MONTANA STATE UNIVERSITY

An investigation of factors related to teacher attrition in Alaska native village schools, as perceived by school administrators

by Lisa Jean Stroh

A dissertation submitted in partial fulfillment of the requirements for the degree of Doctor of Education in School Administration
Montana State University

Abstract:
The purpose of this study was to identify the factors inherent in Alaska bush schools that related most highly to teacher turnover. These factors were examined in relation to each school district's geographic location within Alaska to determine if specific identified factors were related to school district location.

The Superintendent, or designee, in each of the 46 Alaska bush school districts completed a survey, indicating on a Likert-type scale, their perceptions of each item's level of relationship to teacher turnover. Once the survey's reliability was established, a Principal Components Analysis was applied to the responses of the 23 survey items. Examination of the unrotated factor structure indicated that a single factor was measured by the survey. The single factor was a combination of four sub-factors—all present to varying degrees. The sub-factors included professional, personal/family, geographic, and socio-cultural issues.

A one-way analysis of variance was conducted on the categorized survey items to determine if a relationship existed between the five Alaska regions and reasons for teacher turnover in Alaska bush schools. The findings indicated that, statistically, there was no significant difference between specific identified factors and location of the school district within Alaska.

The means for each of the 23 survey items were calculated within their respective sub-factors to exam tendencies and trends among the sub-factors. While each region had a unique ranking of the 23 items, the means of the items were so similar that they did not reflect significant differences.

This study's respondents made several comments following the survey's open-ended question. Some comments centered upon the multi-dimensional role of a bush teacher and the sheer volume of stressful situations those teachers tended to confront on a regular basis. This study's respondents also perceived that in many situations family issues tended to be one of the main reasons why teachers left their bush jobs.

Based upon these findings, it is concluded that: (a) there is no single reason that is individually associated with Alaska bush teachers leaving their current teaching positions; (b) the reasons why teachers leave their current teaching positions are due to a combination of sub-factors which include professional, personal/family, geographic, and socio-cultural issues; and (c) the reasons why teachers leave their teaching positions does not appear to be related to their respective school district's geographic location within Alaska.

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APPROVAL

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This thesis has been read by each member of the thesis committee and has been found to be satisfactory regarding content, English usage, format, citations, bibliographic style, and consistency, and is ready for submission to the college of Graduate Studies.

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Date March 31, 1999

I wish to dedicate this dissertation to my very dear husband of fifteen years, Robin, and our wonderful sons, Robert (age 7) and Benjamin (age 5). They have wholeheartedly supported this endeavor and have helped me to maintain my focus on this project. For the boys, they only knew that Mom was going to the "duck pond" (on the MSU campus) to study. I love them so much and look forward to having more quality time to spend with them. This accomplishment has only been obtained through their love, understanding, and encouragement. May they truly realize they were the *wind beneath my wings*.

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ABSTRACT

The purpose of this study was to identify the factors inherent in Alaska bush schools that related most highly to teacher turnover. These factors were examined in relation to each school district's geographic location within Alaska to determine if specific identified factors were related to school district location.

The Superintendent, or designee, in each of the 46 Alaska bush school districts completed a survey, indicating on a Likert-type scale, their perceptions of each item's level of relationship to teacher turnover. Once the survey's reliability was established, a Principal Components Analysis was applied to the responses of the 23 survey items. Examination of the unrotated factor structure indicated that a single factor was measured by the survey. The single factor was a combination of four sub-factors—all present to varying degrees. The sub-factors included professional, personal/family, geographic, and socio-cultural issues.

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This study's respondents made several comments following the survey's open-ended question. Some comments centered upon the multi-dimensional role of a bush teacher and the sheer volume of stressful situations those teachers tended to confront on a regular basis. This study's respondents also perceived that in many situations family issues tended to be one of the main reasons why teachers left their bush jobs.

Based upon these findings, it is concluded that: (a) there is no single reason that is individually associated with Alaska bush teachers leaving their current teaching positions; (b) the reasons why teachers leave their current teaching positions are due to a combination of sub-factors which include professional, personal/family, geographic, and socio-cultural issues; and (c) the reasons why teachers leave their teaching positions does not appear to be related to their respective school district's geographic location within Alaska.

CHAPTER 1

INTRODUCTION

The goal of the National Commission on Teaching and America's Future (1997) is to ensure that "all communities have teachers with the knowledge and skills they need to teach so that all children can learn, and all school systems are organized to support caring, competent, and qualified teachers in this work" (p. 16). This commission believes in three simple principles, as follows:

1. What teachers know and can do is the most important influence on what students learn.
2. Recruiting, preparing, and retaining good teachers is the central strategy for improving our schools.
3. School reform cannot succeed unless it focuses on creating the conditions in which teachers can teach, and teach well. (p. 6)

The Commission believes these three principles are essential in order for schools to provide quality education to students so that they will possess the needed skills to successfully live in the twenty-first century. As stated above, the teacher is a critical factor in the success of students. Good teachers must be trained properly and recruited. They must encounter working conditions that foster retention.

However, Barnhardt, Director of Cross-cultural Studies at the University of Alaska Fairbanks, reports in his research that the turnover of teachers in Alaska's bush schools is disproportionately high as compared to urban schools within Alaska, as well as nationally. He goes on to explain that throughout the United

States, including Alaska, the teacher turnover rate is 13.7% while the teacher turnover rate in Alaska's bush schools averages 30-50% each year (Barnhardt, 1999). Dr. John Antonnen, longtime Alaskan educator and recent retiree from the position as Director of Rural Education Preparation Program (REPP), also reports the 30-50% teacher turnover rates in Alaska's villages. Dr. Ray Barnhardt, University of Alaska Fairbanks professor, points out:

> Of the 2,368 teachers in Alaska's bush schools during the 1998-99 school term, nearly one-third are new to their positions. That compares with about 12% in the urban schools [in Alaska] (including 104 brand new positions in Anchorage). While rural schools employ only one-third of all the teachers in the state, they typically hire over two-thirds of the new teachers each year, most which originate from outside the state. This means that at the present time, the potential for improving the quality of education in the rural schools has an upper limit that is established by the average three-year cycle of staff turnover. (1999, p. 2)

The focus of this study was to identify the factors most highly related to teacher turnover in Alaska's bush schools. Subsequently, through this research, recommendations were formulated which will provide universities and colleges insights about the preparation of prospective teachers for the bush, and will assist bush school districts in recruiting efforts, as well as in retaining exceptional teachers. "Through these efforts, [Alaska's] students may come closer to gaining their educational birthright–access to competent, caring, qualified teachers in schools organized for success" (p. 3).

Statement of the Problem

The problem addressed in this study is the high teacher turnover rate in Alaska's bush schools. In order for students within Alaska to fully benefit academically, these students must be taught by qualified, caring teachers who provide a cohesive education program (National Commission on Teaching and America's Future, 1996). Unfortunately, a cohesive program can not be achieved when Alaska's bush schools experience a teacher turnover rate up to four times that of the national average (Barnhardt, 1999).

Purpose and Significance of This Study

The purpose of this study was to identify the factors inherent in Alaska bush schools that related most highly to teacher turnover. Secondly, these factors were examined in relation to each school district's geographic location within Alaska in order to determine if specific identified factors were related to school district location.

Although some teacher turnover in public schools may be unavoidable, normal, and even beneficial, high rates of turnover are of concern. They may indicate underlying problems, and because in and of themselves, they can disrupt the effectiveness of the school program. (National Center for Education Statistics, 1995). Given national and state educational reforms which issue high school diplomas contingent upon the exhibition of specific student standards (National Commission on Teaching and America's Future, 1996), Matthes (1987)

believes that a stable core of teachers is absolutely essential to achieving effective schools, which provide students with opportunities to achieve these national and state standards. He writes, "Teacher stability within the job is critical!" (1987, p. 27). Sher (1981) believes research must look closely at teachers. He states, "After all, neglecting teachers in an examination of rural education is like discussing rural health care and overlooking doctors or discussing agriculture and ignoring farmers" (p. 261).

In order for students to fully reach their academic potential, teachers must provide continuity with the curriculum. That can only be achieved through a stable workforce (Matthes, 1987). However, this notion seems rather unlikely, given Alaska's 30-50% rate of teacher turnover in bush school districts (Antonnen, 1998).

Research Questions

Specifically addressing the problem of teacher turnover in Alaska bush schools, this study was designed to answer two questions:

1. Which factors inherent in Alaska's bush schools are related most highly to teacher turnover?
2. Is there a difference in the rankings of importance in the identified factors across the five regions of Alaska (i.e., Northwest, Interior, Southwest, Southcentral, and Southeast regions)?

Definition of Terms

Definitions used in this study were formulated after a thorough review of related literature and from the expert opinion of Ms. Laura Walters, Research and Data Analyst for the State of Alaska, Department of Community and Regional Affairs, Municipal and Regional Assistance Division (Walters, 1998).

In order to address the research questions above and to arrive at valid answers, it is of utmost importance for this study's definitions to accurately and appropriately represent the concepts upon which this study is based. For example, diverse cultures and underlying infrastructures within communities help to define its degree of ruralness. Likewise, no *one* of the factors such as community population, road accessibility, economy, ethnicity, or school size can serve as the single factor when defining an area (Walters, 1998).

Teacher Turnover: Caused when a teacher either does not choose to return to employment in the same school the following year, or the school district chooses to non-retain the teacher for the next school year; the teacher may teach in another school district the subsequent year, or the teacher may leave the teaching profession entirely; synonymous with the term *teacher attrition.*

Regions of Alaska: For the purpose of this study, Alaska school districts were divided into five distinct geographical regions per the Alaska Teacher Placement Department, University of Alaska Fairbanks (Appendices A, B, and C). These regions are also noted in the Alaska Department of

Tourism's Web page and various brochures that are widely distributed.

The five distinct geographical regions are:

Region 1: Northwest
Region 2: Interior
Region 3: Southwest
Region 4: Southcentral
Region 5: Southeast

Factors: Elements inherent in an Alaska Native village and school, which may be related to teacher attrition; Sher (1983) describes these general factors as *conditions, characteristics,* and *compensation.*

Sub-Factors: Specific categories, when in combination with each other, define the *factors* as stated above.

Professional Sub-Factors: lack of adequate lesson planning, poor student management skills, lack of collegial spirit when dealing with peers and others, desire to seek professional growth opportunities elsewhere;

Personal/Family Sub-Factors: spouse not content living in the village setting, a feeling that one's own children are not living in a safe/healthy environment; and

Geographic Sub-Factors: isolation from own culture and friends, goods and services not readily available, cold/harsh climate, inadequate housing situations;

Socio-Cultural Sub-Factors: lack of cultural sensitivity, lack of ability to deal with community "politics," religious affiliation not congruent

with community standards, and lack of ability to deal with disheartening social issues (e.g., child abuse, suicide).

Alaska Native: A person whose ethnicity includes Eskimo, Aleut, or Native Alaska Indian. The Native Alaska Indian group is comprised of two sub-groups, the Southeast Indians (comprised of the Tlingits, Haidas, and Tshimshian Indians) and the Athabascan Indians who reside in central Alaska. Although Alaska has three very distinct Native cultures, sometimes they are all simply referred to as *Indians*. This is primarily done when grouping Alaska Natives with the American Indians who live in the contiguous United States. Due to the small student population nationwide, these students are rarely represented in sufficient numbers in national education surveys to permit reliable and valid generalizations concerning their characteristics. However, this group was included in the 1990-91 and 1993-94 national studies conducted by the National Center for Education Statistics. A summary of findings is included (Appendix D).

Indian: Refers to people of an indigenous culture. For purposes of this study, this term will refer to all Native Alaskans (i.e., Eskimos, Aleuts, and Native Alaska Indians).

Alaska Native Village: A small Alaska community of usually less than 1,000 people, generally predominantly Alaska Native residents; they are a tribe because they share common ancestors, a common language, and live together in a group; this community is usually not accessible by road.

For purposes of this study, the term *Alaska Native village* is synonymous with the following terms: *bush*, *Alaska bush*, *bush village*, *bush community*, *village*, *Alaska village*, and *school communities in Alaska*.

Public School: A school within Alaska that is funded by federal, state, or local monies.

Alaska Bush School: A remote school in Alaska usually having a student enrollment of less than 100 students; most, but not all, bush schools are primarily comprised of students of Alaska Native origin; these school districts are the focus of this study (Appendix E).

Alaska Native School District: A public school district located in Alaska whose combined student population is predominantly composed of Alaska Native students with most of its schools located in very remote areas of the state usually not accessible via the road system. These school districts are the focus of this study, with their respective superintendents participating as the study's population. Two school districts, Kenai Peninsula Borough Schools and Kodiak Island Borough Schools, have some schools which fit the definition of Alaska Native villages and some schools which fit the definition of an Alaska Urban School as defined below. These two school districts were included in the study. However, the participants in these two school districts were directed to respond to the survey's questions as they

pertained to only the Native village schools within their respective school districts.

Native Alaska Teacher: A certified teacher who holds a Type A, Provisional, or Temporary Alaska teaching certificate *and* teaches in a public school in Alaska *and* ethnically identifies with one of the Alaska Native ethnic groups (i.e., Indian, Eskimo, Aleut) as described above.

Non-Native Alaska Teacher: A certified teacher who holds a Type A, Provisional, or Temporary Alaska teaching certificate *and* teaches in a public school in Alaska *and* claims a type of ethnicity different from the Indian, Eskimo, or Aleut groups. The non-Native teacher is usually thought of as being Caucasian. However, other ethnic groups are included in this category.

Bush Teacher: A certified teacher who holds a Type A, Provisional or Temporary Alaska teaching certificate *and* also teaches in a remote area in Alaska. A person may be of any ethnical origin for purposes of this study.

School Administrator of Alaska Bush Schools: An employee of an Alaska school district, who currently holds a Type B Alaska Administrative certificate, *and* is either currently working as a school administrator, *or* has been responsible for the overseeing of an Alaska bush school. This person may include the school district superintendent or his/her designee.

Indigenous: Native; living naturally in a particular region or environment. This term refers to the Alaska Natives absent from the Western world influence.

Culture: Customs and traditions inherent in a group of people.

Alaska Urban School: A school in Alaska, commonly on the road system, located in a community of usually over 1,000 residents in a community where goods and services are readily available. However, exceptions include the towns of Juneau and Kodiak proper–both islands, but each with a flourishing economic base with goods and services readily available.

Alaska Urban School District: A public school district in Alaska comprised of only urban schools (see definition above); for purposes of this study, urban school districts were excluded from the sample (Appendix F).

State-owned School Districts: School districts which have a specific purpose as set forth by the state; for purposes of this study, they were excluded (Appendix F).

Lower 48: Slang word usually meaning the *contiguous forty-eight states in the United States*.

Outside: Slang word for *outside the State of Alaska*, usually refers to *the contiguous forty-eight states in the United States*; however, it may also mean the state of Hawaii.

Road System: The conventional roads in Alaska.

Remote: Not on the Alaska road system; unaccessible by conventional means (e.g., car, and pickup).

Summary

Teachers are critical to the process of providing quality education for students. The retention of teachers plays a major role in developing cohesive educational programs in which students can thrive academically (McIntosh, 1989). The purpose of this study was to identify factors inherent in Alaska bush schools that related most highly to teacher turnover. Secondly, this study sought to determine if a significant difference exists between school district geographic location and the specific identified factors.

In the next chapter, a comprehensive review of literature will provide the reader with insights regarding teacher attrition in general, as well as teacher recruitment and retention. Conditions, characteristics, and employee compensation of Alaska's bush schools and communities will be examined. Finally, a comparison will be made between Alaska bush schools and rural schools of the Lower 48.

CHAPTER 2

REVIEW OF RELATED LITERATURE

Introduction

In Chapter 2, employee attrition in general, is discussed, as well as national research concerning teacher turnover in public schools. Teacher recruitment and retention in Alaska is analyzed according to Sher's (1983) three factors: *conditions*, *characteristics*, and *compensation*. A comparison will be made between school and social factors in Alaska's schools, as well as those found in schools in the Lower 48. Finally, this chapter will include an overview of several programs that are focused on Alaska bush teaching.

