the largest ever. Literacy efforts like these were so successful that in 1886, Sheldon Jackson estimated that one half of the population in Unalaska was literate in Aleut, and around the turn of the 20<sup>th</sup> century there was a trilingual newspaper published in Unalaska with articles written in Aleut, Russian, and English. (Dauenhauer, 1980)

The United States (US) acquired political control of Alaska in 1867. In May 1876, following the gold strike in the Cassiar Mountains, four Tsimshian Indians from Fort Simpson in British Columbia arrived in Wrangell looking for work. They started Methodist prayer meetings,

which many Tlingit Indians attended. One Tsimshian man, Clah, decided to stay in Wrangell to continue the prayer meetings and open a school. (Mitchell, 1997)

In 1877, Amanda McFarland, a Presbyterian missionary, was escorted by Sheldon Jackson to Wrangell to work in the school with Clah and Sarah Dickinson, a Tlingit woman. Sheldon Jackson returned to the Lower 48 and started to raise money for the school and lobby for the federal government to support mission schools in Alaska. In September 1878, out of concern for teenage Tlingit girls that were being pursued by white men, Amanda McFarland opened the first boarding home in Alaska. (Mitchell, 1997)

In the 1800s the United States was trying to figure out how to solve the “Indian problem” that was created by the White man’s insatiable demand for Indian land, which led to the United States violating their treaty commitments and the Indian Wars raging across the western plains. In March 1880, Sheldon Jackson created a fact sheet that he used to lobby for the federal government to financially support the mission schools. One of the items on his fact sheet was that “it will be much cheaper to spend a few thousand dollars in how educating those people to citizenship, than a few years hence millions to fight them, when the encroachments of the Whites shall drive them to desperation”. (Mitchell, 1997, p. 79) Based on the principles of Social Darwinism, US policymakers started to propose two options for Native Americans:

1) continue in Tribal life and become extinct or 2) assimilate into the American society. Many White Americans assumed that European countries had reached the pinnacle of civilization and that Native Americans remained in a savage or barbaric stage. The policymakers believed that through exposure to American society, specifically through the education system, the social evolution process could be accelerated and assimilation could be completed. (Jester, 2002)

In 1884, US Congress created the Organic Act, which created a civilian government for Alaska and called for the establishment of schools. In a clear violation of separation of Church and State, mission schools were allowed to select 640 acres and \$25,000 was allocated to operate the schools. (Alaska Humanities Forum, 2013)

In 1885, Sheldon Jackson was appointed the first Superintendent of Public Instruction in Alaska. As clergy for the Presbyterian Church, he was concerned with protecting Native women from White males and controlling the flow of whiskey to villages. Sheldon Jackson believed that only through massive acculturation could Alaska Native peoples be Christianized and therefore spared the military havoc of Native Americans in the Lower 48. He insisted that there was a link between Christianity, the English language, and American culture. (Dauenhauer, 1980)

Starting in 1886, Sheldon Jackson, the Board of Missions, and the Commissioner of Indian Affairs began to prohibit books in any Alaska Native language from being used in Alaska's schools and insisted that all instruction be in English. The students were required to speak and write in English exclusively and the Teachers made no effort to learn the Alaska Native languages. (Dauenhauer, 1980) The new American education system suppressed both the Russian and Alaska Native languages. There are numerous accounts of physical punishments for speaking Alaska Native languages in schools. Knuckles rapped, mouths were taped, and there is a story of one teacher swabbing Aleut students' tongues with a stinging solution. This policy caused psychological damage with impacts still being felt to this day. (Dauenhauer, 1980)

The colonial approach to education started in the 19<sup>th</sup> century continued into the 20<sup>th</sup> century. More so than the Russians, the United States has historically utilized the school system as a tool to eradicate traditional Alaska Native culture and language and remake the Alaska Native peoples in the image of American society.

In 1901, US Congress withdrew support for Alaska schools and in 1905 they passed the Nelson Act that permitted local communities to assume control of public schools. However, this only applied “to White children and children of mixed blood who lead a civilized life”.

(Dauenhauer, 1980, p. 2 in Footnotes) The remaining Alaska Native students continued to attend Bureau of Indian Affairs (BIA) schools. In 1912, a second Organic Act provided a territorial government in Alaska and they were in charge of all schools, except BIA schools. Between 1930 and 1954 they transferred BIA schools to the Territory of Alaska; this set up three different school systems - local city schools, BIA schools, and territorial schools. (Dauenhauer, 1980)

David Wallace Adams coined the phrase *civilization-savagism paradigm*. “The basic idea was that peoples on the globe were at various stages in their evolution from *savagism* to *civilization*. As the theory went, while Whites were for the most part civilized, Indians were still largely savages.” (Adams, 1988, p. 10) Adams described how the principles of Social Darwinism were being applied in the Native American school system. The paradigm is aimed to erase Native identity by eliminating external symbols of Tribal attachment and replacing the children’s Tribal identity with the values and behaviors of American society. “The educational strategies that promoted the civilization-savagism paradigm included (a) the location of the school, (b) a comprehensive educational program, and (c) indoctrination in the essence of the civilization-savagism paradigm.” (Jester, 2002, p. 7)

In Alaska, the civilization-savagism paradigm was implemented “via the following strategies: (a) removal of Alaska Native children from traditional homes and placement in boarding schools; (b) requirement of English-only be spoken in the schools; and (c) establishment of codes of behavior.” (Jester, 2002, p. 8) Alaska Native students were sent to boarding schools in Chemawa, Oregon; Chilocco, Okalahoma; Eklutna, Alaska; Haines, Alaska;

Illiamna, Alaska; Kanakanak, Alaska; Lazy Mountain near Palmer, Alaska; Minto, Alaska; Mount Edgecumbe near Sitka, Alaska; Seward, Alaska; Seymour, Tennessee; White Mountain, Alaska; and Wrangell, Alaska. There are many stories of extreme physical, emotional, and sexual abuse that the Alaska Native students experienced in the board schools.

