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THE SCHOOL EXPERIENCES OF NATIVE AMERICAN AND ALASKA NATIVE STUDENTS: A CLOSER LOOK AT SELF DETERMINATION THEORY

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By

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THE SCHOOL EXPERIENCES OF NATIVE AMERICAN AND ALASKA NATIVE STUDENTS: A CLOSER LOOK AT SELF DETERMINATION THEORY

A DISSERTATION APPROVED FOR THE
DEPARTMENT OF EDUCATIONAL PSYCHOLOGY

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DEDICATION

I would like to dedicate this work to my father and mother, Earl and Mona Smith, without whose support and encouragement this would not have been possible. My father is a 7th generation Vermonter, who earned his Master's degree in Geology, and taught me the importance of setting goals, not giving up, and going after what you want. My mother, who is part Cherokee, showed me the importance of patience, prayer, and faith in God. These lessons demonstrated by my parents provided a powerful influence in my life.

I would also like to dedicate this work to my two children, Caleb and Nathan. My gratitude for their patience and support cannot be expressed enough. Since they were young when I started the program, I feel like they have sacrificed much, for many of our family vacations were planned around data collection and were accompanied by books, backpacks and a laptop. Through the years they encouraged me to finish my degree, and acted as a supportive audience as I rehearsed presentations. Although completing the Ph.D. process has been rewarding, it pales in comparison with the pleasure and sense of accomplishment that I have experienced as a result of raising my two children.

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ABSTRACT

Multiple regression was performed to examine how well need satisfaction predicted the G.P.A. and well being scores of American Indian college students. In addition, open ended questions asked students about perceived contributions and barriers to academic success. Participants were 76 American Indian college students who were currently attending or had recently graduated from college in Oklahoma. Results indicated that need satisfaction was not a good predictor of G.P.A. or well being, but the results of paired samples t tests and qualitative questions revealed that relatedness played a central role in high school and college success, and both relatedness and competence played key roles in college success. Furthermore, the results of qualitative data indicated that relatedness and competence played major roles in perceived barriers to academic success.

CHAPTER 1

INTRODUCTION

"I left high school with a whisper, not a bang." These are the words of a Yakama woman who dropped out of school when she was 15 years old. Unfortunately, this woman's story is not an uncommon one for many American Indian and Alaska Native students (hereafter referred to as "Native" students). Despite the fact that Native American 4th and 8th graders out-perform both blacks and Hispanics on the NAEP mathematics tests, the rate for dropout of Native students has historically been much higher than for other ethnic and racial groups (Babco, 2005; Swisher & Hoisch, 1992; Office of Indian Education Programs, 1988). Recent reports indicate that 3 out of 10 Native students fail to finish high school (Linik, 2004). Some studies have found high school dropout rates for this population that range from 29% to 52% and in some extreme instances rates of 90% or higher have been cited (Swisher & Hoisch, 1992). According to data from the High School and Beyond study, the dropout rate for 10th graders of American Indian and Alaska Native background was about 29 percent in comparison to drop-out rates of 18 percent among Hispanic students, 17 percent among Black students, and 12 percent among Caucasian students (Pallas, 1986). Among Navajo children, the annual dropout rate was estimated at 32 percent (Crawford, 1986, as cited by Kleinfeld, McDiarmid, & Hagstrom, 1989). Earlier studies of Inuit students in Canada indicated that 90 percent left before high school graduation (Nash, 1978, as cited by Kleinfeld, McDiarmid, & Hagstrom, 1989). Each year almost half of Canadian Inuit students dropped out of major residential schools (Roy-Nicklein, 1986). In addition, Native students who left home to attend boarding schools have had even higher dropout rates.

Consistent with the low high school completion rates, are low college enrollment and completion rates for Native students, in spite of the fact that between the years 1990 and 2000, Native students scored higher on both verbal and math sections of SAT tests than African Americans, Mexican Americans, Puerto Ricans, and Hispanic/Latinos (Babco, 2005). For the year1990, 65.5% of Native students completed high school, but only 9.3% obtained a bachelor's degree from college (Babco, 2005). Babco also pointed out that while Native American enrollment at four year institutions has increased somewhat, Native Americans still are more likely to be enrolled in two year institutions. In 2001, Native Americans represented 1.3% of the total enrollment in two year colleges, and only .8% in four year institutions. Of the estimated 19,000 Native Americans who received degrees in 2002-2003, 37.1% received associate degrees, 48.5% received bachelor's degrees, and 13.4% received master's degrees, and only 1.0% received doctorates (Babco, 2005).