Teacher Attrition: Related Research

Bluedorn (1978) defines teacher attrition as any change in the membership state of an individual. This process may mean that teachers leave their current positions in a school district on their own initiative (e.g., changing school districts, but remaining in the teaching profession; quitting the teaching profession for a job outside the field of education; retiring). Teacher attrition may also include teachers leaving their jobs as a result of actions taken at the school's initiative, such as non-retention or dismissal of teachers. Bluedorn (1978) refers to two types of teacher attrition–voluntary (teacher initiated) or involuntary (school initiated).

Employee attrition in any organization can have a positive or a negative effect upon the organization and/or the specific employee. In terms of the public school system, much emphasis is placed upon the importance of the classroom teacher and his/her role in providing a safe, stable and enriching environment for students (Matthes, 1987). Naturally, the most common time for teacher attrition is between school terms. However, due to extreme conditions in some of Alaska's villages, some teachers may not choose to stay the entire year. Thus, the stability, of the organization suffers (Matthes, 1987).

Cotton and Tuttle (1986) discuss the financial aspects associated with employee attrition. These expenses may include costs associated with recruitment, selection, and training of new employees. Although these initiation costs may be somewhat substantial in terms of time and money, Cotton and Tuttle (1986) point out that one of the positive aspects of attrition in an organization is the subsequent ability of the organization to replace the position with a less experienced, less costly employee. However, the authors also warn that when attrition rates get too high, the effectiveness of the organization suffers.

When examining various attrition models, March and Simon (1958, as cited in Weise, 1990) believe the voluntary choice to leave a position is based upon the individual's perception of the current situation and the desirability and ease of movement. They also contend there is a "critical level of satisfaction-

dissatisfaction that determines whether an individual begins to search for another position or decides to remain in his/her current placement " (p. 53).

As previously stated, job attrition does not necessarily mean the employee resigns from the organization. Jackofsky and Peters (1983) distinguish between inter- and intra-organizational movement. As this relates to the school setting, one might surmise the high teacher turnover rates in small schools are higher than turnover rates in big schools simply due to lack of available intra-organizational movement opportunities.

Herzberg (1968) and Flowers & Hughes (1973) note that there is a difference between *job dissatisfaction* and *lack of job satisfaction*. For example, a teacher may remain in a position he/she enjoys, even though there may be much external dissatisfaction being exerted by the community. However, if job satisfaction is not present, he/she will likely desire to change positions (as cited in Weise, 1990).

McIntosh, in his article, Retention of Teachers in Rural Areas, points out, "Many rural recruiters readily admit that successful recruitment is much easier to accomplish than successful retention." Helge (1984), on the basis of a national survey, asserts that recruiting and retaining qualified staff is the greatest problem facing rural educators [and schools]. Although there is very little research available concerning teacher retention, this seems to be the main problem rural schools are facing today (McIntosh, 1989, p. 19). According to Matthes & Carson (1989), little is known about those factors that attract an individual to a

particular school district. Furthermore, even less is known about the factors that might cause an individual to consider a position in another school district.

Encouraging the best available teachers to come to schools in sparsely populated areas and then making the position attractive for them to remain there long enough to provide a lasting, positive contribution is a long-standing problem. Sher (1983) suggests that attracting and keeping competent individuals to teach the *three Rs* in rural schools is largely a function of the *three Cs*: *conditions*, *characteristics*, and *compensation*.

- *Conditions* include environmental surroundings, including cultural, housing, and recreational facilities.
- *Characteristics* refers to the quality of personnel produced by pre-service programs, and whether they are oriented toward rural teaching through either background or training.
- *Compensation* includes not only a reasonable salary, but also incentives for choosing a rural career and rewards for excellence in teaching.

In this study, Sher's (1983) framework guided the review of literature and analysis of a survey to identify the factors most highly related to teacher turnover and to determine the relationship of these factors to geographic location within the State of Alaska.

Next, an overview of Alaska and its public school system will be examined through Sher's (1983) framework of *conditions*, *characteristics*, and *compensation*.

Conditions

Alaska: Its Location and Its Communities

"When Alaska is described to people who have not visited it, the most frequently used word is *unique*. Numerous factors intertwine to make Alaska an exciting, rapidly changing, diverse, and complex place" (Hecht, 1981, p. 186). Alaska is the largest of the United States in area, twice the size of Texas (Alaska Department of Tourism, 1998), and equal to one-fifth the size of the contiguous 48 states (Hecht, 1981) (Appendix G). It also boasts the northernmost (Point Barrow), the easternmost (Simisopochnoi Island in the Aleutians) and the westernmost (Little Diomede Island) points of the U.S. This is possible because Alaska straddles the international dateline (Alaska Department of Tourism, 1998).

Alaska competes with Wyoming for the smallest population in the nation (People's Almanac, 1997). With its current population of 606,000 people, Alaska has less than one person per square mile, as compared to 72 people per square mile, which is the national average (Alaska Department of Tourism, 1998). Approximately half of the population lives in Anchorage, Alaska's largest city, which claims a population of approximately 250,000 people (People's Almanac, 1997). "The rest of the Alaska citizens reside in or near the 200+ small towns and villages which are scattered throughout this immense state" (Hecht, 1981, p. 186). Hecht (1981) writes,

> Alaska's landscape ranges from rugged mountains to flowery tundra to rain forests. The climate varies from the extreme winter cold of the north to the milder rainy weather of the Southeast, and 90 degrees Fahrenheit summer temperatures are not infrequent in the Interior. (p. 186)

Not surprisingly, Alaska's location contributes to its uniqueness. It shares no common boundary with the rest of the United States (Appendix H). It is a member of the circumpolar community, if one were to view the area from above the North Pole (Appendix I); and "culturally, racially, and linguistically, its original inhabitants are closer to those northern neighbors than to the peoples of their own nation" (Hecht, 1981, p. 186).

The State of Alaska is rich with natural resources. The Alaska Department of Tourism reports (1998),

- Proceeds from natural resources within Alaska generate 90% of its state's revenues;
- Twenty-five percent of the oil produced in the United States comes from Alaska;
- The seafood processing and fishing industries are also important to Alaska's economy, as the waters are rich in salmon, crab, halibut, and herring;
- Forestry is especially important in the Southeastern region of the state, as it provides thousands of jobs and hundreds of millions of dollars in revenue to Southeast Alaska; and
- Monies generated from tourism are increasing, as the state attracts over 1.1 million visitors annually. (p. 35)

Ground transportation is very limited throughout the state. Therefore, people rely heavily upon air and water travel for transportation from place to place. In fact, Juneau is the only state capital in the Union which can be reached

solely by boat or plane. Boats, snowmobiles, and four-wheelers are invaluable means of transportation within the various villages, as the extent of conventional roads is quite limited (Darnell, 1994; Hecht, 1981).

Perhaps what makes Alaska truly unique is its Native population. In 1996, Alaska Natives constituted 16.5% (approximately 100,000) of the state's total population. Eighty percent of the Native population resides within one of the six urban cities, while about 20% of Alaska's Natives live within the 200+ villages scattered throughout remote areas of the state (Darnell, 1992). Furthermore, there are over 20 different Alaska Native languages spoken throughout the state (Kawagley, Norris-Tull, & Norris-Tull, 1998). Most, but not all, bush communities in Alaska are primarily comprised of Alaska Natives (i.e., Indians, Eskimos, or Aleuts).

Alaska Bush Communities: Then and Now

Most of today's Alaska Natives are descendants from the nomadic hunters and gatherers who crossed from Siberia to North America over the Bering Land Bridge that connected the two continents. These original Alaska Natives developed into three distinct groups: Indians, Eskimos, and Aleuts. In fact, the term, Alaska Native, refers to these three racial/cultural groups (Hecht, 1981). However, in some studies (e.g., Schools and Staffing Survey as conducted by the National Center for Education Statistics), these three groups are classified as simply *Indians*, and are therefore, considered synonymous with the American

Indians of the Lower 48. A brief history of each Alaska Native group is described below:

- Indians – The Indian nations settled in Southeast Alaska. This region had lush forests, a mild climate, as well as abundant fish, game, and edible plants. The Tlingits (pronounced Klinkits), Haidas, and Tshimshian Indians thrived in this area. Their highly developed culture produced totem poles, ceremonial costumes, and exquisite blankets. The Tlingits were also fierce warriors. When the first Russians tried to settle in Southeast Alaska, the Tlingits drove them out, despite the guns and cannons brought by the intruders.

- Eskimos – The Eskimos scattered throughout the Northern and Western Regions of Alaska. In this harsh land they hunted, fished, and gathered the berries that grew during the brief, cool summers. Eskimo hunters harpooned whales from small, skin covered canoes called *umiaks.* Eskimos also hunted for walrus, seals, and polar bears. They followed the herds of caribou that migrated across the tundra.

- Aleuts – The smallest group of Alaska Natives, the Aleuts, settled mainly on the land named for them, the Aleutians. They were hardy people who lived off the sea. Their food, clothing, shelter, and tools came from creatures living in the ocean or along its shoreline. Exceptional sailors, the Aleuts sometimes paddled hundreds of miles in skin-covered canoes, called *bidarkas*, to trade, visit, or stage daring raids on enemy villages. (Alaska Department of Tourism, 1998, p. 1)

While Native culture remains strong in these remote villages of Alaska, rapid advances in communications, transportation, and other services have dramatically changed the lifestyles of many Natives. Many families in rural Alaska maintain the traditional indigenous lifestyle that is largely dependent on subsistence hunting and fishing. Wild foods (e.g., salmon, caribou, moose, and numerous wild berries and herbs) form a major portion of their food supply, and many rural residents rely on commercial fishing in the summer months as their

main financial support (Kawagley, Norris-Tull, & Norris-Tull, 1998). Some Natives still carry on the traditional folklore such as basket weaving and ivory carving. These items are usually sold to tourists instead of being used for everyday tasks.

Some Natives manage and staff multi-million dollar businesses such as complex social programs or their respective Native Corporation headquarters (Kleinfeld, 1992; Alaska Department of Tourism, 1998). These Native corporations were formed after the 1971 Alaska Native Claims Settlement Act (ANCSA) was passed by U.S. Congress. In this Act, Alaska Natives received 44 million acres of land and almost $963,000 in exchange for the extinguishment of their aboriginal land claims. The cash and lands became the property of the 13 regional, 4 urban, and the 200+ village Native corporations formed by the Act. Any Native Alaskan born before passage of the Act, *and* who could prove one-quarter Native blood ancestry, was eligible to enroll in a local and regional corporation. This entitled him/her to 100 shares in both the local and the regional corporations (Alaska Department of Tourism, 1998).

The use of modern conveniences is increasing in rural Alaska. Technology such as computers, televisions, satellite dishes, telephones, guns, steel traps, microwave ovens, refrigerators, powered boats, four-wheelers, and snow machines are all commonplace in Alaska villages of the 1990s. However, many of these conveniences which make life tasks easier, also produce noise, which is very disconcerting to some of the traditional village residents (Kawagley,

1995). Kawagley, in his book, A Yupiaq Worldview: A Pathway to Ecology and Spirit (1995), discusses this situation:

> It always surprises me to see houses falling into disrepair, rifles and shotguns rusting, and many other modern tools and appliances lying about, not being cared for, while Native artifacts, such as harpoons, ice picks, adzes, and crooked knives, seem to be much better cared for.
>
> One elder said that fur hats are "so much more efficient, warming, and closer to the heart" than manufactured hats made of man-made materials. Maybe there is still a oneness with nature and all beings that governs the modern Yupiak worldview. (p. 84)

Some Natives are working closely with huge corporations, paving the way for increased oil exploration and development, especially on the North Slope. At the same time, other Natives feel "overwhelmed and displaced of their land" (Kawagley, 1995, p. 12). According to Kawagley,

> The Native people are considered transmutable and physical elements of the environment and objects that can be removed to a new village site, where they often become "human animals in a cultural zoo." . . . Already, there are several villages where affluent outsiders can fly in to view the Natives in their natural habitat, a demeaning practice to the people on display. (p. 13-15)

As noted in the above excerpt, there is a feeling of uneasiness between fellow villagers when discussing progressiveness or preservation of their culture (Kawagley, 1995). In Kawagley's book, A Yupiak Worldview: A Pathway to Ecology and Spirit (1995), he describes the village life in these changing times.

> The Yupiak people have found many ways to adapt to changing times through a blending of old and new. Sometimes the blend has been met with success and other times it has not. For example, most villages have no qualms about taking advantage of federal and state grants for generating electricity, roads, airports, housing, and assistance to the needy. This has brought new opportunities to the village, and local administrators have learned to

> account, budget, report on activities, and to live by the rules and regulations attached to these new institutions.
>
> From the point of view of some elders, however, this is seen as a disease of the newer generation, especially with respect to assistance to the needy. In their view, it has effectively relieved villagers of their self-esteem, self-reliance, self-sufficiency, and self-determination. (p. 79)

These changes in technology, economy and lifestyles for the Alaska Natives have not come without a price. Statistics obtained from the last published annual reports from the Alaska State Division of Family and Youth Services (1996), are evidence that many Alaskan families are under extreme stress and that many Alaskan children are at great risk of harm or delinquency (P. Nakamura, personal communication, June 26, 1998) (Figure 1).

While the role of the State of Alaska Department of Youth and Family Services is to protect children at risk of abuse or neglect and to rehabilitate youthful offenders while protecting communities, this agency writes, "This mandate is greatly influenced by Alaska's geographic size and complexity, unevenly distributed population, cultural diversity, and relative inaccessibility to rural villages" (1996, p. 4).

In summary, Alaska is a state of much uniqueness (Hecht, 1981). However, with this uniqueness come situations and conditions which create tensions and stress in the lives of its residents (Kawagley,1995; Darnell, 1992; Kleinfeld, 1992). Conflicts also arise when Native children are being taught in school by predominately non-Native teachers (Lipka, 1994). McIntosh (1989) cautions:

Those being recruited need to know not only the strong points of the district and community, but also any limitations which might affect either their willingness to sign a contract or remain after the first year of teaching. A high level of awareness of teaching and living conditions before the contract or remain after the first year of teaching. A high level of awareness of teaching and living conditions before the contract is signed will certainly eliminate some of the unhappiness that may result after a teacher arrives in the community. (p. 26)

Figure 1. Alaska Statewide Statistics Relating to Children

EACH YEAR . . .	
1 in every 2,198 children	Dies of either homicide, suicide, or unintentional injuries
1 in every 65 babies	Is born with Fetal Alcohol Syndrome (FAS) or Fetal Alcohol Effect (FAE)
1 in every 18 babies	Is born with low birth weight
1 in every 12,454 children	Commits suicide
1 in every 207 children (ages 6-18)	Is admitted for inpatient psychiatric care
1 in every 11 babies	Is born to mothers with fewer than 12 years of education
1 in every 8 babies	Is born to teenage mothers
1 in every 89 children (ages 6-18)	Is arrested for felony offenses
1 in every 14 children	Drops out of school
1 in every 17 babies	Is born to unmarried parents (ages 13-18)
1 in every 35 children (ages 6-18)	Is reported runaway
1 in every 52 children	Is abused and neglected (substantiated reports)
1 in every 5 preschoolers	Is living below the poverty level
1 in every 9 children	Has no health insurance
1 in every 8 children	Receives Aid to Families with Dependent Children
1 in every 6 children	Is living in single parent households

Source: Alaska's Health and Welfare, 1993; Public Health Background DPH, June 1993; Alaska Bureau of Vital Statistics, 1990 Annual Report; 1990 Census of Population, General Population Characteristics, Alaska, 1992; Alaska's Adolescents, A Plan for the Future, 1994, as cited in the Alaska Department of Health & Human Services, 1996).