In 1966, the State of Alaska hired the Training Corporation of America to complete a feasibility study to determine the size and location of regional boarding schools. Following the study, the state created regional boarding schools in Nome, Kodiak, and Bethel. For students that could not get into state-operated or Bureau of Indian Affairs boarding schools, the State started a Boarding Home Program, which involved students staying in private homes in urban communities in order to attend the local high school. (Alaska State Board of Education, 1972)

In 1972, the Alaska State Board of Education completed a book called *The Big Picture on Small Schools* that investigated the problem that during the 1971-1972 school year 900 out of 3,500 high school students in Alaska were still being required to leave their homes to attend federal boarding schools. A fiscal analysis was completed on the annual operating costs of instruction and domiciliary and construction costs for regional boarding schools (192 students), area boarding schools (100 students), the boarding home program, and local high schools (60 students). The annual costs per student for instruction and domiciliary ranged between \$6,000 for regional boarding schools and \$3,000 for local high schools. Even though the instruction costs were higher per student in the local high schools, they did not require domiciliary expenses, because the students lived at home. The construction costs per student ranged between \$23,177 for regional boarding schools and \$12,500 for local high schools. Even though the costs of the area boarding schools and local high schools were the same per school, the area boarding schools required the additional cost of building a dormitory. The costs to operate enough schools for 900

students ranged from \$5.4 million to operate the regional boarding schools and \$2.7 million to operate local high schools. The costs to construct enough schools for 900 students ranged from \$20,860,000 for regional boarding schools and \$11,250,000 for local high schools. Although the calculations were completed in 1972, they still demonstrate that due to the additional costs to operate and construct dormitories it costs less per student and overall to build and operate local high schools instead of boarding schools. (Alaska State Board of Education, 1972)

Even with this information, the State of Alaska continued to require many Alaska Native students in rural Alaska to leave their homes and attend boarding schools while State was building local high schools for non-Native students until a settlement was reached in the mid-1970s. While some Alaska Native students felt that they received a quality education in boarding schools; many others experienced extreme emotional, physical, and sexual abuse and did not return to their homes for years, which has caused generational cultural and social problems for rural Alaska.

Kivalina asked the Alaska Legal Services Corporation to assist them in obtaining a local high school in 1971 and they filed a lawsuit against the State Board of Education. The State of Alaska quickly settled and added Kivalina to the list of villages to receive high schools. This victory encouraged other villages to do the same thing and the Alaska Superior Court reacted in 1974 and ruled that local high schools were not required under the constitution. (Cotton, 1984)

In 1975, Alaska Native students, including Molly Hootch, brought a civil action to the Alaska Superior Court against the Alaska State-Operated School System "to secure their right to an education in the form of secondary education in their community of residence and to redress a willful and continuous pattern and practice of racial discrimination against Alaska Natives in violation of the constitution and laws of the United States and Alaska". (Molly Hootch, minor,

by her father, et. al., Appellants, v. Alaska State-Operated School System, a State Corporation, et al., Appellees, 1975) Although the Alaska Superior Court affirmed their 1974 decision in a 4-1 decision on the first claim of not being required to provide a school in their community, the second claim of racial discrimination was remanded and then decided that the State's failure to provide local high schools for Alaska Natives when they were providing local high schools for non-Natives was a pattern and practice of racial discrimination in violation of the United States Constitution, Alaska Constitution, and non-discrimination laws. (Cotton, 1984) During the late 1970's to mid-1980's Alaska enjoyed an economic boom from the oil pipeline, which assisted the State of Alaska in constructing new schools to comply with the settlement agreement.

### **Educational Research**

In 1993, Gary Huang and Craig Howley investigated impoverished, minority, and handicapped children being at risk in schools. Data was collected from the Alaska Statewide Student Testing Program in 1989, which included reading, writing, and math along with (a) students' background as reported by teachers, (b) students' academic attitudes and study habits as reported by students, and (c) school climate as reported by principals. Data was obtained from the school districts regarding student-teacher ratio, community size, and various measures of educational costs. When investigating all students in each school: 1) The lower the costs, the higher the academic achievement. 2) The higher the community size, the higher the academic achievement. 3) The higher the class size, the higher the academic achievement. 4) The higher the student-teacher ratio, the higher the academic achievement. 5) The lower the educational disadvantage, the higher the academic achievement. However, when they just compared disadvantaged students they found that **they obtained higher academic achievement scores in small schools and lower academic achievement scores in large schools.** Small schools (10-

179 students) in Alaska appear to mitigate the effects of disadvantage, whereas large schools (540+ students) tend to compound those effects. (Huang, 1993)

In 1994, Craig Howley summarized results from numerous studies regarding the influence of school and district size on student academic achievement. He found that the **smaller the school and school district, the higher the academic achievement, at least among disadvantaged students.** Research demonstrated that when comparing students' academic achievement of higher-order thinking, no significant difference was found between the performance of students in small rural high schools and larger high schools in urban areas. Small school size was found to be associated with lower dropout rates and he attributed much of this effect to high school climate and high rates of student participation in school activities, like basketball. Small schools are effective academically. (Howley, 1994)

In 1997, Carole Seyfrit and Lawrence Hamilton examined Alaska Native high school students' perceptions of the purpose of school, quality of schools, adult encouragement, Alaska Native language skills, and future residential expectations. They compared their results to a longitudinal study completed in Canada. Data was gathered through a survey in the Northwest Arctic Borough School District, Southwest Region Schools, Yupiit School District, and Mt. Edgecumbe. They found that students in small villages are as likely to report parental encouragement as are students who live in larger towns or attend boarding schools. However, "85% of Alaska Native students think they will live someplace other than their home communities for most of the rest of their lives". (Seyfrit & Hamilton, 1997, p. 1) The students in Canada reported less educational expectations from their parents than students in Alaska, but the Canadian Inuit students were less likely to expect to live someplace other than their village. The

researchers hypothesized that recent decisions affecting self-governance for Native peoples in Canada were likely to accelerate similar changes among their youth. (Seyfrit & Hamilton, 1997)