Consistent with other underrepresented minority groups, Native Americans are better represented in the behavioral sciences than in the physical sciences or engineering, and earn a decreasing percent of master's and doctorates in each of the sciences and engineering fields compared to white and Asian students. Native Americans were more likely to be enrolled in graduate programs in the social sciences and psychology. In 1998, 52% of Native American S&E graduate students were enrolled in either the social sciences or psychology, but only 15% in engineering and 6% in computer sciences. Babco (2005) noted that in 2002, 69.5% of all degrees awarded to Native Americans were non Science and Engineering degrees, and only 30.5% Science and Engineering, with the highest percentage of degrees being in the psychology and the social sciences

(55%).

After reviewing the literature concerning the dropout rates among Native students, I was left with several unanswered questions. In particular, questions addressing the academic success and persistence of some Native students, while so many others drop out of the system. The diversity of the American Indian and Alaska Native community, as well as the great contrast between urban and rural circumstances of Native people, makes it difficult to generalize the reasons for the high dropout rate. However, in the past, several theories have attempted to explain this phenomenon. Most theories have focused on cultural discontinuity, which suggests that minority children, having been initially raised in a distinctive culture of their own, often are thrust into a school system that promotes the values of the majority culture rather than their own, and forces the child to choose one culture at the expense of the other (St. Germain, 2001; Ledlow, 1992). Other theories used to examine this phenomenon include the effectiveness theory, which focuses on school organization (Lezotte & Levine, 1990; Slavin & Madden, 1989; Vickery, 1990); cultural differences, which claims that children don't do well in school as a result of miscommunication organized by different cultural and linguistic preferences for interaction (Erickson & Mohatt, 1982; Philips, 1983; van Ness, 1981); deficit theories- which suggest that minority schooling has been of lesser quality(Bennett, 1986; Rodriquez, 1982; Finn, 1991; Ravitch, 1985); and goal theory, which examines the role of goal orientation (performance vs. mastery) on the motivation of students (McInerney & Swisher, 1995). Critical theories have also been applied to the problem of dropout. Rather than focusing on the individual, critical theories view school and classroom life as being shaped by powerful economic and political structures that influence all aspects of

society, and create arrangements in and out of schools that systematically give voice to some and deny it to others (McLaughlin, 1994).

Although a large amount of research has focused on the poor performance and high dropout rate for Native students at both the secondary and post-secondary levels, much less research exists on the academic success/resilience of Native students. Rather than examining failure, I focused on those Native students who demonstrated academic success through high school and college GPA, graduation from high school, current college enrollment (or graduation within the last year) in a four year university. To assist with this, I used Self Determination Theory to guide my research in examining relationships between need satisfaction and High School GPA; need satisfaction and college GPA; and need satisfaction and psychological well being in college. The goal of this study included an examination of the relationship between need satisfaction, as defined by Self Determination Theory, and the academic success (High School GPA and college GPA, respectively, as well as college enrollment or recent graduation) of Native students who are attending a four year university in Oklahoma (The University of Oklahoma, Northeastern University, or East Central University). I hoped that the results of this study would identify factors within the learning environment that may relate to students' academic success (as demonstrated by High School GPA and college GPA and college enrollment or recent graduation) as well as psychological well being while in school (measured by the Psychological Well Being Inventory and Satisfaction With Life Scale).

CHAPTER 2

LITERATURE REVIEW

This following section provides a brief literature review of the academic success of American Indian and Alaskan Native students (hereafter referred to as Native students), as well as an overview of self determination theory with emphasis on Needs Theory (one of the theories that comprises self determination theory). For the reader's benefit, additional information is provided on Native dropout as well as an historical educational background on Native students in Appendix A. I have included this supplemental material because dropout is a subcategory of persistence, and examination of this issue provides insight into the size and scope of the problem. I also felt that it would be beneficial for readers to have some insight into the history of the school experiences for Native students, including those who attended boarding schools. Therefore, the second portion of the appendix includes a short overview on this subject. I felt strongly about including this information because boarding schools have had a tragic history of abuse and supported the practice of cultural genocide towards Native Americans. For this reason, Native populations may have negative connotations towards boarding schools and school in general. Not surprisingly, boarding schools have a much higher dropout rate among Native students than traditional schools. Finally, overviews of some of the theories that have more commonly been used to explain the school dropout among Native students, including Personal Investment Theory and Cultural Diversity Theory are included in Appendix A. This particular section is included in order to provide insight into approaches that have attempted to explain the academic success/failure of American Indian and Alaska Native students in the past, some of their

shortcomings, and why examining this phenomenon from a different approach may be helpful.