Historical Background of Alaska's Public School System

The parents, grandparents, and ancestors of today's public school students have experienced a shifting of administrative objectives and structure since schools began in Alaska during the 1700s. Kleinfeld, McDiarmid, & Hagstrom (1985) and Darnell (1970) complement each other's views when describing this ever-changing history of public schools in Alaska.

- Traditionally, the education of Alaska Native children reflected indigenous values and prepared children to live as their ancestors had lived. The boys were taught how to hunt and the girls were taught skills concerning food preparation.

- During the 1700s to mid 1800s, Russian missionaries with the purpose of Christianizing the Native population founded religious schools. The main emphasis was on religion and literacy so Native children could read Scriptures.

- In 1867, the United States purchased Alaska from Russia and many of the Russian missionaries withdrew from the state, leaving Native education very neglected for many years.

- Almost twenty years later, in 1884, the Organic Act appropriated $15,000 to the education of Indian children. This money was distributed throughout the state, primarily to any of the mission schools still in existence.

- In 1894, the U.S. Bureau of Education took over the administrative responsibilities of Alaska' schools in order to provide a separation of church and state. The educational objectives assigned to these schools were that the children must be kept in school until they acquired what was termed a common-school education (practical knowledge of some useful trade). The law stated, "We believe in reclaiming the Natives from improvident habits and in transforming them into ambitious and self-helpful citizens." (as cited in Darnell, 1970, p. 4)

- In 1905, the Territory of Alaska took over the education of the White children, but the Secretary of the Interior (located in Washington,

D.C.) continued to take responsibility for education of the Native children in Alaska.

- In 1931, the Secretary of the Interior transferred responsibility for education of Alaska Natives from the Bureau of Education to the Bureau of Indian Affairs (BIA). With the appointment of John Collier as Commissioner of Indian Affairs in 1934, the BIA adopted a dual-purpose education for all Native Americans, including Alaska Natives. Upon taking office, Commissioner Collier proclaimed, "Indians whose culture, civic tradition, and inherited institutions are still strong and virile shall be encouraged and helped to develop their life in their own patterns, not as segregated minorities but as noble elements in common life. At the same time, the individual Indian is entitled to every opportunity that the nation offers to any citizen. This means that he is entitled to the fullest educational privileges, not in sequestrated institutions but in the schools and colleges which serve us all." (as cited in Darnell, 1970, p. 7)

- Until the 1970s, many of the native schools were operated by the Bureau of Indian Affairs who placed predominately non-Native administrators in leadership positions within predominately Native schools. At this time, the State of Alaska assumed financial responsibility for the elementary and boarding schools.

- In 1976, while school consolidation in most of the United States was creating larger administrative units, the Alaska legislature divided the former State Operated School System into 21 small, regionally controlled school districts called REAAs–Regional Education Attendance areas. Although these small districts created potential opportunities for local control, their small size created problems with their ability to obtain necessary materials to adequately teach the small numbers of students and with their ability to develop programs to serve children with special needs such as those with fetal-alcohol syndrome. Also, secondary students who sought an education were forced to leave home and enter boarding schools or attend town high schools through the boarding home program.

- Students' inability to fit comfortably back into village life after attending the regional high schools and the appalling alcohol abuse and suicide rates in the student populations, led policy-makers to reevaluate the regional high school concept.

- Finally, in the lawsuit Tobeluk v. Lind, the State of Alaska (in an out-of-court settlement) agreed to provide high schools in all Alaska bush communities that requested them. Most bush communities, 126 in all, wanted local high schools. High schools were constructed in dozens of villages. Parents wanted their children at home and valued the opportunity to have more control over staffing and curriculum. But these small high schools found it difficult to provide diversity of teachers, specialized courses, and a variety of extracurricular activities. As a result, the state government re-opened Mt. Edgecumbe, formerly a Bureau of Indian Affairs boarding school in Southeast Alaska, as an option for rural secondary students. (Darnell, 1992, p. 28)

- At the present time, student applications for Mt. Edgecumbe exceed the school's capacity. There is a movement to provide new boarding schools for Native students. However, providing more boarding schools creates a problem in that the loss of students and student revenues from the small high schools would make it even more difficult for these small schools to offer high quality education to its existing students.

- Although many effective programs have been developed for Native students, the small size of many rural communities and school districts, the stress caused by rapid cultural change, and the tension between the western and indigenous world-view still create policy problems which need attention. (Kleinfeld, McDiarmid, & Hagstrom, 1985, p. 1-6; Darnell, 1994, p. 1 -37)

At the present time, the structure of Alaska's public school system is as follows:

- The state consists of 52 school districts and six state-owned schools. Of the 52 school districts, the student population ranges from nearly 50,000 students in the Anchorage Public Schools to less than 50 students in the Pelican City School District. By the criteria, as defined in this study, six school districts are considered urban and 46 are considered bush schools. However, two of 46 bush school districts are comprised of both urban and bush schools, as defined by this study, by using the data from the Alaska Department of Community and Regional Affairs (1998).

- Prior to the 1990s, Alaska was not considered in national school reform efforts, primarily due to its "separation from the contiguous

forty-eight states and because of its distinctive characteristics." (Hecht, 1981, p. 192)

For example, in 1978 a memo was sent by the Rural Education Project Director to the Center for Northern Educational Research (as cited in Hecht, 1981). This memo stated: "Alaska's situation is considered too unique to be of general applicability elsewhere... Alaska was one of "those situations in rural America where cultural/social and geographical conditions are sufficiently unique [that it] requires very different approaches to improving education." (as cited in Hecht, 1981, p. 208)

However, the State of Alaska, and the Native villages in particular, have *not* been left off any of the national, state, or local educational reform movements of the 1990s, no special provisions have been made concerning the unique cultural/social or geographical conditions. With these reforms, come a great deal of added accountability and pressure for teachers to prepare *all* students for post-secondary pursuits. These standards have been set forth by national and state committees for *all* school age children, with no differentiation between teaching/learning abilities, styles, or situations.

- In conclusion, throughout the history of the many, varied school systems of Alaska public education's past, non-Natives have consistently determined policy and have developed the programs. They have done so under the premise that "they know what was best for Native education." (Darnell, 1970, as cited in Norris-Tull, 1957, p. 132)

Students and Classrooms of Bush Alaska in the 1990s

What is the profile of students attending today's Alaska bush classrooms?

Research indicates that:

- One third of Alaska's school age population fits one of the various definitions of "students at risk" (Darnell, 1992).
- Poverty is a factor in many children's lives. In fact, children living in poverty are one-third less likely to graduate from high school than other children. Over 47% of village students lived in poverty during

the 1990-91 school year, as compared to only 17% of students in Alaska non-bush school districts (Alaska Economic Trends, 1992).

- In some school districts, up to 30% of the elementary age Native children are academically functioning below grade level. In grades 7-12, the number increases to over 40% (Alaska Department of Education, Extent of the At-Risk Population, 1990). This figure is also consistent with the 1996 report that notes the latest figures available (Report Cards to the Public, 1996).

- Based on the last census, which was completed in 1990, approximately one in seven Alaskans is functionally illiterate in English (Darnell, 1992).

- Nearly 40% of students are classified as *bilingual/ bicultural* as compared to less than 4% of students attending non-bush schools in Alaska (Alaska Department of Education, 1997).

- Over 12% of all school-age students are classified as "Chapter 1" pupils. This means their educational attainment is below the level appropriate for children of their age, according to the regulation of the U. S. Department of Education. In Alaska's non-bush schools, less than 4% of the student population is classified as Chapter 1 pupils. While considering that Native students, in general, make up 16% of the total school population statewide, they make up over 49% of Chapter 1 students statewide (Alaska Department of Education, 1993).

- Approximately 30% of freshmen entering Alaska's high schools, statewide, will not graduate (Alaska Department of Education, 1990).

- In some school districts, especially in the Southeast and coastal districts, the student transience rate is as high as 48% per year (Alaska Department of Education, Report Card to the Public, 1998).

- In a national survey of Indian and Native Alaskan youth, 21% of the girls and 12% of the boys had attempted suicide, 46% of the girls and 56% of the boys had used hard liquor, and 26% of the girls and 9% of the boys had been sexually abused. (Whitney, 1992, p. A-1, A-10)

Characteristics

According to the Alaska Teacher Placement Department, University of Alaska Fairbanks (1997), each year approximately 85% of all Alaska teachers hired for the upcoming school term are *imports*—hired from out of state, usually from the Northwestern United States. Although Alaska villages are comprised of up to 95% Native students, 95% of all Alaska bush teachers are non-Natives (Alaska Natives Commission, 1993). Darnell (1992) and Norris-Tull (1997) explain Alaska's bush teaching situation:

> In many cases, unfortunately, newly-graduated teachers or outstanding teachers from other areas are simply not prepared or do not have the background to succeed under the demanding conditions found in many rural [Alaska] villages" (Darnell, 1992 p. 9: Norris-Tull, 1997, p. 137).

Who are these prospective teachers and why do they seek a teaching position in Alaska? Some of these candidates are seeking the *adventure* of The Last Frontier and others are simply seeking the *salary* of The Last Frontier (Anttonen, 1998). Carol Barnhardt (1982), researcher and author, describes these new teachers to Alaska as having,

> . . . missionary zeal. The lures of high salaries or quests for adventure have often been the motivating forces responsible for the steady influx of teachers from Outside. . . . The importation of teachers from Outside has had its advantages and disadvantages. They usually bring with them new perspectives, new ideas, and very often a great deal of enthusiasm. However, those qualities are almost invariably dampened by the reality of long, harsh winters and the prolonged isolation from familiar people, places and goods.
>
> Adjustment to the physical environment is minor, however, compared to the complications that are created by the fact that Alaska is composed of diverse groups of people whose cultural

> backgrounds often differ radically from those of teachers from Outside. It doesn't take teachers long to discover that their own value systems, life styles and ways of teaching and learning are often not shared or even appreciated by the students and families in the communities they are trying to serve. This discovery can quickly lead to feelings of frustration, anger, inadequacy and anxiety for teachers and students, which in turn often leads to dropping out–by teachers and students. (p. 12)

Alaska Bush Schools – Are They Meeting the Needs of Their Students?

One might ask, "Why do the students in bush Alaska experience so many academic and social difficulties?" According to Philips (1972), "The cultural incongruence between the home and school learning environments make it very difficult for Native students to learn to their full potential (p. 97). These complexities come into play when two fundamentally different worldviews converge and present a formidable challenge for students, as well as for teachers. To better illustrate this point, Knudtson and Suzuki (1992) have identified the distinguishing characteristics of both worldviews--of those of the indigenous peoples and those of the Western world in which most Alaska bush teachers have been raised and trained (Appendix J).

As Burgess (1978) points out, "Unfortunately, many instructors ignore culture and its impact on learning both in *content* and in *style*, rather than devising methods and techniques through which culturally diverse individuals approach problem solving" (p. 9). For example,

- Western education tends to emphasize compartmentalized knowledge (by disciplines) which is often decontextualized and taught in the detached setting of a classroom (Kawagley, 1995; Berger, 1977; Franklin, 1990; Livingston, 1981). Native people

have traditionally acquired their knowledge through direct experiences in the natural environment. For them, the particulars come to be understood in relation to the whole, and the laws are continually tested in the context of everyday survival. (Kawagley, 1995)

- According to Swisher and Deyhle (1987), Indian [Alaska Native] children tend to learn visually, by observation, manipulation, and experimentation in their Native setting (John, 1972; Kleinfeld, 1973; Rohner, 1965; Wolcott, 1967; Felon & Galloway, 1969). Rohner (1965) contends that in their school classroom, Native students must learn by verbal instruction, reading, and writing. The Western world approach to teaching is incongruent with their learning styles and affects their knowledge and demonstration of material taught.

Werner & Begishe (1968) also present evidence that many strategies of Western world trained teachers are incongruent with the traditional culture's practices. For example,

- Indians [or Native Alaskans] seem to be unprepared or ill at ease if pushed into early performance without sufficient thought or the acquisition of mental competence preceding the actual physical activity. . . . This philosophy of learning for indigenous peoples can be summed up in the following proverb: *If at first you don't think, and think again, don't bother trying.* The non-Native approach stresses performance as a prerequisite for the acquisition of competence . . . This philosophy of learning can be summed up . . . *If at first you don't succeed, try, try again.* (p. 45)

- Western thought also differs from Native thought in this notion of competency. In western terms, competency is based on predetermined ideas of what a person should know, which is then measured indirectly through various forms of objective tests. Such an approach does not address whether that person is really capable of putting the knowledge into practice (Franklin, 1990). In the traditional Native sense, competency has an unequivocal relationship to survival or extinction. You either have it or you don't, and survival is the ultimate indicator. (Barnhardt & Kawagley, 1997, p. 1)

Kleinfeld, McDiarmid, & Hagstrom (1985) suggest,

> The lists of effective teaching practices are disappointing, that such teacher behaviors as holding high expectations have ambiguous meaning. For example, what about a teacher who is working with an Eskimo child who reads a story over and over and knows all the words but can't figure out what the story means? . . . The research of effective teaching attempts to specify universal scientific rules, but in many situations the rules do not apply [to the learning style of Alaska Native students]. (p. 93)

Although the researcher realizes there is no way to precisely pinpoint every teaching technique of non-Native teachers that tend to be incongruent with Native students, there is literature that addresses some of the differences between non-Native and Native teachers' teaching styles, due to cultural factors. For example, Native teachers tend to differ from mainstream non-Native teachers in the organization of classroom space and time (e.g., the way physical and personal spaces are arranged, and the pacing of lessons) and in the organization of classroom discourse (the culturally patterned ways of speaking in a classroom) (Barnhardt, 1982; Erickson & Mohatt, 1982; Lipka, 1994; Van Ness, 1992). Native teachers tend to use slower pacing of lessons and closer physical contact with students than do mainstream teachers. Native teachers also use a discourse style that includes a more even distribution of speech among students and teachers, speaking to a group instead of nominating individuals, and allowing multiple speakers to talk at once. Native teachers are more likely than mainstream teachers to use content related to the local environment. At the risk of over-generalizing, the differences in classroom organization and discourse

reflect important indigenous values of individual autonomy and group harmony (Lipka,1994).

In summary, many Indian students come to school with a learning and interactional styles that are very different from the situations they encounter in the classroom (Swisher & Deyhle, 1987). This incongruency not only places students at risk, but it also places the teacher, usually a non-Native teacher, at risk as well (Gjelten, 1978).

However, many Natives are beginning to realize the need for students to be taught both traditional cultural material as well as academic curriculum as seen by the Western world. Kawagley (1995) writes:

> In the past, Native people have tended to view formal education as a hindrance to their traditional ways, but they have begun to look at it in a different light. They are seeking to gain control of their education and give it direction to accomplish the goals they set for it. [They are] strengthening their own culture while simultaneously embracing Western culture as a second force that can help them maintain themselves with as much self-reliance and self-sufficiency as possible. Having always had to thrive in a tough environment, they know that knowledge can make it easier and less harsh . . . with a carefully developed technology supported by an attuned educational system. (p. 89)

Norris-Tull (1992), a professor and author regarding Alaska Native issues, believes there needs to be a balance between cultures, with each complimenting the other. He writes:

> Children are the most important segment of any community, for each community's future lies in its children. To assure that future, the children must be given, through education, the skills that will enable them to succeed in life and the understanding that will continue the community's values. For Alaska Native children, this

means that they must receive an integrated education that encompasses two sets of skills and two sets of values.

> The first set of skills is that necessary for the children to succeed in traditional Native lifeways. The second set of skills is that necessary for the children to succeed in Western society. The children's education must also integrate Native and Western values so that they are empowered in both cultures. The skills and values are inseparable, for mastery of one cannot be obtained without mastery of the other. (Norris-Tull, 1997, p. 143)

Compensation

Supply and Demand of Teachers in Alaska

According to Alaska Teacher Placement, the demand for educators in the State of Alaska continues to exceed the supply. In 1997, there were 1,330 new hires statewide and teacher shortages remain a problem (1998). Certain high demand areas such as special education and speech pathologist positions continue to remain unfilled, adversely impacting the consistency and quality of education in Alaska's classrooms (1998).