In 2002, Timothy Jester investigated Alaska's public school system consistently failing "to provide Alaska Natives a culturally relevant educational experience and to effectively educate the majority of Alaska Natives when evaluated according to test scores, dropout and graduation rates, and educational attainment levels". (Jester, 2002, p. 2) He conducted a qualitative study on one school district in Alaska with schools in Alaska Native villages and non-Native communities during the 2000-2001 school year. The research question was "in what ways does the sociohistorical context of Alaska Native schooling play out in contemporary educational policies and practices?" (Jester, 2002, p. 2) Data was collected over a six-month time period through interviews, observations, and document analysis. He discovered that the district created a tracking system that functioned as a dual educational system that allowed the district to identify early the "incapable" students and place them in a nonacademic track resulting in an alternative diploma, because they had created a "no-failure" theme and did not want the possibility of students not graduating to occur. This resulted in the students not graduating, because they were not provided a comprehensive academic curriculum. Timothy Jester found that the district had recast the historical *civilization-savagism* paradigm into an "unhealthy Native" construct that enabled them to explain Alaska Native students' academic failure as not connected to their standards-based system and thus keep their successful reputation instead of developing an educational policy that facilitated cultural relevant instruction and enabled the students to achieve academically. (Jester, 2002)

In 2009, Takako Takano, Peter Higgins, and Pat McLaughlin investigated the concern about detachment from both a place and the natural environment in industrialized nations. They

explored a school-based educational attempt to investigate the meaning of 'connection with place' and the implications for sustainability in Alaska. The research questions were "1) Why do these indigenous people feel a need to restore a connection with the land?, 2) What effects can be observed that might be attributable to the programme?, and 3) Are there any implications for sustainability education that might be generalizable to an international audience?" (Takano, Higgins, & McLaughlin, 2009, p. 345) They collected data by observation, interviews, surveys, and conversations with stakeholders, the students' writings and secondary sources. They found that by **implementing a place-based education** at Russian Mission School during 2002-2007 that integrated the community's cultural values and activities into their curriculum, **they raised the students' academic scores.** (Takano, Higgins, & McLaughlin, 2009)

### **Positive Deviance**

The positive deviance concept is that there are a few individuals or groups who have found uncommon practices and behaviors that enable them to achieve better solutions to problems than the others who face the same challenges and barriers. The authors of *The Power of Positive Deviance* suggest that it should be considered as a possible approach when a problem meets the following criteria: "1) The problem is not exclusively technical and requires behavioral and/or social change, 2) the problem is "intractable" – other solutions haven't worked, 3) positive deviants are thought to exist, and 4) there is sponsorship and local leadership commitment to address the issue. (Pascale, Sternin, & Sternin, 2010, p. 196)

Pascale and Jerry and Monique Sternin have determined that there are seven steps to successfully implementing the positive deviance approach:

- 1) Introduce as a proven approach
- 2) Focus on what is working against all odds (the positive deviant) rather than on what is wrong and/or what is missing

- 3) Communities and community members must be invited to participate and comfortably feel that they can opt in or opt out
- 4) Encourage community members to reframe the problem to ensure relevance, concreteness, and measurability
- 5) Engage broader community to host group conversations during which common practices are established and, subsequently, positive deviants are identified
- 6) Ensure that community takes ownership of a design to disseminate new discoveries through action learning. Practice trumps “knowing about”.
- 7) Remain vigilant to ensure that sponsors, outside experts, and facilitators remember that their only role is as co-conveners (with local leaders) and catalysts of the group conversation. (Pascale, Sternin, & Sternin, 2010, p. 194)

In 2010, a medical college in Pakistan utilized the positive deviance approach because many students were achieving lower clinical performance ratings than would be expected based on their performance on written examinations. Zareen Zaidi, Tara Jaffery, and Shaheen Moin wanted to try a novel approach to partner with the student community to encourage positive change in study habits instead of relying on best practice solutions that focused on identifying reasons for low achievement. They used the six-step positive deviance conceptual framework to identify and disseminate the study strategies employed by successful students. Fifty students were assessed mid-rotation using a mini-clinical examination and 360-degree evaluations. The students who performed well were invited for individual in-depth interviews to find out how they learned clinical skills. **The positive deviance approach significantly improved clinical skills and attitudes in students.** (Zaidi, Jeffery, & Moin, 2010)

Prior to 2010, Argentina realized that while nationally 86% of students in Argentina completed their elementary education, only 56% of children in the rural province of Misiones graduated from elementary school. They brought together parents and teachers from rural elementary schools that identified that one school had a 100% retention rate and 10 others had a 90% retention rate. The parents and teachers visited the high-retention schools to find out what they were doing differently with the same resources and obstacles. They found that teachers in

the high-retention elementary schools had engaged the parents as partners in their child's education, which led to the parents encouraging the students to remain in school and the students completing their homework. One year later, the rural province of Misiones documented a **50% increase in student retention** in the elementary schools within the two school districts that participated in the project. The difference between the high and low-retention elementary schools **had more to do with behavior occurring outside instead of inside the classroom** by the teachers and parents. (Pascale, Sternin, & Sternin, 2010)

## Research Methodology

The research methodologist incorporated concepts based on the Positive Deviance Concept. It is based on the observation that in every community there are certain individuals or groups, whose uncommon but successful behaviors or strategies enable them to find better solutions to a problem than their peers. These individuals or groups have access to exactly the same resources and face the same challenges and obstacles as their peers. (Tufts University, 2010)

The data was gathered from information available to the public for the 2009-2010 school year on the Alaska Department of Education's website, for 2010 on the Alaska Department of Commerce, Community, and Economic Development's website, for 2010 on the US Census Bureau's website, and for the November 2, 2010 General Election on the State of Alaska's Division of Elections website. The information from the Alaska Department of Education was manually entered into version 21.x of the Statistical Package for Social Sciences (SPSS) and the schools with high school students attending in 2009-2010 were copied from reports provided in an Excel worksheet by the Alaska Department of Education. The information about the communities was manually entered into SPSS from data gathered from the Alaska Department of

Commerce, Community, and Economic Development's website and the US Census Bureau's website. The voter participation information was manually entered into SPSS from the data available on the State of Alaska's Division of Election's website.