An American Indian (as defined in the Indian Self-determination and Education Assistance Act) is a person who is a member of an Indian tribe, band, nation, or other organized group or community (including any Alaska Native village, regional, or village corporation as defined or established pursuant to the Alaska Native Claims Settlement Act) that is recognized as eligible for the special programs and services provided by the United States to American Indians because of its members' status as American Indians. According to the U.S. Department of the Interior (1991), however, there is no federal tribal definition that establishes a person's identity as Indian. Government agencies use different criteria for determining who is an Indian. Similarly, tribal groups have varying requirements for determining tribal membership. "To define someone by blood quantum is the very definition of racism," said David Cornsilk, a member of the Cherokee Nation (Kaplan, 2005).Therefore, for definitional purposes of this research, American Indians are those who identified themselves as such. This method, also used by the Census Bureau in 1990, is considered to provide the most accurate data obtained on American Indians (Bureau of the Census, 1988).

When I initially began examining the academic success (as evidenced by high school GPA and college GPA) and dropout rates of American Indians and Alaska Natives I considered the many different angles that this research might take. The majority of extant research examining Native students and their school experiences focuses on dropout. More than likely, this is a result of the high dropout rate among Native students (American Indians and Alaska Natives have the highest dropout rate of any ethnic group

in the United States). However, I felt that focusing specifically on the dropout rate of this population was not the angle that I wanted to pursue for a couple of reasons. First, a sizeable amount of literature taken from this approach already exists. Second, I wanted to examine things from a more positive perspective. Although the issue of dropout among Native students is certainly a very real concern, and contributes towards understanding academic success, it is not enough simply to be aware of the problem. I believe that a continued emphasis on the high dropout rate among this population only perpetuates negative stereotypes and promotes a sense of helplessness and failure. Much of the research on Native students paints a rather grim picture of their educational potential, and tends to overlook those who do succeed. I believe that by studying Native students who do succeed academically (that is, have relatively high, High School GPA's, and go onto college), we can begin to gain insight into the factors within the school environment that may promote success and persistence.

As mentioned earlier, the bulk of the existing literature focuses on Native students' dropout rather than success. In this chapter, I provide a short review on success among Native students. Again, there is much less existing information concerning this issue, which provided further impetus for my study.

Finally, I provide an overview of Self Determination Theory (SDT), the theory that I am using in this study to examine the school experience of Native students attending various universities within the state of Oklahoma.

Native Success

This study departed from most research because it focused on Native students who demonstrated academic success through high school completion, high school and

college GPA, and enrollment in college, as opposed to focusing on those who have dropped out of high school. Resilience is a term used to describe a set of qualities that foster a process of success in spite of risk. There may be several benefits to focusing on the success of Native students rather than on dropping out. First, I hope this study will reveal elements within the learning environment that may foster resilience and academic success among Native students. If this study can identify such factors, then suggestions can be made for creating future learning environments that promote academic success and persistence among other Native students. The findings of this study may prove to be valuable and informative to administrators in institutions of higher education, to educators in the public school system, and to anyone interested in the recruitment and retention of American Indian and Alaska Native college students. Second, I believe that by focusing on the academic success and resilience of Native students rather than on their failure, it may help overcome negative overtones concerning Native students' abilities to succeed academically. Benjamin, Chambers and Reitman (1993) stated, "in its extreme, research on ethnic minority students which focuses primary attention on those who fail can project prejudicial, ethnocentric majority attitudes that certain cultural groups are inherently deficient in their ability to persist" (in an educational environment) (p.1). Although studies indicate that Native students have the highest dropout rate of any ethnic group, there are many Native students who have demonstrated tenacity and academic success in spite of the various obstacles encountered along the way. I would like to focus on this group of Native achievers—as their fighting spirit may serve as an inspiration to others.