Projections indicate that Alaska's demand for teachers will be great in the years to come. The Alaska Teacher Placement's Statewide Educator Supply & Demand Report (LaBarge, 1998), states that,

> In spite of a declining military deployment in the state, Alaska's population continues to grow. With the last four years' steady increase, and with the largest growth in Alaska's population being in the school-age category, school enrollments are expanding annually. This growth and other contributing factors increase the demand for more qualified teachers. Meeting such a demand is now problematic, according to the Alaska Teacher Placement Department at the University of Alaska Fairbanks.

> In addition to growing enrollments and teacher retirements, several other factors contribute to the difficulty in [the] recruitment [of quality teachers]. Declining school district budgets, static or declining salaries, reduced benefit packages, and drastic increases in certification costs has all impacted the recruitment of teachers to Alaska's schools. Alaska has lost much of its competitive advantage in attracting qualified educators. With the impending retirement of approximately 6% of the current education labor force, departing teachers could create more than 450 possible vacancies for each of the upcoming years. In addition, new positions will have to be created to deal with expanding enrollments and new programs. For these reasons, Alaska's demand for educators will continue to be high. (p. 20) (Appendix K)

Salaries and Incentives

On an average, Alaska teacher salaries are 128% that of the national average (LaBarge, 1999) (Appendix L). Some school districts provide other incentives such as district housing, longevity increments, tuition reimbursements, non-business travel, disability insurance, professional liability, travel insurance, and family medical insurance benefits (Appendix M).

Rural Schools: A comparison between Alaska and Lower 48

While some similarities exist between Alaska bush schools and rural schools located in the Lower 48, Alaska bush schools represent the extremes of many situations (Darnell, 1992). Miller (1988), in his article entitled, Teacher Preparation For Rural Schools, discusses some of the issues encountered by rural teachers across the nation. Sher (1977) warns the reader to not over-generalize characteristics of rural teachers or their community's situations. He states that there is often greater diversity found when comparing rural schools

among themselves than the difference found when comparing urban and suburban environments. He writes:

> Rural America may well represent the single most diverse and heterogeneous group of individuals and communities in our society. The island village off the coast of Maine, a coal mining town in West Virginia, a ranching area in Wyoming, a college town in Minnesota, an impoverished community in the Mississippi Delta region, a ski-resort section of Vermont, a migrant-worker settlement in Texas, an Alaskan Native village near the Arctic Circle, and a prosperous grain-farming area in Iowa have little in common except that they are all classified as rural areas of the United States. (p. 63)

School Factors

Similarities. The similarities between the responsibilities of a teacher in an Alaska Native village or a rural school in the Lower 48 may be very encompassing. Teachers may find themselves teaching multi-age/multi-grade classes, have small student-to-teacher ratios, and may be responsible for the preparation and teaching of several different subjects (in which the teacher may or may not be qualified to teach). The rural schoolteacher usually is the main teacher for all students assigned to him/her, including the special needs children. Other similarities include extensive administrative, supervisory, extra-curricular, and maintenance responsibilities, coupled with fewer defined rules and policies, and a more informal administrative structure (Miller, 1988). As applicable in both areas, Rusyniak (1990) views many duties of a rural teacher or administrator as being "duties–some assigned, but most assumed" (p. 17).

Miller (1988) also comments, "If teachers come to a small, rural school with expectations predicated upon factors which relate to urban or suburban

schools, duties often defined by a negotiated master contract, they are likely to be sorely disillusioned" (p. 17).

Differences. In Alaska, unlike most Lower 48 states, a teacher is allowed to teach classes for which he/she is not certified if the school district believes the teacher has the skills to effectively teach those classes (Alaska Department of Education, Teacher Certification, 1998). One main difference between Alaska Native village schools and rural schools in the Lower 48 is the amount and quality of the curricular materials and the condition of the school facility. Given that Alaska's state expenditures per student is 149% that of the U.S. average, most schools within the state are very well advanced in terms of technology, with updated curricular materials and supplies (Alaska Department of Education, Report to the Public, 1997). Because of the extreme remoteness of the state, there are many distance delivery opportunities via the telephone, television, or via the computer for students and teachers (Anttonen, personal communication, 1998). The school facilities in most villages are very well built and maintained. In the 1976, out-of-court settlement for the case, Tobeluk v. Link, the State of Alaska agreed to build high schools in all the villages who requested them. Soon after this decision, dozens of villages received new facilities (or new additions built on to their existing facilities). As most of the schools in rural Alaska serve K-12 grade students, most Alaskan students continue to benefit from this settlement (Darnell, 1992). However, in many villages, schools are not able to take full advantage of technological advances due to inadequate telephone

service (some villages still use single side-band radios for telephone communication) or fluctuations in electrical current (some villages use a generator as their only source of electrical supply) (Kawagley, 1995).

Another major difference between the schools in Alaska and those in the Lower 48 is the issue of teacher compensation (i.e., salaries and fringe benefits). While rural teachers in the Lower 48 typically earn lower salaries and fewer fringe benefits than their counterparts earn in more populated school districts, cost of living expenses are lower in the rural areas than in the urban areas of the Lower 48. However, this concept is just the opposite in Alaska. Alaska teachers' salaries are higher than their counterparts in the Lower 48. Furthermore, Alaska's bush school districts tend to compensate teachers at a higher rate than Alaska's urban school districts (Alaska Department of Education, Report Card to the Public, 1997). However, according to Alaska Teacher Placement (ATP) at the University of Alaska Fairbanks,

> Alaska's salaries have seen very little change since 1994. They are, however, doing better than the U.S. average. Since 1995, Alaska's beginning teacher salaries are the highest in the nation. With the average salaries at 128% of the U.S. average, Alaska's educators have one the highest compensation rates in the nation. However, several districts are no longer compensating for years of experience and are, therefore, bringing in all new hires at entry level. Some districts are only allowing up to four years of experience to new hires in their district. According to statistics compiled by the American Federation of Teachers, after adjustment to the cost-of-living index, Alaska's salaries still rank among the top 25 in the U.S. (Report Card to the Public, 1998, p. 23) (Appendices N and O)

Moreover, unlike rural areas of the Lower 48, the cost of living in bush Alaska is greater than in urban Alaska (LaBarge, 1998). In most cases, food and other needed items are flown to villages via air transport, which is very expense. Also, air service is very costly if a person (and his/her family) needs to leave the village for any reason (e.g., shopping, medical care, or family related situations). Costs associated with building a house in a village can amount to as much as 132% more than if the same house was built in an urban area with Alaska such as in Anchorage. Also, some Native villages restrict non-Natives from owning property on Native owned land. This makes the opportunity of being a homeowner impossible for some non-Native teachers (Norris-Tull, 1997).

Socio-Cultural Factors

While teachers in bush Alaska and in the Lower 48 often experience difficulty finding, buying, and selling property, both groups experience the *fish bowl* effect. They are scrutinized by community members and have a very high profile within the school and community. Very high expectations exist for teacher involvement within community activities, and there is a great emphasis placed on informal and personal communications. While all rural teachers experience the above conditions to a certain extent, some researchers (Miller, 1988; Sher, 1995) feel Alaska's extreme socio-cultural factors are what truly account for the extremely high teacher turnover rates in these remote Native villages (Darnell, 1994).

Although some bush school districts in Alaska provide subsidized housing for teachers, many times these housing conditions are "far from adequate as compared to typical Lower 48 housing situations" (Anttonen, 1998). And with this subsidized housing comes school district chosen room mates. In an interview with John Anttonen, former Director of the Rural Educator Preparation Partnership Program at the University of Alaska Fairbanks and longtime bush school administrator (1998), he contends that in order for an Outsider to truly be accepted by the community, he/she "must live among the people". Antonnen goes on to explain that when a teacher lives in housing provided by the school district, a superficial barrier is created between the teacher and the local villagers.

Due to lack of roads and other recreational facilities, the school is usually the hub of the community in these remote villages. It is usually an expectation for school personnel to supervise these facilities during their after school hours. "More time at school means less quality time for the teacher to spend with his/her own family" (Anttonen, personal communication, 1998).

The physical, geographic, and climatic conditions of remote Alaska villages are also factors which teachers must learn to overcome. Darnell (1992) writes,

> The physical environment of the rural schools is composed of an interrelated combination of dramatic extremes. Great distances separate small, isolated communities. Climatic and physical characteristics of the land are often harsh and unforgiving. There are great geographic, economic, historical, and cultural differences

> among these rural areas and many individuals share a strong sense of independence and contrariness. (p. 6)

Bush areas of Alaska experience extreme geographic conditions such as long, dark, harsh winters, inaccessibility to goods and services (e.g., medical services, shopping, etc.), and extreme distances from extended family and friends. These are all part of the "total isolation from one's own culture," which Dr. Peter Nakamura, Director of Public Health Services for the State of Alaska (1998), contends is the single most common reason why teachers leave bush Alaska (P. Nakamura, personal communication, June 26, 1998). Miller (1988) agrees with Nakamura (1998). Miller writes,

> When attention is shifted to the rural community as a social and cultural context of the school, these rural-urban differences become even more complex, reflecting differences in shared values and beliefs. It is the cultural context of working in a rural setting that poses the greatest obstacle for preparing teachers to work in isolated communities and this may well be the major cause for teacher turnover. (p. 24)

Gjelton (1978), an author on rural issues, comments,

> It is important to see this whole scene, because the most characteristic feature of the rural experience is the interconnectedness throughout it. To be a successful teacher in a rural community requires integration of personal, cultural, professional, and social dimensions. (p. 6)

This integration that Gjelton (1978) refers to is critical for the retention of bush teachers (Fisherman, 1984). As cited in Lipka (1994), Fisherman (1984) describes the volatility of teaching in such an area. He states,

> The school serving minority-group children is in reality a two-edged sword, even when it is minority-community controlled. It leads away, out of and, in a sense, partially undermines the very

> community that it ostensibly serves. This is all the more so when the minority community really does not control the school, its staff, its curriculum or its more subtle messages. The minority group-school is, therefore, an ambiguous factor. Its real thrust, at any time, depends on the contextual circumstances surrounding it and controlling it. (p. 55)

Existing Programs Dealing with Alaska Bush Teacher Turnover

Programs have been developed through the University of Alaska that help train prospective Alaska bush teachers. Most of these programs operate under the philosophy that "change must come from within the ranks of the people" (Barnhardt, 1999). A discussion of several such programs follows:

- One program makes it possible for local residents, those closest to the situations, to take coursework while continuing to live in their home villages. This coursework is presented via audio conference, site visits by field-based faculty, and attendance at regional and statewide student meetings. Although these programs have helped somewhat to increase the number of Native teachers in bush Alaska, the X-CED (Cross-Cultural Education) Program has been perceived by some teachers, administrators, and campus-based faculty as inferior to campus-based education. This perception is one of several difficulties Native graduates have had in gaining employment as teachers after graduation (Lipka, 1994). In fact, to Native teachers, the most insulting part of the hiring pattern facing them is that some districts are willing to hire the certified Native teachers, but only as aides to work with the many Outside teachers (non-Native teachers from the Lower 48 who exhibit no Alaska experience) being hired as regular teachers. Typically, Outside teachers stay up to four years before returning *home*, therefore, contributing to the district's high teacher turnover rate. (Lipka, 1994)
- The University of Alaska is expanding its special education department in order to serve students in rural sites who wish to pursue a Masters program in Special Education. The limitations of this program are twofold: (a) the teacher needs to have access to the internet, and (b) the teacher must be in a situation in the village

where a host teacher with special education credentials will act as a mentor. (LaBarge, 1999)

- Some school districts are actively involved in promoting local students who wish to pursue teaching degrees. Several rural districts offer programs that encourage and promote Alaska Local or Native teacher hires through scholarship programs. For example, Lower Kuskokwim School District placed six such students (12% of their total hires) and Southwest School District placed four students (13% of their total hires) directly into classrooms in 1998 (LaBarge, 1999). According to the Alaska Teacher Placement Department, such programs greatly enhance the state's need to fulfill demands for teacher diversity (LaBarge, 1999).

While the above programs provide some relief to the teacher turnover issue, the graduates of these programs are not able to fulfill Alaska's total demand for bush teachers. Current data indicates that 85% of all new Alaska hires come from outside the state, predominantly from the Lower 48 (LaBarge, 1998). Although most of these hires from the Lower 48 are well-intended (Barnhardt, 1998), Kleinfeld (1988), longtime professor and researcher of Alaska rural issues, states,

> It is important for administrators, counselors, and teachers recognize that some otherwise excellent teachers may not be personally adapted to a cross-cultural teaching situation, and that there is no need to view this as evidence of personal failure. (p. 84)

However, Barnhardt (1997) offers hope and encouragement to non-Native teachers by saying,

> Succeeding as a teacher in an Alaska bush village and school is difficult, yet not impossible for a non-Native teacher. . . It is not necessary (nor it is possible) for an Outsider to fully comprehend the subtleties and inner workings of another cultural system (even it if is still fully functional) to be able to perform a useful role in that cultural community. (p. 3)

Miller also points out,

> We must not suggest that working and living in a rural community is, or cannot be, a positive experience. However, a match must be made between the teacher and the employment setting in order to best benefit the learning environment for the students. If teachers are not adequately prepared to deal with those factors that are unique to rural teaching in Alaska, they may never come to realize the many positive aspects of small, rural schools and communities. (p. 87)

Despite the varied programs to increase local candidates as prospective teachers, and Barnhardt's notion that an Outsider is able to serve a useful role in bush Alaska, successful teacher recruitment and retention is vital (Matthes & Carlson, 1987). In the next section, information is presented regarding effective teacher recruitment and retention.

Teacher Recruitment and Retention Within Alaska Bush Schools

According to Matthes and Carlson (1988), little is known about those factors that attract an individual to a particular school district. Furthermore, even less is known about the factors that might cause an individual to consider a position in another school district. It is implied that *the conditions for practice* (Sykes, 1983; Chapman & Hutcheson, 1982; McLaughlin, Pfeifer, Swansen-Owens, & Yee, 1986) are directly related to the recruitment and retention of qualified teachers.

Although there are numerous recommendations for successful recruitment and retention of teacher in the literature (Miller, 1982; Seifert & Kurtz, 1983; Swift, 1984), Matthes & Carlson (1985) contend that for many rural school

districts, retention is much harder than recruitment. They go on to state, "Encouraging the best available teachers to come to a school in sparsely populated areas and then making it attractive for them to remain there long enough to make a lasting, positive contribution is a long-standing problem."

Some recruitment suggestions for school districts, which may help to increase teacher retention, include (Matthes & Carlson, 1985; Barnhardt, 1999):

- Pay expenses of candidates to visit the school district before signing a contract (local community patrons and civic groups can help in the recruitment and screening of applicants);
- Emphasize the inherent advantages of small, rural schools while being honest about the limitations of bush living;
- Pre-service and ongoing orientation programs;
- Immediate community involvement in welcoming and including the new teacher in a variety of community programs;
- Pairing new teacher with a master teacher;
- Pairing new teacher with a community elder;
- Regular classroom and school-wide visits by district and building administrators;
- Professional days to participate in workshops and conferences;
- Reimbursement of tuition for one graduate course per academic year;
- Release time for working on curricula/instructional units, or for visiting classrooms in other school districts;
- Inservice workshops designed and arranged by classroom teachers with administrative support and involvement;
- Effective negotiations with area universities to offer, within the district, graduate-level courses tied in with local curricular and instructional projects;

- Paying stipends to teachers to attend summer institutes and to work on curriculum development projects;
- Conferences on outcome-based learning, sponsored by administrators and school board members; and
- Career ladders and staff development plans.