During 2009-2010 school year, there were 506 public schools and 290 schools with at least one student in high school (Grades 9<sup>th</sup> – 12<sup>th</sup>). (Alaska Department of Education and Early Development, p. 2010) Test results were obtained from the Alaska Department of Education and Early Development's State of Alaska Report Card to the Public website. There were two high schools without any information provided and two schools that been closed since the 2009-2010 school year, therefore no test results were provided. There were 16 high schools with too few total students tested for the results to be published and 35 high schools that either did not have any Alaska Natives students enrolled or there were too few Alaska Native students tested for the results to be published. A total of 235 high schools were compared for this report.

Excel software was used to enter the percentage of Alaska Native students achieving advanced proficiency and proficiency in reading, writing, mathematics, and science on the standard based assessments for each of the 235 high schools. Data was sorted by the combined Advanced Proficiency percentages and the combined percentages of students achieving at least a minimum proficiency or better to determine the top 20% or 47 schools and the bottom 20% or 47 schools. Excel software was also utilized to determine the Range, Mean, Standard Deviation of 235 High Schools, my Top 20% or Group One, and the Bottom 20% or Group Two.

It was determined to include the Science scores, even though 23% of the 235 schools did not publish the Science scores due to not testing at least five Alaska Native students and a zero was put in those columns, which lowered their average academic scores. If the Science scores had not been included and the Top 20% was solely based on the Reading, Writing, and Math

scores, four high schools would have been included in the Top 20% and one high school would not have been in the Bottom 20%. However, since they had less than four Alaska Native students, it was determined to include the Science scores when determining the Top 20% or 47 high schools and thus leave them out of the group. There were 10 high schools in the Top 20% that had no Science scores entered and still made the Top 20%, even though having a zero in those columns lowered their average academic score.

Version 21.x of the Statistical Package for Social Sciences, commonly known as SPSS, was used to enter the previously mentioned school and community factors for the 94 schools. The factors were entered as nominal, ordinal, or scale. SPSS was used to analyze the factors. T-Tests were used to analyze the Scale factors and Chi-Square was used to analyze the Ordinal and Nominal factors. For the T-Tests, an academic scale designation was entered that only included the Reading, Writing, and Math scores into SPSS. For the Chi-Square tests, a Group One or Group Two nominal designation was used for the Academic factor.

## Findings

### Research Question

- 1) Are there high schools in Alaska where Alaska Native students are achieving academic excellence?

Answer: YES

Table 1 describes the group of 235 high schools. The range of percentages of Alaska Native students achieving advanced proficiency was 46% to 0 with a mean of 11%. The range of percentages of students achieving at least a minimum proficiency level was 96% to 13% with a mean of 49%. Therefore, **there are high schools in Alaska where as high as 46% of the**

**Alaska Native students achieved advanced proficiency in reading, writing, mathematics, and science and as high as 96% reached minimum proficiency or higher.**

Table 1  
Alaska High Schools (N = 235) – All Tests Combined

	Range	Mean	Standard Deviation
<b>Combined Advanced Proficiency</b>	45.54 – 0.00	10.80	8.50
<b>Combined Minimum Proficiency or Higher</b>	95.83 – 13.03	48.54	17.80

Note: The numbers are percentages of Alaska Native students achieving that level on Standard Based Assessment during 2009-2010 school year.

Table 2 describes the group of 235 high schools and the range of percentages of Alaska Native students achieving advanced proficiency and at least a minimum proficiency level for reading, writing, math, and science. **For every subject there was at least one high school where 100% of the Alaska Native students reached at least the minimum proficiency level.** Reading scores on average were higher than the other subjects. However, even when excluding 23% of the high schools where the science scores were not reported due to too few students tested, the science scores on average were lower than the other subjects.

Tables 3 and 4 describe the “positive deviant” schools, which is defined as the top 20% (47 schools), compared to the bottom 20% (47 schools) of high schools in Alaska. For the “positive deviant” schools, the range of percentages of Alaska Native students achieving advanced proficiency was 46% to 15% with a mean of 23%. The range of percentages of students achieving at least a minimum proficiency level was 96% to 62% with a mean of 72%. For Group 2, the range of percentages of Alaska Native students achieving advanced proficiency was 6% to 0 with a mean of 2%. The range of percentage of students achieving at least a minimum proficiency level was 33% to 13% with a mean of 24%.

Table 2  
**Alaska High Schools (N = 235) – Reading, Writing, Math, & Science Scores**

	<b>Range</b>	<b>Mean</b>	<b>Standard Deviation</b>
<b>Reading Advanced Proficiency</b>	75.00 – 0.00	15.35	14.24
<b>Reading Minimum Proficiency or Higher</b>	100.00 – 15.79	64.00	20.19
<b>Writing Advanced Proficiency</b>	57.14 – 0.00	5.71	10.34
<b>Writing Minimum Proficiency or Higher</b>	100.00 – 15.79	53.02	22.04
<b>Math Advanced Proficiency</b>	60.00 – 0.00	13.70	12.41
<b>Math Minimum Proficiency or Higher</b>	100.00 – 7.14	50.08	21.67
<b>Science Advanced Proficiency</b>	68.75 – 0.00	10.25	12.09
<b>Science Minimum Proficiency or Higher</b>	100.00 – 0.00	33.09	25.80

Note: The numbers are percentages of Alaska Native students achieving that level on Standard Based Assessment during 2009-2010 school year.

Table 3  
**Positive Deviant High Schools (n = 47) Group One**

	<b>Range</b>	<b>Mean</b>	<b>Standard Deviation</b>
<b>Advanced Proficiency</b>	45.54 – 14.96	22.69	7.32
<b>Minimum Proficiency or Higher</b>	95.83 – 62.05	72.43	8.35

Note: The numbers are percentages of students achieving that level on Standard Based Assessment during 2009-2010 school year.

Table 4  
**Group Two (n = 47)**

	<b>Range</b>	<b>Mean</b>	<b>Standard Deviation</b>
<b>Advanced Proficiency</b>	5.56 – 0.00	1.92	1.62
<b>Minimum Proficiency or Higher</b>	32.96 – 13.03	24.45	5.61

Note: The numbers are percentages of Alaska Native students achieving that level on Standard Based Assessment during 2009-2010 school year.

Table 5 identifies the “positive deviant”, top 20%, high schools and their schools districts where Alaska Native students achieved academic excellence during the 2009-2010 school year.

Table 5  
**Positive Deviants - Top 20% of Alaska High Schools**

School District	School	School District	School
AK Gateway	Eagle Community School	Kenai Peninsula	Susan B. English
Aleutians East	Akutan School	Ketchikan Gateway	Ketchikan HS
Aleutians East	Nelson Lagoon School	Kodiak Island	Kodiak High School
Anchorage	Polaris K-12 School	Kodiak Island	Larsen Bay School
Anchorage	South Anchorage HS	Kodiak Island	Port Lions School
Bering Strait	Unalakleet School	Lake/Peninsula	Chignik Lagoon
Bering Strait	White Mountain School	Lake/Peninsula	Egegik School
Bristol Bay	Bristol Bay Middle/HS	Lake/Peninsula	Tanalian School
Copper River	Glennallen Jr/Sr HS	Mat-Su	Colony High School
Copper River	Kenny Lake School	Mat-Su	Houston High School
Cordova City	Cordova Jr/Sr HS	Mat-Su	Career & Tech Ed HS
Fairbanks North Star	Hutchinson High School	Mat-Su	Palmer High School
Fairbanks North Star	Star of the North HS	Mat-Su	Twindly B. Charter
Fairbanks North Star	West Valley High School	Mat-Su	Valley Pathways
Galena	Interior Dist. Ed. of AK	North Slope	Barrow High School
Haines	Haines High School	Northwest Arctic	Deering School
Juneau	Thunder Mt. High School	Saint Mary's	St. Mary's School
Kake City	Kake Elementary & HS	Sitka	Sitka High School
Kenai Peninsula	Kenai Central HS	Tanana	Maudrey J. Sommer
Kenai Peninsula	Nanwalek School	Unalaska City	Unalaska Jr/Sr. School
Kenai Peninsula	Ninilchik School	Valdez City	Valdez High School
Kenai Peninsula	River City Academy	Wrangell City	Wrangell High School
Kenai Peninsula	Skyview High School	Yakutat City	Yakutat School
Kenai Peninsula	Soldotna High School		

**Research Question**

- 2) Are there school and/or community factors that positively affect Alaska Native students’ academic performance in Alaska’s high schools?”

Answer: YES

School and community factors were found that positively affect Alaska Native students’ academic performance in Alaska’s high schools. However, they were not the factors that the general public may have generally thought would make a difference. **A statistically significant relationship between academic performance and these school factors was NOT found.** For three themes; Funding, Programs, and Teacher; none of the factors were statistically significant.

- Funding
  - Expenditures Per Daily Membership of Students
  - State Aide Entitlements (per student for district where school is located)
- Individual Schools
  - Accreditation
  - Attendance Rate
  - Type of Instruction (traditional (four walls), correspondence/Internet-based, boarding school, and specifically for high risk students)
- Programs
  - Participation in 21st Century Community Learning Center Program
  - Participation in ICE (Initiative for Community Engagement)
- School Districts
  - Number of Schools in School District
- Teachers
  - Highest Level of Education of Teachers in School
  - Percentage of Core Academic Classes Taught by Highly Qualified Teachers
  - Student/Teacher Ratio

Although many of these school factors have been identified as important in other studies, this analysis suggests that the **above factors do not strongly affect academic performance among Alaska Native students in high schools in Alaska.** Low and high student/teacher ratios were found in high performing schools and low performing schools. None of the boarding schools were in the top 20% or the bottom 20%. Although many of the schools specifically designed for high risk students were in the bottom 20%, one of them was not. **A statistically significant relationship was found between the academic scores, graduation and three school factors.**

- Graduation
  - Graduation Rate - The higher the graduation rate, the higher the academic scores.
- Individual Schools
  - Enrollment Number – The higher the enrollment number, the higher the academic scores.
  - Student Survey Return Rate – The higher the student survey return rate, the higher the academic scores.

- School Districts
  - Type of School District (borough/municipality/city or regional educational assistance area (REAA)) – If the school was in a borough/municipality/city school district, the higher the academic scores.