Barnhardt (1999) believes the responsibility for addressing the issue of Alaska teacher recruitment and retention also lies with a variety of agencies outside the school district. These agencies my include:

- Department of Education (DOE) through licensing regulations and teacher education standards;
- The universities through appropriate teacher preparation programs such as Cross-Cultural Education (X-CED)/Rural Education Preparation Partnership (REPP); and
- Rural communities through their commitment to locally controlled education; Barnhardt (1990) adds, "The most critical factor in the success of any educational effort is its initiation from the cultural community being served and the strong, sustained and unequivocal support provided by the representatives of that community. Without such commitment and persistence, the initiative softens and falls by the wayside in a few years, victims of the frequent turnover in school personnel and the inevitable redirection and reconstruction of programs that accompany such turnover." (p. 46)
- A program of study based on the Alaska Standards for Culturally Responsive Schools could be made available to guide teachers in the transition of their new insights into culturally-appropriate curriculum and teaching practices. (p. 46) (Appendix P)

Summary

The research related to teacher attrition was discussed in Chapter 2 along with teacher recruitment and retention in rural areas. Alaska's geographical and

social features were categorized according to Sher's terms: (a) *Conditions*, (b) *Characteristics*, and (c) *Compensation*. Similarities and differences between Alaska's schools and those of the Lower 48 were compared.

In Chapter 3, the researcher will outline the methodology of this study. The study's population description and sampling procedures, data collection instrument, survey design and development, and timeframe for data collection will be outlined.

CHAPTER 3

METHODOLOGY

The purpose of this study was to identify factors inherent in Alaska's bush schools (i.e., professional, personal/family, geographic, and socio-cultural) which are related most highly to teacher turnover, as perceived by Alaska bush administrators. Secondly, the researcher sought to determine whether school district geographic location within Alaska made a significant difference as to which factors identified most highly with teacher turnover. In this chapter, the study's methodology will be outlined. Topics of discussion will include: the study's population description and sampling procedures, data collection instrument, survey design and development, initial data analysis strategy, and the study's timeframe.

Population Description and Sampling Procedures

Of Alaska's 52 school districts, six districts were determined to be urban districts and were, therefore, not included in this study (i.e., Anchorage, Fairbanks, Juneau, Ketchikan, Matanuska-Susitna, and Valdez). The superintendent (or his/her designee) from the remaining 46 school districts served as the population, as well as the sample for this study (Appendix E). Throughout the study, the researcher refers to this group as the *population*. By definition, two of the study's 46 school districts consisted of both urban and bush

schools (i.e., Kenai Peninsula Borough Schools and Kodiak Island Borough School District). Respondents from these two school districts were reminded to complete the questionnaire based upon his/her "entire experiences as an Alaska bush educator" and not the experiences associated with the urban schools within these two districts.

Based upon its geographic location, each school district was assigned to one of five regions within Alaska. They were as follows (Figure 2):

Figure 2. Alaska's Five Regions

Alaska's Five Regions	
Region 1	Northwest Region
Region 2	Interior Region
Region 3	Southwest Region
Region 4	Southcentral Region
Region 5	Southeast Region
(See Appendices A and C for more information)	

Division of the regions was adopted from the Alaska Teacher Placement Department, University of Alaska Fairbanks (LaBarge, 1998). Each region exhibited distinct characteristics, as noted by expert, Laura Walters, Research and Data Analyst, State of Alaska (Appendices Q, R, S, T, and U) (L. Walters, personal communication, February 10, 1999).

Data Collection Instrument

Data for this study were collected through the use of a 32-item questionnaire (Appendix V). The written directions at the top of the first page

informed participants regarding the importance of the study and provided them with reassurance of confidentiality that all results would be presented in aggregate form, with no school district being identified with their individual responses.

The questionnaire consisted of four parts, as follows:

1. Questions #1 - #23: Each participant was asked to circle a number on a Likert type scale from 1 - 10 which indicated to what degree the item listed led to Alaska bush teachers leaving their current positions. Number 1 on the scale meant the factor *did not* contribute to teachers leaving. Number 10 meant the factor *strongly* contributed to teachers leaving. Although the questions, hereafter referred to as items, were categorized according to their respective sub-factor during the data analysis process, the items were listed in random order on the questionnaire (Appendix W). Following is an abbreviated listing:

    - Professional Sub-factor – lesson planning and teaching; peer relations; student discipline; professional growth;
    - Personal/family Sub-factor – contentment of spouse; safe, enriching environment for own children; quantity and quality of time with own family; hobbies and recreation;
    - Geographical Sub-factor – isolation from one's own culture; availability of goods and services; climate; housing;
    - Socio-cultural Sub-factor – cultural sensitivity through participation in school/community activities; able to effectively survive in community's political infrastructure; social issues;

2. Question #24: Each participant was asked an open-ended question in which he/she was encouraged to write any comments concerning the instrument's format or content, identify any additional factors which the participant believed related to teacher turnover, to provide clarification regarding a given answer, or to list other issues of interest related to teacher turnover.

3. Questions #25 - #30: Through the use of multiple-choice responses, each participant was asked demographic questions which provided

additional information concerning the participant's gender, age, experience in Alaska, and position within current school district.

Since one of the research questions of this study was to analyze the responses according to geographic region within Alaska, the respondent was asked to denote which region (i.e., Northwest, Interior, Southwest, Southcentral, or Southeast) was most representative of his/her responses, based upon his/her past experience.

4. Questions #31 - #32 (optional): The respondent was asked to respond to these questions only if he/she desired a summary of the study's findings upon their completion. These questions requested the respondent's name and address.

Survey Design and Development

The questionnaire (Appendix V) was developed by the researcher, based upon review of related literature and discussions with 37 Alaska bush teachers (past and present), authors, professors, community agency personnel, and researchers in the field of Alaska bush schools and communities. A three-phase process established construct and content validity of this instrument. Each step of the process is described below.

Validity and Reliability

Validity is "the degree to which a test measures what it is supposed to measure and, consequently, permits appropriate interpretation of scores" (Gay, 1996, p. 138). *Construct validity* is "the degree to which a test measures an intended hypothetical construct or an intended content area" (Gay, 1996, p. 140). According to Gay (1996) *content validity* is "the degree to which a test measures an intended content area" (p.139). The establishment of validity was

accomplished through expert judgment throughout the three phases of questionnaire construction.

Reliability is "the degree to which a test consistently measures whatever it measures" (Gay, 1996, p. 145). Reliability was established as part of the data analysis. However, in the three-phase questionnaire development process, experts facilitated the establishment of the questionnaire's reliability by examining it for possible problems associated with clarity of instructions, wording, and format.

The three-phase questionnaire development used to establish validity and reliability of the instrument was as follows:

1. Phase #1: Before the development of the instrument's first draft, the researcher completed a comprehensive review of literature and informally interviewed eight Alaska Bush teachers and four experts in the field of bush education. During these interviews, the researcher was referred to other professionals working in the field of Alaska bush education. The researcher informally interviewed three current Alaska bush teachers with a combined bush experience of 33 years spanning all five Alaska regions; one principal/teacher with eight years bush experience; one principal with six years bush experience; one special education director with eight years bush experience; one assistant superintendent of instructional services with 11 years bush experience; and one itinerant nurse who has served Alaska bush schools for the past six years. The questionnaire construction was initiated, based upon data collected from the informal, data-gathering interviews. The researcher determined that the main factors most highly related to teacher attrition in Alaska bush schools could be categorized into four sub-factors: professional, personal/family, geographic, and socio-cultural.

2. Phase #2: Upon completion of the draft questionnaire, the researcher solicited feedback from a multi-disciplinary group of experts and Alaska bush teaching professionals. These people were asked to comment on the questionnaire regarding the following issues that could

negatively impact the validity and reliability of the questionnaire (Greenland, 1985):

- Unclear directions
- Reading vocabulary and sentence structure difficulty
- Inappropriate level of difficulty of questionnaire
- Poorly constructed questions
- Ambiguity
- Survey items inappropriate for the outcomes being measured
- Survey item length
- Improper arrangement of items
- Identifiable patterns of answers

The draft questionnaire was distributed to experts and Alaska bush professionals for review. This process was completed via e-mail and through personal delivery.

Feedback was provided to the researcher by one nurse (six years bush experience), four teachers (combined 33 years bush experience spanning all five Alaska regions), one principal/ teacher (two years bush experience in Region 3), two school district consultants (29 years bush experience throughout all five Alaska regions), five principals (36 years bush experience spanning all five Alaska regions, two districtwide administrators (19 years experience including combined 47 years Alaska bush experience in all five Alaska regions), and two experts. The researcher via e-mail, telephone conversations, and fax messages received this feedback.

Based upon input from the reviewers listed above, the researcher revised the questionnaire to reflect identified problem questions.

3. Phase #3: Upon revision of the questionnaire, the researcher distributed the instrument via e-mail to another group of individuals for their review.

Feedback was obtained from three teachers (23 years combined experience, representing Regions 1, 2, and 3); one principal (11 years experience, primarily in Region 5); two university professors; and the Commissioner of Education for the State of Alaska.

These reviewers suggested only minor changes. The questionnaire was revised to reflect those suggestions and was then ready for distribution to participants of the study.

Data Collection and Return Rate

The researcher spoke with the school district superintendent in each of the 46 Alaska bush school districts that served identified as this study's population. In the telephone conversation, the researcher introduced herself and explained that she was also an Alaskan administrator, explained the purpose of the study, and requested school district participation.

Dillman, author of the book, Mail and Telephone Surveys: The Total Design Method (1978), stresses the importance of personal appeal which helps "respondents feel that they have [through the completion and return of the instrument] done something important to help solve a problem faced by them, their friends, or members of a group" (p. 163). The researcher's current position as a school administrator in an Alaska bush school district helped to create a collegial feeling of working together to solve the issue of high teacher turnover rates.

Receiving an affirmative response from each of the 46 superintendents, the researcher asked each superintendent how many years he/she had been an educator in the State of Alaska. Based upon his/her answer, the researcher asked if the superintendent felt comfortable completing the questionnaire, or if the Superintendent felt the task should be delegated to another administrator within the district. In all cases, the superintendent and the researcher felt the superintendent was qualified to complete the questionnaire.

The questionnaire was faxed to each superintendent immediately following the telephone conversation. Each faxed questionnaire contained a short, hand-written message thanking the respondent, in advance, for his/her participation in the study. Each participant was instructed to return the completed questionnaire via fax or mail. After ten days, the researcher called each superintendent who had not returned the questionnaire. Telephone follow-ups were continued until there was a 100% questionnaire return.

Initial Data Analysis Strategy

Data Analysis

Initial data analysis included calculating the mean scores and standard deviations for each of the 23 survey items. Next, the survey items were categorized into four groups called sub-factors (i.e., professional, personal/family, geographic, and socio-cultural). The mean response of each of the four sub-factors was calculated for each region and total.

A one-way analysis of variance was conducted to determine if a statistically significant relationship exists between the regions and perceptions of superintendents, concerning factors related to teacher turnover. Also, a total mean score denoting all five regions (i.e., a statewide mean score) was calculated. By determining the means of each sub-factor, the researcher was able to compare relative importance of the sub-factors across the regions to explain teacher turnover.

Through this analysis, the researcher was able to answer the research questions posed in Chapter 1: (a) What are the main factors inherent in Alaska bush schools that are most highly related to teacher attrition? and (b) Is there a significant relationship between the factors identified in question one and the geographic location of the school district within Alaska?

Timeframe for Data Collection

The review of related literature was completed and the development of the study's instrument began. Upon culmination of feedback and revisions concerning the survey, the questionnaire was distributed to the 46 Alaska bush school district superintendents. Data analysis followed the collection process. The researcher's timeframe is presented in Figure 3.

Figure 3. Timeframe for Data Collection

June – July 10, 1998	Phase #1: Development of initial questionnaire after literature search and interviews with experts and Alaska bush professionals.
July 24, 1998	Committee Meeting and Defense of Study's proposal
July 24 - October 30, 1998	Phase #2: Feedback from experts and Alaska bush school professionals regarding draft questionnaire. Revision of questionnaire by researcher.
November 1 – 30, 1998	Phase #3: Additional feedback from experts and professionals regarding questionnaire. Revision of questionnaire by researcher.
December 1, 1998 - January 4, 1999	Final critique of instrument by experts and professionals. Final version of questionnaire completed by researcher.
January 5 - February 26, 1999	Phone contact made with study's participants; Questionnaires faxed to participants; Return of completed questionnaires to researcher; Follow-up telephone calls completed by researcher, as needed.

Summary

In this chapter the study's methodology was outlined. Topics of discussion included: population description and sampling procedures, data collection instrument, survey design and development, initial data analysis strategy, and the study's timeframe. In the next chapter, a further discussion will take place regarding the data collection procedure, data analyses, as well as the study's summary of findings and interpretation.

CHAPTER 4

FINDINGS AND INTERPRETATION

Introduction

The purpose of this study was to identify factors inherent in Alaska bush schools that related most highly to teacher turnover. The superintendent, or designee, in each of the Alaska bush school districts completed a questionnaire, indicating on a Likert-type scale their perceptions of each level of relationship to teacher turnover. The items were categorized into four groups, hereafter referred to as sub-factors. They included professional, personal/family, geographic, and socio-cultural factors. The responses that defined the sub-factors were analyzed to determine if any one of the sub-factors, as perceived by the superintendents, was the primary reason for teachers leaving Alaska bush schools. Secondly, these sub-factors were analyzed to determine if the school district's geographic location within Alaska was related to the sub-factors that most highly related to teacher turnover, as perceived by bush school district superintendents.

Data Collection Procedure

Preceding data collection, the researcher telephoned each school district's superintendent, and asked for his/her school district's participation in the study. One hundred percent of the superintendents agreed to participate. Upon agreement to participate, the researcher faxed a questionnaire and a

personalized handwritten cover letter thanking the respondent for his/her participation. Each survey was completed and either faxed back to the researcher or returned via U.S. Postal Service mail. This process began on January 4, 1998, with the first telephone calls to superintendents and ended on January 8, 1999. In all but four instances, the researcher spoke directly with each superintendent. In four cases the superintendent was not available. However, the superintendent's secretary requested the researcher to fax the questionnaire to the school district without prior approval of the superintendent. In each instance, the secretary offered to ask the superintendent for his/her support of participation. The secretary also assured the researcher that she would ask the superintendent to return the call to the researcher if participation was not desired. The researcher received no dissenting replies from superintendents.

Over half of the surveys were returned by January 22, 1999. Follow-up telephone calls were initiated to all participants who had not returned a questionnaire by January 22, 1999.

By February 12, 1999, all but two questionnaires had been returned to the researcher. After several additional reminders to these two respondents, their surveys were returned by February 26, 1999, from their respective school districts. Both respondents indicated they favored their district's participation in the study, but stated that they had just "not gotten to it." Upon the acquisition of these two surveys, the researcher claimed a 100% return rate.

While all 46 of the superintendents had offered support of this survey, four of the superintendents chose to delegate the survey's completion to an experienced subordinate. Several respondents wrote comments on the cover letter, indicating support and need for this study, which, in turn, will benefit Alaska's educational system.

Respondents' Profile

Most of this study's respondents were males (Figure 4) between the ages of 46-55 years (Figure 5). Forty-two superintendents, two personnel directors, one principal, and one director of secondary education served as this study's participants by completing the questionnaire. In most cases, superintendents had experience working in schools that had over 10 teachers (Figure 6). The respondents averaged 14 years as an Alaskan educator and 10 years as an Alaskan administrator.

Each participant was asked to indicate in which *one* region he/she had the most familiarity/experience in Alaska bush education. Therefore, it was possible that an individual's responses were categorized within a different region than the one in which he/she was currently employed (Table 1).

Figure 4.