Table 6 describes the student survey return rate factor. For the “positive deviant” schools, the mean was 81% and for group two the mean was 61%. With a T value of 2.488, 45 degrees of freedom and a two-tailed significance of 0.017, this is a probability of less than 0.05. This means that the students were statistically more likely to return the survey in the “positive deviant” schools than the other schools. This factor is important; because it identifies that a different behavior is occurring at the “positive deviant” schools. **The Teachers at the “positive deviant” high schools, who work under the same constraints as the others, have found a way to successfully encourage the students to return the surveys.**

Table 6  
**Student Survey Return Rate**

	<b>N</b>	<b>Mean</b>	<b>Standard Deviation</b>
<b>Positive Deviants (Group 1)</b>	26	81.20	23.77
<b>Group 2</b>	21	60.96	31.99
<b>T-Value</b>	2.488		
<b>Degrees of Freedom</b>	45		
<b>Sig. (two-tailed)</b>	0.017*		

\*P = less than 0.05

Table 7 and Graph 1 describe what type of school district the “positive deviant” (Group 1) and Group 2 high schools are located within. In the “positive deviant group”, 41 (44%) high schools are located within a borough/municipality/city school district and 6 (6%) are located within a Regional Education Attendance Area (REAA) school district. In Group 2, 12 (12.8%) high schools are located within a borough/municipality/city school district and 35 (37%) are located within a Regional Education Attendance Area (REAA) school district. The Chi-Square

value is 36 with a two-tailed significance of 0.000; this is a probability of less than 0.001. This factor is important, because it demonstrates that more of the “positive deviant” high schools are in borough/municipality/city school districts. **The borough/municipality/city school districts, who work under the same constraints as the REAA school districts, have found a way to successfully encourage their Alaska Native students to achieve academic excellence.**

A statistically significant relationship between academic performance and these community factors was **NOT found**. For three themes; Community Services, Parents, and Voters; none of the factors were statistically significant.

- Community Demographics
  - Community Size
- Community Services
  - Local Police
- Parents
  - Parent Survey Return Rate
- Voters
  - Voter Participation Rate

Table 7  
**Type of School District**

		<b>Borough/City</b>	<b>REAA</b>	<b>Total</b>
<b>Positive Deviants Group 1</b>	<b>Count</b>	41	6	47
	<b>% within Group</b>	87.2%	12.8%	100.0%
	<b>% of Total</b>	43.6%	6.4%	50.0%
<b>Group 2</b>	<b>Count</b>	12	35	47
	<b>% within Group</b>	25.5%	74.5%	100.0%
	<b>% of Total</b>	12.8%	37.2%	50.0%

	<b>Value</b>	<b>Degrees of Freedom</b>	<b>Sig. (two-tailed)</b>
<b>Chi-Square</b>	36.380	1	0.000**

\*\*P = less than 0.001

Graph 1  
**Type of School District**

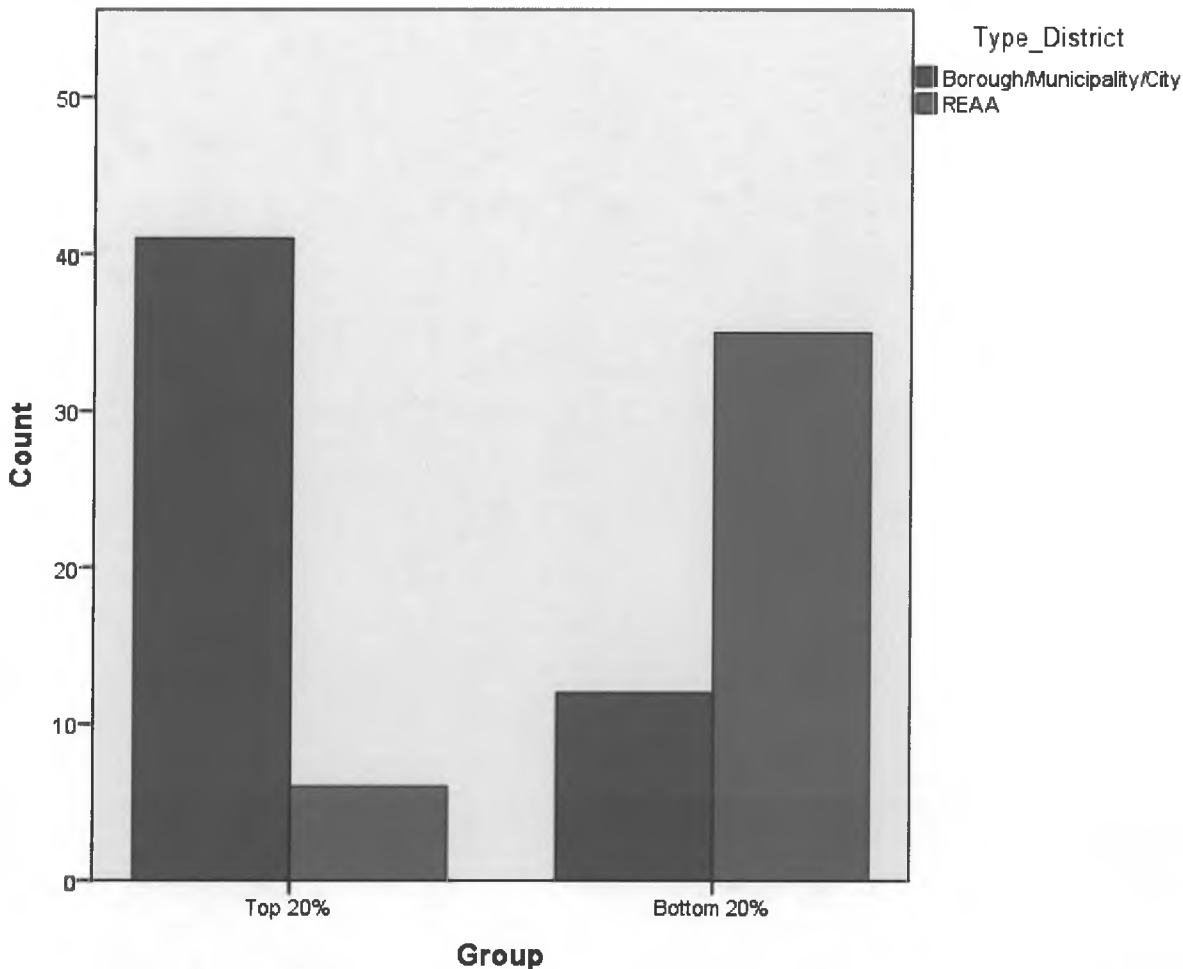


Table 8 describes the number of people in the community where the school is located. Three high schools were not included, because students enrolled with correspondence schools are not necessarily living in the same community as where the Teachers work. For the “positive deviant” schools (Group 1), the mean was 17,321 people and for Group 2 the mean was 20,413 people. With a T value of -0.221, 89 degrees of freedom and a two-tailed significance of 0.826, this is a probability of greater than 0.05. This means that the “positive deviant” schools were NOT statistically more likely to be located in smaller or larger communities than the other schools. Therefore, there is NO statistically significant relationship between community size and

academic excellence. Alaska Native students are just as likely to excel academically in small or large communities.

Table 8  
**Community Size**

	<b>N</b>	<b>Mean</b>	<b>Standard Deviation</b>
<b>Positive Deviants (Group 1)</b>	45	17,320.51	60,368.32
<b>Group 2</b>	46	20,413.24	72,636.30
<b>T-Value</b>	-0.221		
<b>Degrees of Freedom</b>	89		
<b>Sig. (two-tailed)</b>	0.826*		

\*This is greater than 0.05, therefore this relationship is NOT statistically significant.

Although many of these community factors have been identified as important in other studies, this analysis suggests that the **above factors do not strongly affect academic performance among Alaska Native students in high schools in Alaska.** For example, high performing schools and low performing schools were found in large and small communities and there were high and low performing schools in active voting communities and inactive voting communities. **A statistically significant relationship was found between the academic scores and five community factors.** For one theme, Language, all of the factors were statistically significant.

- Community Demographics
  - Percentage of Alaska Native students in the High School – The lower the percentage of Alaska Native students in the high school, the higher the academic scores.
  - Percentage of Community Members with Bachelor’s Degree or Higher – The higher the percentage of community members with bachelor degrees or higher, the higher the academic scores.
  - Percentage of Community Members with High School Diploma or Higher - The higher the percentage of community members with bachelor degrees or higher, the higher the academic scores.

- Language
  - Percentage of Community Members Speaking an Alaska Native language – The lower the percentage of community members speaking an Alaska Native language, the higher the academic scores.
  - Percentage of Students without Limited English Proficiency – The higher the percentage of students without limited English proficiency, the higher the academic scores.

Table 9 describes the percentage of community members with a high school diploma or higher. For the “positive deviant” schools, the mean was 89% and for group two the mean was 75%. With a T value of 7.315, 45 degrees of freedom and a two-tailed significance of 0.000, this is a probability of less than 0.001. This means that **more community members have high school degrees in the communities where the “positive deviant” schools are located.** This factor is important; because it identifies that a different behavior is occurring between parents at the “positive deviant” school and the other schools. Three high schools were not included, because students enrolled with correspondence schools are not necessarily from the community where the Teachers work. **The parents at the “positive deviant” high schools, who work under the same constraints as the others, may have found a way to successfully encourage their children to achieve academic excellence.**

Table 9  
**Community Members with High School Degree**

	N	Mean	Standard Deviation
<b>Positive Deviants (Group 1)</b>	45	88.58%	7.28%
<b>Group 2</b>	46	75.28%	9.85%
<b>T-Value</b>	7.315		
<b>Degrees of Freedom</b>	89		
<b>Sig, (two-tailed)</b>	0.000		

\*\*P = less than 0.001

Table 10 describes the percentage of community members with a bachelor degree or higher. For the “positive deviant” schools, the mean was 21% and for group two the mean was 9%. With a T value of 7.315, 45 degrees of freedom and a two-tailed significance of 0.000, this is a probability of less than 0.001. This means that **more community members have high school degrees in the communities where the “positive deviant” schools are located.** This factor is important; because it identifies that a different behavior is occurring between parents at the “positive deviant” school and the other schools. Three high schools were not included, because students enrolled with correspondence schools are not necessarily from the community where the Teachers work. **The parents at the “positive deviant” high schools, who work under the same constraints as the others, may have found a way to successfully encourage their children to achieve academic excellence.**

Table 10  
**Community Members with Bachelor Degree**

	<b>N</b>	<b>Mean</b>	<b>Standard Deviation</b>
<b>Positive Deviants (Group 1)</b>	45	20.92	10.23
<b>Group 2</b>	46	9.17	9.60
<b>T-Value</b>	5.652		
<b>Degrees of Freedom</b>	89		
<b>Sig, (two-tailed)</b>	0.000		

\*\*P = less than 0.001

**Table 11**  
**Summary of Significant Factors**

Type of Factor	Theme	Factor	Positive Deviant (Group 1)	Group 2
<b>Graduation</b>	<b>Graduation</b>	Graduation Rate	High	Low
<b>School</b>	<b>Individual Schools</b>	Enrollment Number	Large	Small
		Student Survey Return Rate	High	Low
	<b>School District</b>	Type of School District	Borough/City	REAA
<b>Community</b>	<b>Demographics</b>	% of AK Native Students in HS	Low	High
		% of Community Members with Bachelor Degree or Higher	High	Low
		% of Community Members with HS Diploma or GED or Higher	High	Low
	<b>Language</b>	% of Community Members Speaking AK Native Language	Low	High
		% of Community Members Without Limited English Proficiency	High	Low

**Future Research / Policy Options**

Seven possible policy options or future research topics have been identified:

- 1) The student survey return rate could be investigated to find out how it is being administered differently in the “positive deviant” schools.

Why did only 55% of the “positive deviant” schools and 45% of the other schools send out the survey? Who creates the survey and encourages it to be given to students? Are the teachers encouraging the students to complete the survey during class or sending it home? Are the

teachers offering a reward or prize to the students that return the survey? Or are the students returning the surveys in the “positive deviant” schools, because 1) they are given a survey to complete and 2) they believe that their comments will make a difference at the school.