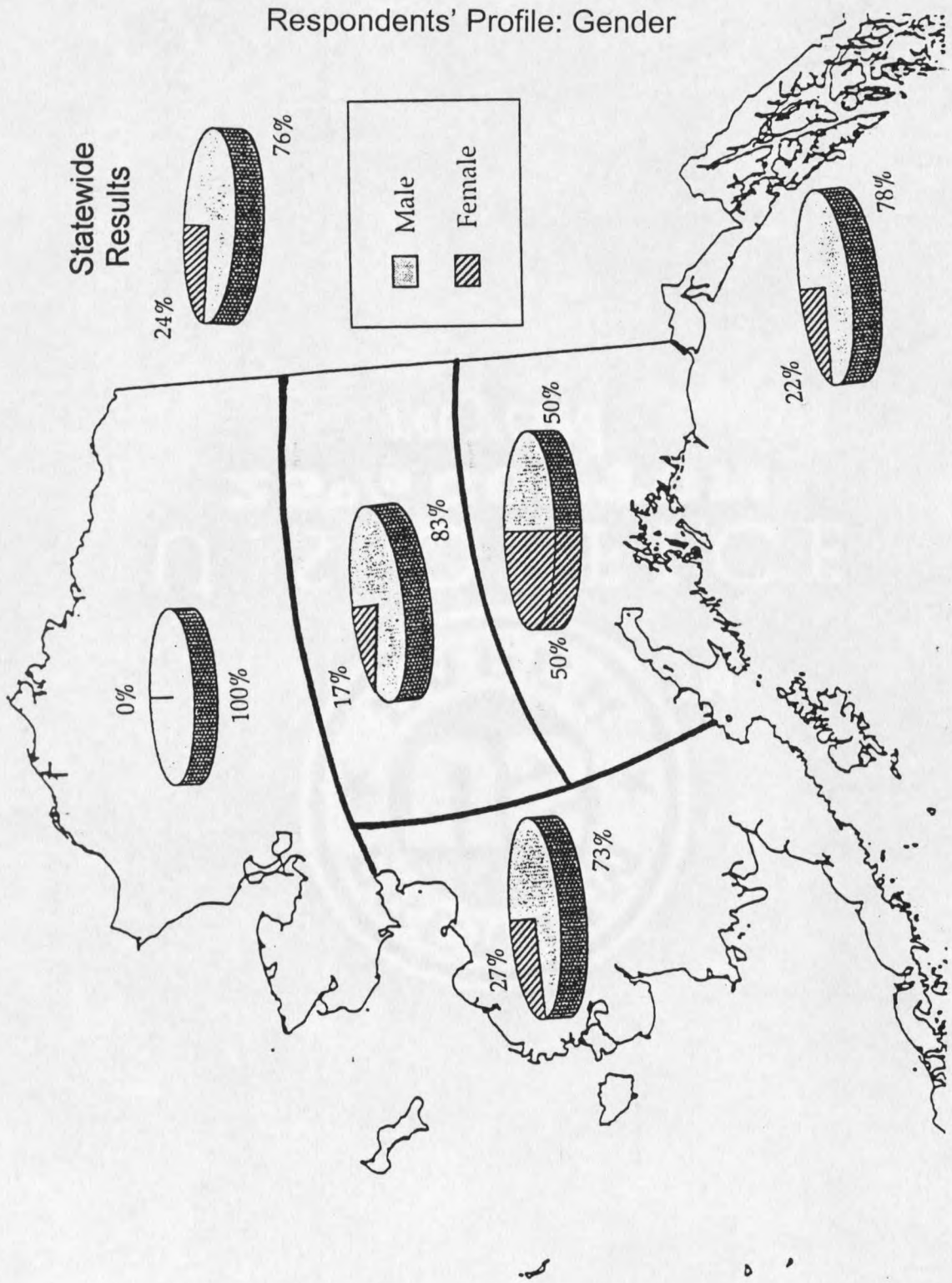

Respondents' Profile: Gender
Statewide Results
24%
76%
Male
Female
0%
100%
17%
83%
50%
50%
27%
73%
22%
78%

Figure 5.

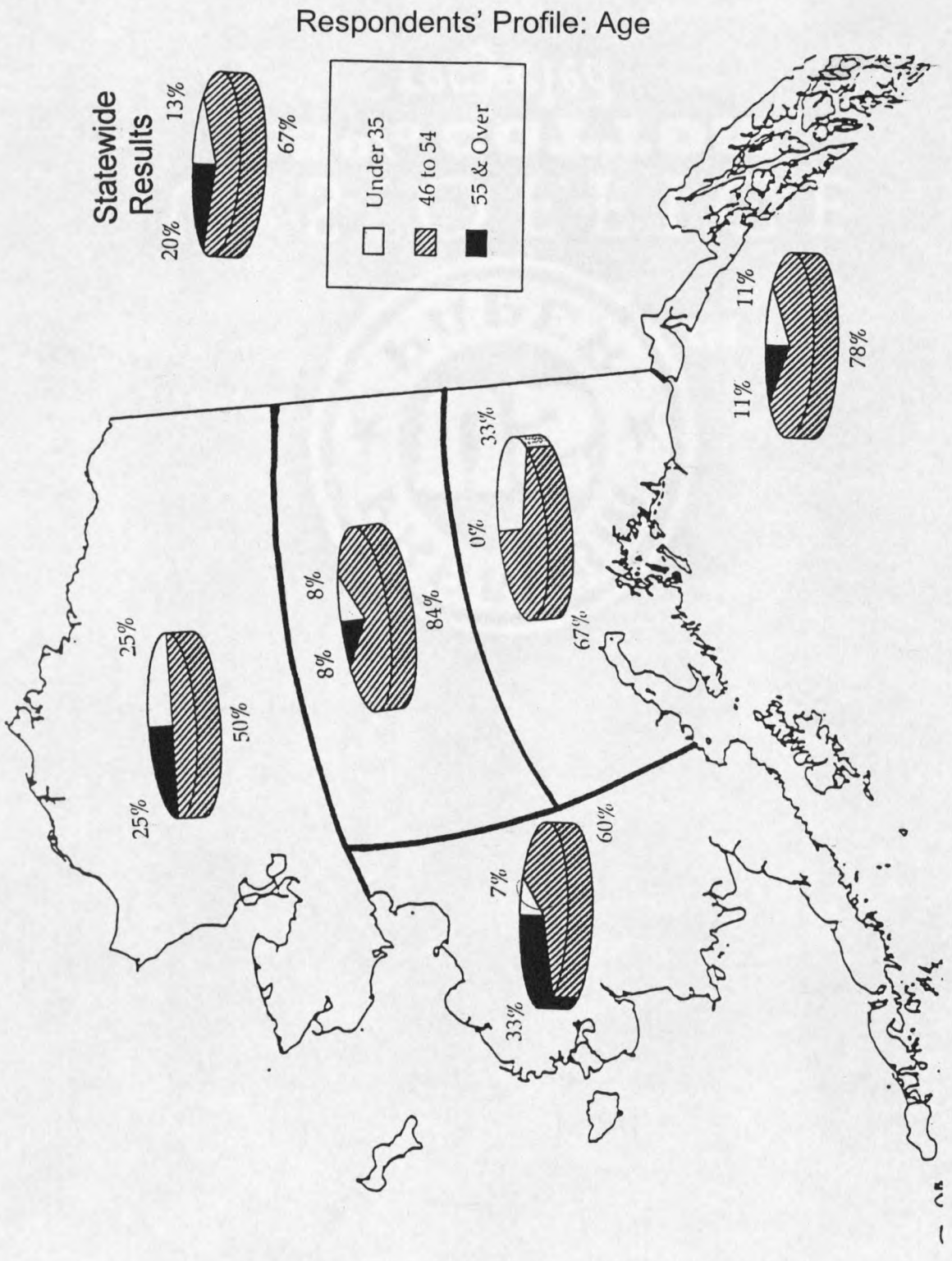

Respondents' Profile: Age
Statewide Results
13%
67%
20%
Under 35
46 to 54
55 & Over
11%
11%
78%
33%
0%
67%
8%
8%
84%
25%
25%
50%
7%
33%
60%

Figure 6.

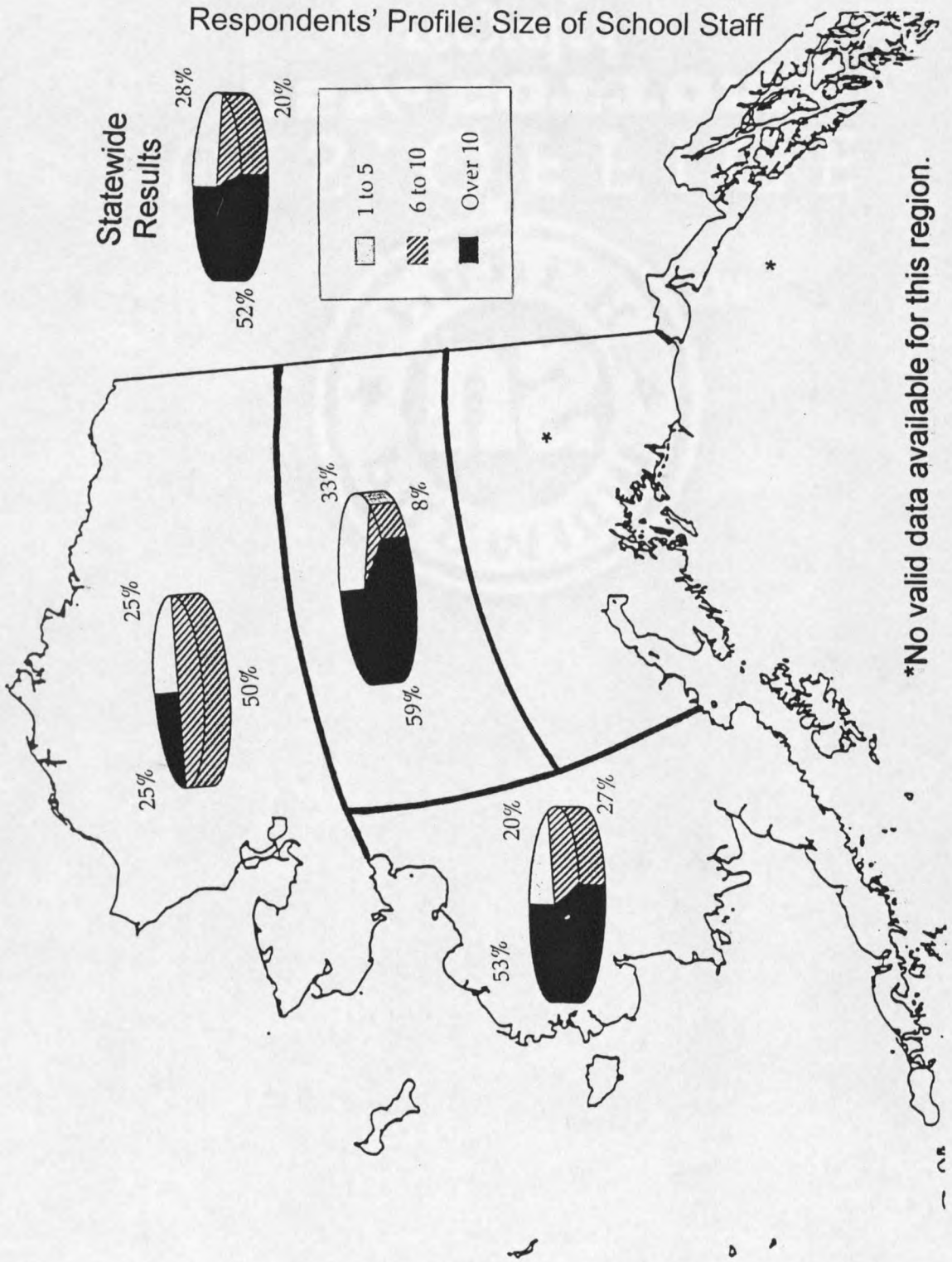

Respondents' Profile: Size of School Staff
Statewide Results
28%
20%
52%
1 to 5
6 to 10
Over 10
33%
8%
59%
25%
25%
50%
20%
27%
53%
*No valid data available for this region.

Table 1. Number of Respondents by Region

Region	Number of schools in region (bush)	Number of respondents claiming this region as their most familiar region
Region 1: Northwest Region	4	4
Region 2: Interior Region	10	12
Region 3: Southwest Region	14	15
Region 4: Southcentral Region	3	6
Region 5: Southeast Region	15	9

Data Analyses

Instrument Validity and Reliability

In the process of developing the 23-item survey that was sent to the superintendents of Alaska's 46 bush school districts, content and construct validity were established through expert opinion (see Chapter 3). In this process, the instrument was pre-tested on a small group of individuals who were representative of the group that was to be surveyed. This exercise resulted in critical feedback regarding the instrument's format and clarity of instructions that could have introduced unintentional error by the respondents completing the survey.

Initial analysis of the 23-item survey addressed the issues of validity and reliability. Reliability, or internal consistency, was calculated using the Reliability Procedure in SPSS 9.0 (George & Mallery, 1999). Specifically, Chronbach's alpha was calculated using the following formula:

$$\text{alpha} = \frac{Kr}{1+(K-1)r} = \frac{23\,(.3577)}{1+(23-1)(.3577)} = \frac{8.2271}{8.8694} = .93$$

K = # of items
r = mean inter-item correlation

This calculation resulted in an alpha score of .93, indicating a very high level of internal consistency between the 23 survey items. Conceptually, this reliability coefficient reflects the correlation of the survey items to all other items in the domain of items that measured what this survey measured (refer to Chapter 3, Construct and Content Validity) (Gall, Gall, & Borg, 1999). The Chronbach's alpha of .93 indicates that the survey consistently measured one or more constructs related to teacher attrition in Alaska (Appendix X).

Principal Components Analysis

Once it was established that the survey instrument was reliable, a Principal Components Analysis (SPSS) (Gall, Gall, & Borg, 1999) was applied to the responses of the 23 items on the survey. Examination of the unrotated factor structure revealed that a single factor was measured by the survey (Table 2

).

As illustrated in this table, all items loaded positively on the first factor with a factor loading above .4, with the exception of Item #8. This factor was developed using a least squares technique, in the same way as in multiple regression without the dependent variable. The fact that all but one item loaded highly on this factor strongly indicates that a single construct was measured by the survey and provides evidence that all items (except Item #8) contribute to face validity (Gay, 1996) of the survey instrument. This evidence of a single construct being measured by the survey is further supported by a strong Chronbach's alpha discussed above (Gorsuch, 1974). Attempts to identify the sub-factors using an oblique rotation technique of the Principal Component Analysis (a promax procedure, SPSS) did not result in the creation of an

interpretable factor structure.

Table 2. Principal Components Analysis

Component Matrix[a]

	Component			
	1	2	3	4
#1	.615	.217	.169	5.399E-02
#2	.497	-.340	.582	-8.452E-02
#3	.636	-.394	.240	.179
#4	.455	-.397	.542	-2.278E-03
#5	.666	.120	3.870E-02	-7.318E-02
#6	.603	-2.810E-02	-.196	.205
#7	.564	.463	.436	-.276
#8	.220	.524	-.210	.477
#9	.673	.176	-9.556E-02	.118
#10	.716	9.378E-02	-.427	8.788E-02
#11	.723	2.519E-02	-.377	-.205
#12	.718	-2.523E-03	-232	-.326
#13	.528	-.145	.168	.633
#14	.556	.304	.316	.366
#15	.666	-.496	-.104	-9.619E-02
#16	.686	-.573	-5.467E-02	-5.417E-02
#17	.793	-9.647E-02	-.229	7.027E-02
#18	.598	-.482	-2.929E-02	.166
#19	.609	.335	-.413	.112
#20	.588	.424	.448	-.296
#21	.667	.476	.429	2.893E-02
#22	.822	-1.463E-02	-.29	-.130
#23	.653	9.644E-02	-.165	-.439

Extraction Method: Principal Components Analysis.

[a] = 4 components extracted.

The results of these analyses indicate that the instrument used to survey opinions of experienced Alaska public school administrators about why Alaska bush teachers leave their positions consistently measured a single construct that

deals with teacher turnover. This also implies that the sub-factors identified by the experts in the creation of the survey instrument measured the same phenomena and should not be considered as independent factors in discussions regarding teacher turnover.