According to “Alaska Statute Sec. 14.03.120 Education Planning; Reports (c) – A district shall make efforts to encourage students, parents, teachers, and other members of the community to participate in the preparation of the report submitted under (a) of this section.” (Laws.com, 2013) The Alaska Department of Education and Early Development implement this law by requiring the districts to encourage students, parents, and members of the public to participate in the school report card. Usually school districts complete this task by doing a survey. Each individual school district decides what to include in the survey. (Corazza, 2013)

2) Future research could investigate the fact that there were more “positive deviant” schools from borough/municipality/city school districts than from the Regional Education Attendance Area (REAA) school districts.

Is there an issue with their school board election practices and procedures? On February 6, 2013 House Bill 104 “An Act relating to election practices and procedures; relating to the reporting of election campaign contributions and expenditures; relating to identification requirements for a communication paid for by a political party; relating to public records; relating to the election of an advisory school board in a regional educational attendance area; and providing for an effective date” was introduced. It passed the Senate unanimously on April 8, 2013. (Alaska Legislature, 2013)

With the passage of Alaska Senate Bill 35 in 1975, the state set up 21 Regional Educational Attendance Areas (REAA). This law did not provide the same level of autonomy as the borough/municipality/city school districts receive through the State's constitution and statutes.

Although they have elected school boards, they do not make fiscal decisions. The boundaries generally follow the regional boundaries set up in the Alaska Native Claims Settlement Act and are designed to contain an integrated and homogenous socioeconomic, cultural, and linguistic area, while also considering geographic features and transportation. Each school within each REAA has a local school committee, but they act in an advisory capacity without legally defined duties and nonexistent power. The REAA boards' operation of schools and decision to construct new schools and close schools are all subject to approval by the Commissioner of the Department of Education and Early Development and they must rely on funds appropriated by the legislature or receive grants in order to build schools. The State owns the buildings and REAAs receive permits to use them. (Getches, 1977)

The REAA school boards have between five and 11 members. Alaska State Statute 14.08.051 requires that within 90 days of the Federal census, the Commissioner of the Department of Education and Early Development in consultation with the Department of Commerce, Community and Economic Development and the local communities must review the school board apportionment scheme of each REAA to ensure that each school board member represents an equal number of persons. (Alaska Department of Commerce, Community, and Economic Development, 2011) Today there are 19 REAAs. The following school districts are Regional Education Attendance Areas (REAA):

Table 12  
**Regional Education Attendance Areas (REAA)**

REAA-03	Alaska Gateway	REAA-31	Lower Kuskokwim
REAA-04	Aleutian Region	REAA-32	Lower Yukon
REAA-06	Annette Island	REAA-40	Pribilof Islands
REAA-07	Bering Strait	REAA-44	Southeast Island
REAA-09	Chatham	REAA-45	Southwest Region
REAA-10	Chugach	REAA-51	Yukon Flats
REAA-11	Copper River	REAA-52	Yukon-Koyukuk
REAA-14	Delta-Greely	REAA-54	Yupitit
REAA-21	Iditarod	REAA-55	Kashunamiut
REAA-29	Kuspuk		

- 3) Efforts to encourage completion of the General Educational Development (GED) throughout Alaska could be supported, so that more parents obtain high school degrees.

- 4) Efforts for college-level distance education could be supported, so that more parents obtain college degrees.
- 5) Efforts to increase science test scores could be supported, so that the averages for all tests combined increases.

Future projects could include adapting science curriculum to be more place-based, so that school becomes more relevant for students living a traditional lifestyle.

- 6) Future research could investigate why the current policy allows schools to administer the science tests at a different time than the other tests.

Why did at least 23% or 54 of the high schools in the project have fewer students taking the science tests than the tests for the other subjects?

- 7) The positive deviance approach could be utilized to engage the teachers and parents in working together to find local solutions.

## **Recommendation**

It is recommended that First Alaskans Institute partner with the State of Alaska's Department of Education to host an education dialogue in order to be a catalyst to start the positive deviance process in Alaska. The dialogue could be combined with another state-wide educational conference to consolidate expenses. The idea would be to invite interested teachers and parents. It is important that all teachers and parents feel that they can opt out or opt into going to the summit. Travel scholarships should be provided, so that teachers and parents with a financial hardship can still attend the summit.

The State of Alaska's Department of Education would provide academic data for all the individual schools for the previous three years. The facilitators would arrange the participants into small groups and encourage them to research the academic data to identify schools where

students are excelling. As the participants realize that teachers and parents from those schools are in the group, the facilitators would encourage small group conversations about what they might be doing differently in their community or school. They will discover that positive deviants; like White Mountain, Nelson Lagoon, Maudrey J. Sommer School in Tanana, Nanwalek, Unalakleet, and others; exist and their Alaska Native students are excelling academically, even though they face the same barriers and obstacles as other schools.

Then, it is recommended that the partners sponsor field trips, so that teachers and parents can visit the “positive deviant” schools, talk to the teachers and parents that live there, and observe the behavior inside and outside of the classroom. What matters the most is “how” – the very particular journey that each individual school and community must engage in to mobilize itself, overcome resignation and fatalism, discover its latent wisdom, and put what they learn into practice. (Pascale, Stermin, & Stermin, 2010)

Improving academic performance does not have to be an expensive task, even though it is a complex problem. These types of problems are such that our understanding of what we are ‘solving for’ is ever-evolving. Each solution that is discovered will shed light on a deeper layer of the problem in a forward spiral toward enduring remedies. (Pascale, Stermin, & Stermin, 2010) Viable and sustainable solutions will not come from the top down; they will come from engaging the individual communities and schools and supporting the solutions that they discover.

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