Analysis of Variance

Based on the above findings, a one-way analysis of variance (ANOVA) was conducted to determine if a relationship existed between the five Alaska regions and the reasons for teacher turnover in Alaska bush schools. Total mean scores on the 23 items for each region were used to test for differences between the five Alaskan regions (i.e., Northwest, Interior, Southwest, Southcentral, and Southeast). This analysis indicated no significant difference between the regions (alpha = .05) (Table 3).

Null Hypothesis

There is no significant difference on the total mean scores between the five Alaska regions (alpha = .05).

Table 3. One Way Analysis of Variance

ANOVA

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	1.184	4	.296	.113	.977
Within Groups	106.987	41	2.609		
Total	108.172	45			

Indicated in the table above, the significance level between the groups equated to .97. Therefore, this test failed to indicate that the null hypothesis should be rejected. Thus, it was concluded that there is no significant difference between the five Alaska regions (alpha = .05) as related to reasons why Alaska bush teachers leave their current teaching positions.

Ranking of the 23 Items by Region

In order to examine the relative importance of the 23 items across the five regions, the means for each of the 23 survey items were calculated by region (George & Mallery, 1999) (Figures 7-12) (Table 4). Each item's mean score in descending order ranked the 23 items. While each region's list was a unique ranking, the means for the respective sub-factors across the regions were very similar. With so many of the items scoring so close together, these scores did not reflect practical differences.

Although the rankings did not indicate practical differences, it is interesting to note the specific survey items that consistently ranked within most of the regions' *Top 10 List* as being highly related to teacher turnover. The respondents indicated the teacher's family was a major issue as to longevity of a teacher. For example, if a teacher's spouse was either not present or was not content with living in the village, a teacher tended to leave his/her teaching position in the village. Likewise, if a teacher felt his/her own children were not being raised in a safe, healthy, and enriching environment, the teacher was likely to leave the village. Also, the lack of perceived adequate housing facilities, coupled with living in an isolated area away from

his/her own culture, friends, and families, was shown as being highly associated with teacher turnover in Alaska's bush schools.

Analysis of the Sub-Factors

Next, the 23 test items were categorized according to their respective sub-factors (i.e., professional, personal, geographic, and socio-cultural) to identify trends by region and total scores (Appendix X) (Figures 13-23) (Table 5) . As Figures 13-23 indicate, the profile of the average score for each of the sub-factors is virtually constant across the five regions. The Northwest region tended to be slightly higher in the geographical category and slightly lower in the professional category. This indicates that, according to the respondents' perceptions, all of the study's sub-factors are virtually equal in importance regarding teacher turnover in Alaska bush schools.

Responses from Open-ended Question

The instrument included one open-ended question. This question encouraged respondents to write comments concerning Alaska bush teacher turnover. From the responses of this open-ended question, it was concluded that the role of a bush teacher is multi-dimensional. Teachers were expected to deal with the many social issues they encountered. At the same time, they were also expected to provide exciting extra-curricular activities to students. Community standards encouraged them to teach cultural traditions, as well as strive for academic excellence.

Table 4.

Means and Standard Deviations of the 23 Items By Region and Total

REGION		#1	#2	#3	#4	#5	#6
Northwest	Mean	5.75	3.75	3.75	3.75	6.50	4.50
	N	4	4	4	4	4	4
	Std. Deviation	.95	2.98	3.59	3.09	2.64	2.38
Interior	Mean	5.83	6.91	5.75	7.58	6.41	4.83
	N	12	12	12	12	12	12
	Std. Deviation	2.36	2.67	2.89	1.92	2.77	2.94
Southwest	Mean	6.26	4.33	5.46	5.86	5.93	5.33
	N	15	15	15	15	15	15
	Std. Deviation	1.94	2.19	3.09	2.29	2.25	2.63
South-central	Mean	7.00	6.83	5.66	6.66	5.66	5.33
	N	6	6	6	6	6	6
	Std. Deviation	2.60	2.92	2.50	1.63	2.50	2.73
Southeast	Mean	6.77	5.44	3.77	4.88	7.55	3.55
	N	9	9	9	9	9	9
	Std. Deviation	3.23	2.24	2.16	2.31	1.23	1.58
TOTAL	Mean	6.30	5.50	5.08	6.04	6.39	4.78
	N	46	46	46	46	46	46
	Std. Deviation	2.32	2.68	2.85	2.42	2.30	2.52

REGION		#7	#8	#9	#10	#11	#12
Northwest	Mean	5.00	7.50	3.75	6.75	6.25	3.75
	N	4	4	4	4	4	4
	Std. Deviation	3.46	1.91	1.70	3.20	2.21	1.70
Interior	Mean	6.41	5.25	5.16	4.33	4.75	4.91
	N	12	12	12	12	12	12
	Std. Deviation	3.11	2.76	2.97	2.67	2.98	2.87
Southwest	Mean	6.46	6.66	4.60	5.06	5.80	5.93
	N	15	15	15	15	15	15
	Std. Deviation	2.92	2.35	2.26	2.12	2.30	1.98
South-central	Mean	7.00	6.66	5.50	3.83	4.33	6.00
	N	6	6	6	6	6	6
	Std. Deviation	2.75	1.75	1.64	2.31	1.75	1.67
Southeast	Mean	5.88	5.11	5.33	4.77	5.88	6.66
	N	9	9	9	9	9	9
	Std. Deviation	3.37	2.36	3.12	2.10	2.14	2.44
TOTAL	Mean	6.28	6.06	4.93	4.80	5.39	5.63
	N	46	46	46	46	46	46
	Std. Deviation	2.99	2.42	2.49	2.40	2.39	2.35

Means and Standard Deviations of the 23 Items By Region and Total

(Continued)

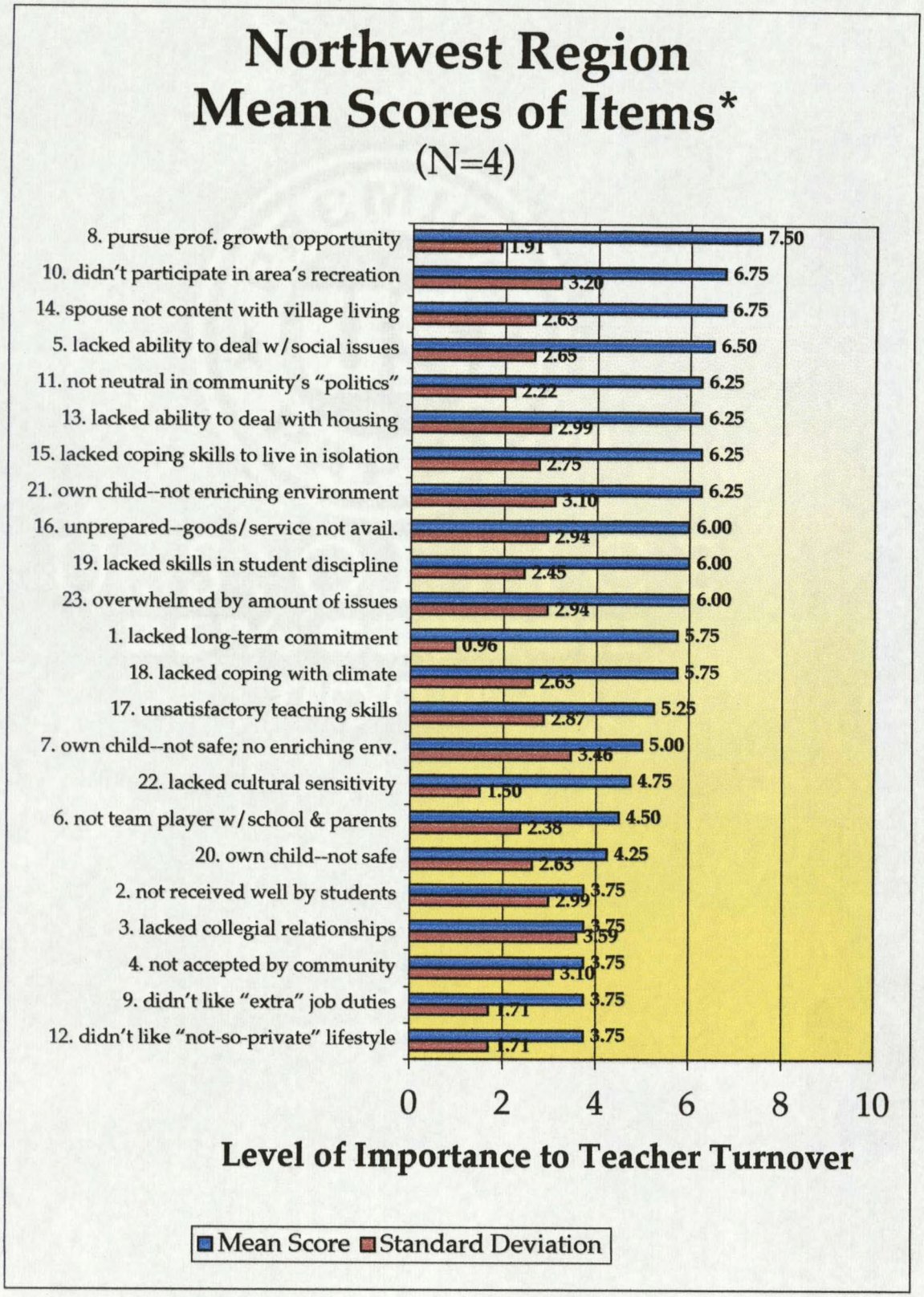
REGION		#13	#14	#15	#16	#17	#18
Northwest	Mean	6.25	6.75	6.25	6.00	5.25	5.75
	N	4	4	4	4	4	4
	Std. Deviation	2.98	2.63	2.75	2.94	2.87	2.63
Interior	Mean	7.41	7.00	6.41	6.25	5.83	6.16
	N	12	12	12	12	12	12
	Std. Deviation	2.93	2.73	2.90	2.80	3.15	2.94
Southwest	Mean	6.66	7.60	6.86	6.06	5.06	5.33
	N	15	15	15	15	15	15
	Std. Deviation	2.66	2.06	1.35	1.86	2.34	2.12
South-central	Mean	6.00	7.16	6.33	6.83	5.83	5.50
	N	6	6	6	6	6	6
	Std. Deviation	2.60	1.32	2.50	2.40	2.63	2.42
Southeast	Mean	5.88	6.66	6.44	5.88	4.88	5.77
	N	9	9	9	9	9	9
	Std. Deviation	3.21	2.50	2.35	2.47	2.42	2.72
TOTAL	Mean	6.58	7.13	6.54	6.17	5.34	5.69
	N	46	46	46	46	46	46
	Std. Deviation	2.80	2.24	2.20	2.32	2.58	2.46

REGION		#19	#20	#21	#22	#23
Northwest	Mean	6.00	4.25	6.25	4.75	6.00
	N	4	4	4	4	4
	Std. Deviation	2.44	2.63	3.09	1.50	2.94
Interior	Mean	4.66	5.58	6.41	4.75	5.08
	N	12	12	12	12	12
	Std. Deviation	2.49	3.17	2.87	2.89	3.62
Southwest	Mean	6.66	4.66	6.40	5.13	6.80
	N	15	15	15	15	15
	Std. Deviation	1.49	2.79	2.41	2.44	2.17
South-central	Mean	5.50	5.83	6.50	6.00	8,16
	N	6	6	6	6	6
	Std. Deviation	1.37	2.92	2.88	2.52	1.16
Southeast	Mean	5.55	5.77	6.66	5.44	7.77
	N	9	9	9	9	9
	Std. Deviation	1.94	2.63	2.69	2.24	2.68
TOTAL	Mean	5.71	5.23	6.45	5.17	6.65
	N	46	46	46	46	46
	Std. Deviation	2.02	2.80	2.58	2.41	2.82

Table 5.

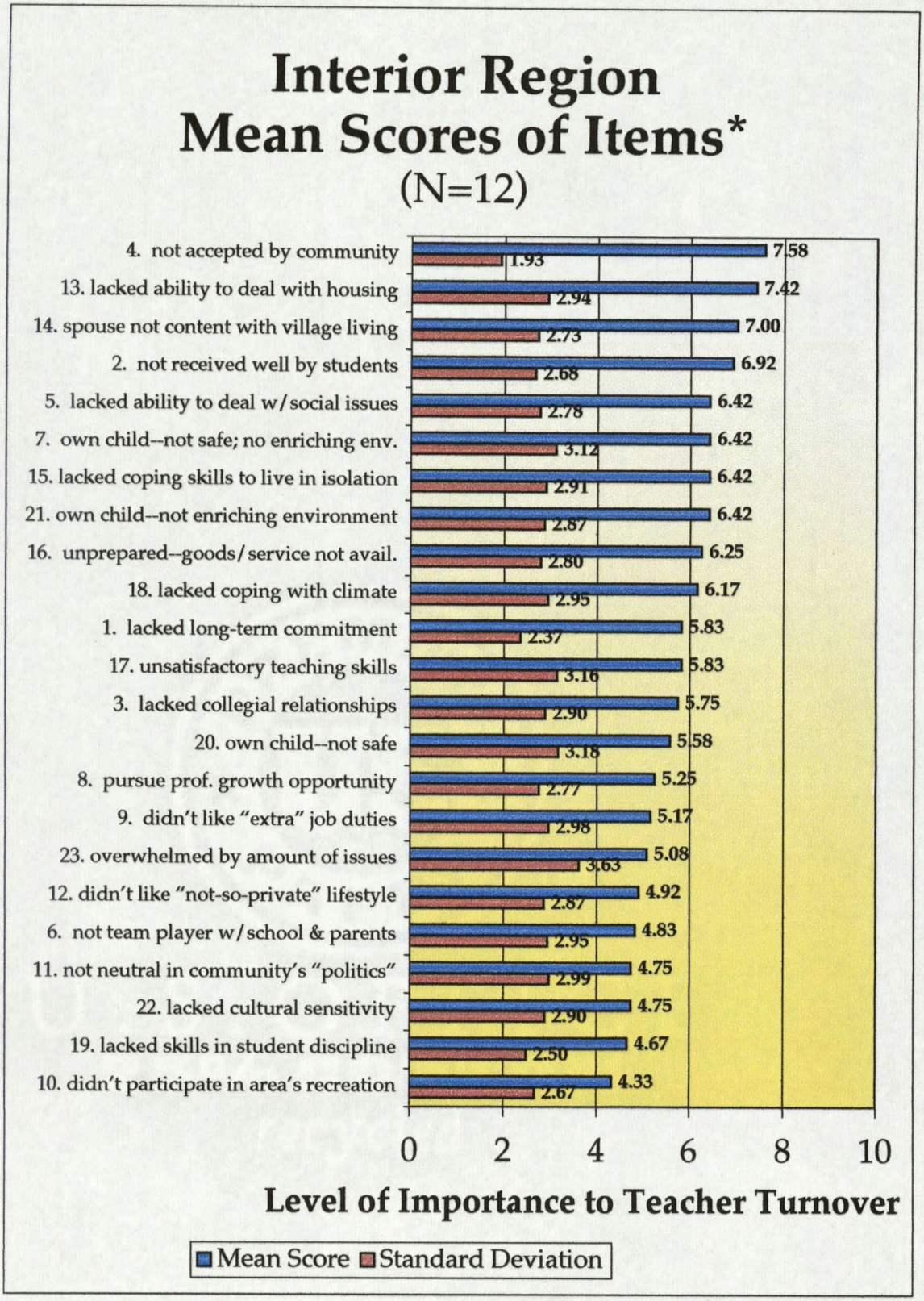
Means and Standard Deviations of Sub-Factors By Region and Total

REGION		Personal	Socio-Cultural	Geographic	Professional	TOTAL
Northwest	Mean	5.38	5.58	5.41	6.50	5.07
	N	4	4	4	4	4
	Std. Deviation	2.49	2.38	2.09	2.01	1.89
Interior	Mean	6.29	5.83	5.81	5.50	5.66
	N	12	12	12	12	12
	Std. Deviation	2.11	2.06	1.80	2.05	1.90
Southwest	Mean	6.28	6.06	5.86	5.78	5.45
	N	15	15	15	15	15
	Std. Deviation	1.83	1.45	1.32	1.13	1.57
South-central	Mean	6.41	6.19	6.09	5.70	5.95
	N	6	6	6	6	6
	Std. Deviation	1.56	1.48	1.24	1.11	1.58
Southeast	Mean	6.25	6.33	5.75	5.38	5.58
	N	9	9	9	9	9
	Std. Deviation	2.21	1.91	1.79	2.01	1.75
TOTAL	Mean	6.22	6.03	5.82	5.68	5.56
	N	46	46	46	46	46
	Std. Deviation	1.94	1.74	1.55	1.62	1.66



Actual scores are rounded to the nearest hundredth.

Figure 8.



**Actual scores are rounded to the nearest hundredth.*

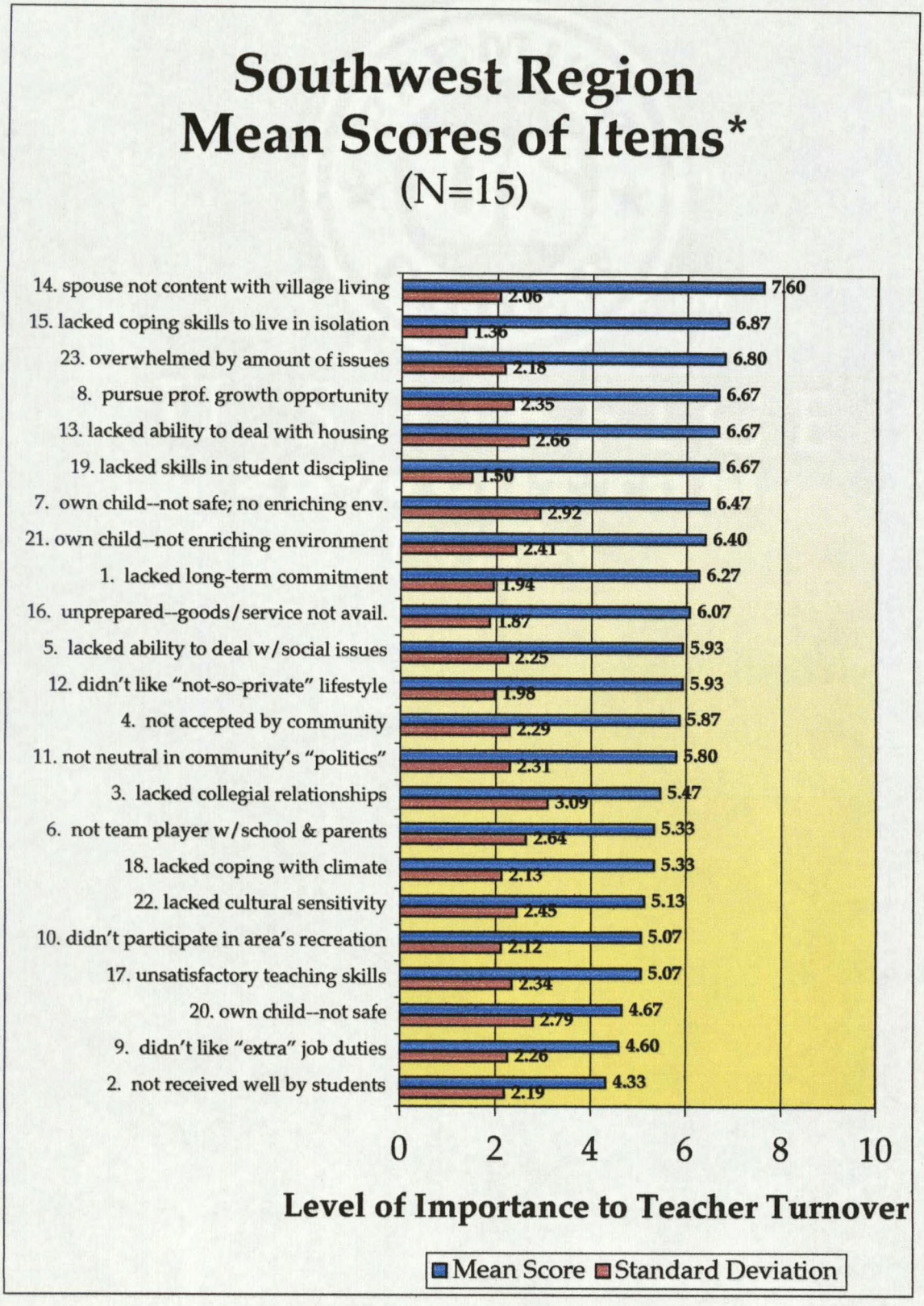


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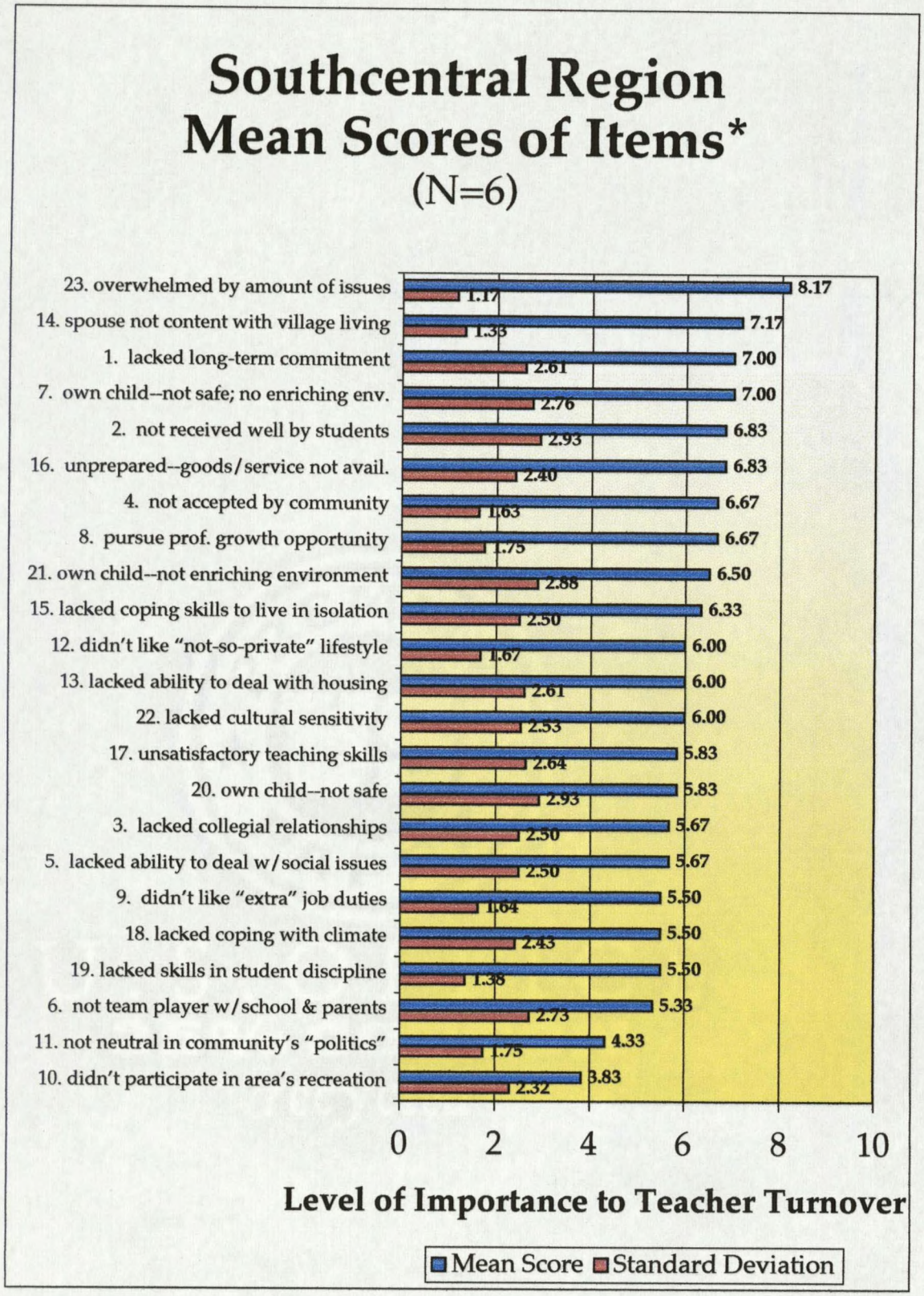
Figure 10.



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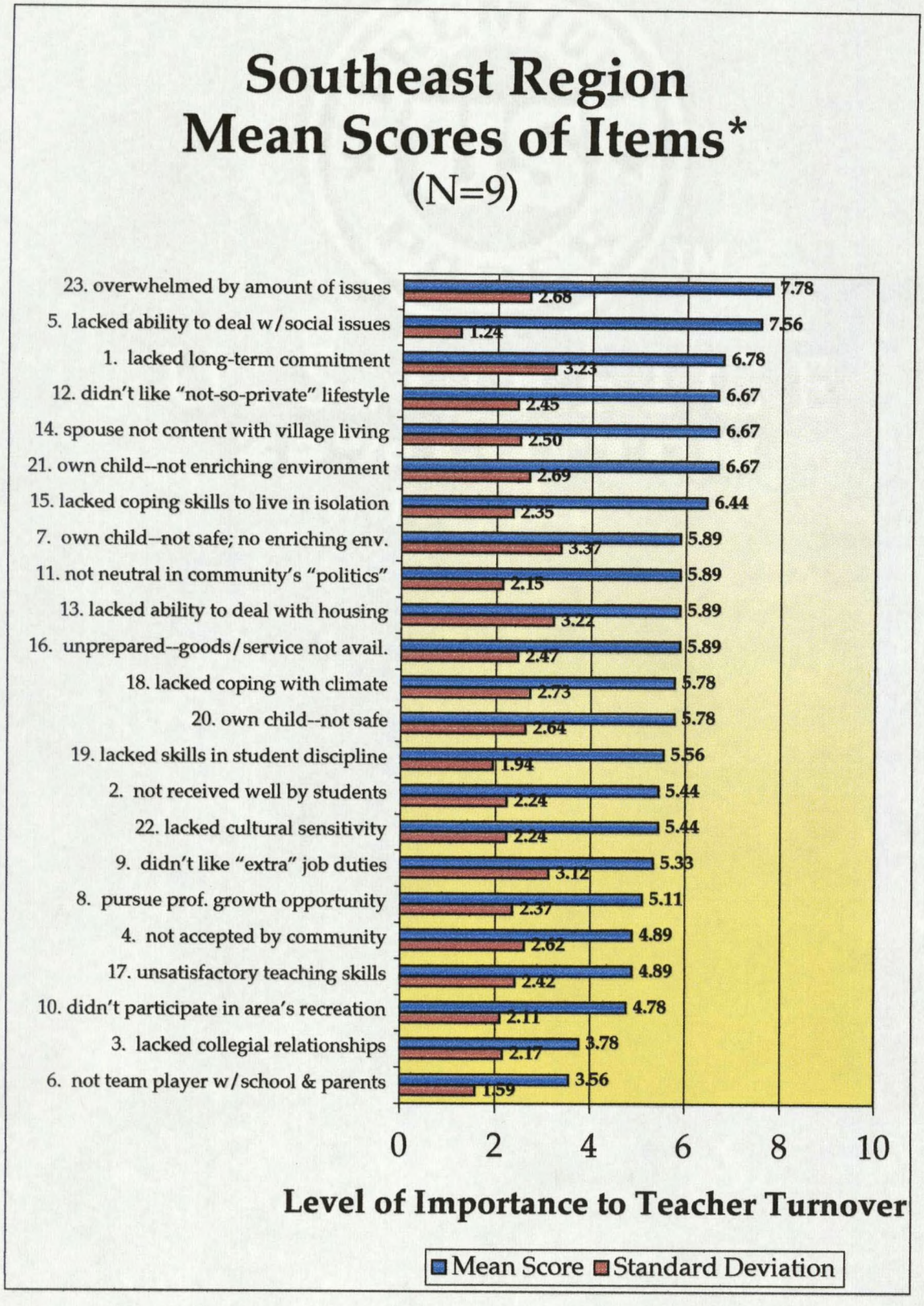

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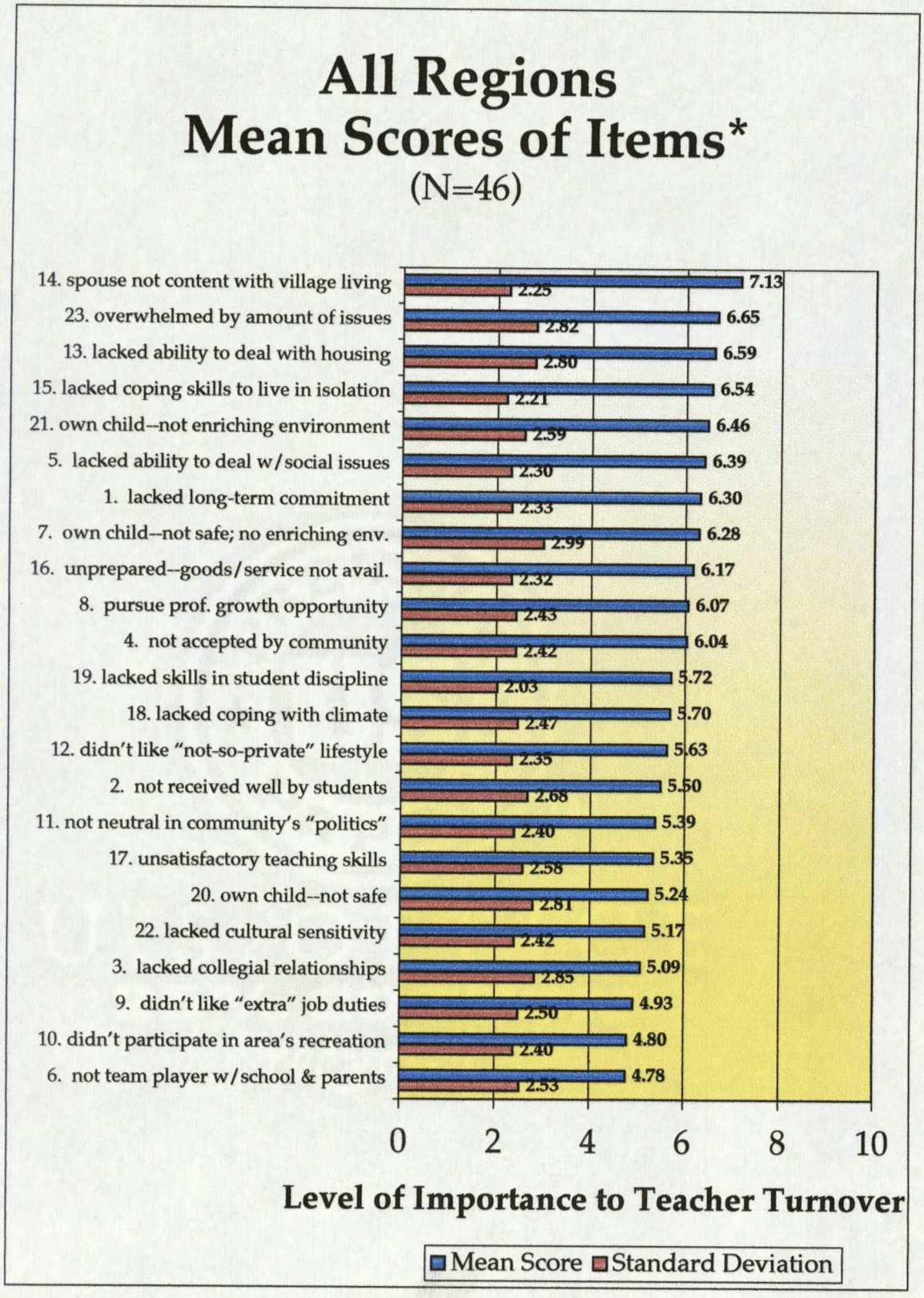

**Actual scores are rounded to the nearest hundredth.*