Questions concerning the most desirable type of high school programs for rural

Native students have been debated over the years. According to some perspectives, Native majority schools offer advantages for Native children because they have relatively smaller classrooms made up of more homogenous populations (Kleinfeld and Kohout, 1974). Past research has indicated that college success of rural Native students at the University of Alaska in Fairbanks was strongly related to the type of high school attended. Students from parochial boarding schools were significantly more successful than students from public boarding schools, students from public Native majority schools, and rural students from public white majority schools. In this study, students from public boarding schools were least successful.

Recently, a pattern of performance has emerged in a number of studies of American Indian cognition that suggests this population may have an aptitude for mathematics. It is a pattern that has been described as better spatial than sequential ability and better sequential than verbal conceptual ability (Bowker, 1993; Diessner & Walker, 1986). This cognitive style is similar to that which has been identified among Asian children in cross-cultural studies. Yet, in spite of this, researchers have found that teachers in rural Native schools in Alaska held significantly lower expectations for their students' abilities as well as their prospects for college than did teachers in other schools (Kleinfeld & McDiarmid, 1987). In this study, teachers claimed that they were not displaying low expectations towards their students. Rather, they were simply being realistic.

McInerney and Swisher (1995) attempted to identify factors that motivated Navajo students in an academic environment by administering surveys based on Maehr's Personal Investment Model to five hundred and twenty nine students in grades 9-12 at

Window Rock High School, located in Window Rock, Arizona. The results of their study indicated that some important variables in predicting students' retention included academic performance, and valuing of school included variables related to the self, including the students' sense of competence, sense of purpose, and task motivation (demonstrated by the students' striving for excellence in their school work). This study also revealed that sense of competence was a major determinant of Navajo students' school confidence, grade point average, and desired occupation after leaving school. The higher the students' competence, the higher their confidence at school, the more they liked school, the higher their occupational aspirations, and the higher their GPA. Other variables identified were group leadership and social concern. Students who expressed strong social concern were more likely to indicate an intention to complete school. Although affiliation is commonly found to be a powerful motive for Navajo children, the results of their study did not indicate affiliation to be a significant predictor of any of the criterion variables. In addition, McInerney and Swisher (1995) found individual recognition to be negatively correlated with Navajo students' intentions to complete school.

In a qualitative study examining the success of Alaska Natives at the University of Alaska, Fairbanks, Reyes (2000) identified several factors that contributed to students' success, including persistence and hard work; financial support from Native Corporations; family support (most students identified one or more family members whose support contributed to their success); commitment to Alaska Native community; employment; and the availability of developmental classes on campus (described as important in assisting students in developing academic skills they felt that they lacked).

Factors that were identified as barriers to academic success included poor academic preparation, especially at the high school level, difficulty in financing their college education, inadequate childcare, lack of affordable housing, and a difficulty in speaking up in class (identified as a possible cultural difference that students in this study learned to mediate). Similarly, Reyner & Dodd (1995) identified prejudice, finances, language and alcohol (in descending order) as obstacles in the college success of Native students. Interestingly, when asked what advice the students in this study would offer to potential Alaska Native college students, some of the advice implied fulfilling a need for autonomy (One participant's response to this question was "Ask yourself, 'What do I want?' Make sure that this is what YOU want, and not just what your parents want for you.").

Wilson (1997) conducted an ethnographic study at UAF examining professor and student relationships and the effects of these on the achievement of Native students. Wilson noted that students frequently spoke of good relationships with teachers in their villages as being a strong contributing factor in their decision to come to UAF. In contrast, they saw limited relationships with professors at UAF as a contributing factor to their lack of success there. Students felt that their success in some classes was directly related to their relationships with their professors, as suggested by the following statements made by participants in the study: "I would like professors to be more available, more willing to meet the students' needs. I don't just mean by having office hours. I mean by really being there for students." Still another said, "There is a big difference between a professor who is there physically and one who is there physically, emotionally, and spiritually. It seems like many professors sit at their desks just to fill in the necessary time. They don't really want to make contact with students. As soon as I

can sense that, I make sure that the professor doesn't have to be bothered by me." Wilson concluded accessibility, approachability, and availability are manifested through a modeling of genuine caring. Wilson also noted that Native students identified with female faculty members who had shown their "humanness and caring in ways that made the students feel cared about." Students attributed having caring professors to their desire to learn and succeed. For example, one participant stated, "In a couple of my classes I have women professors who let you see their humanness. You see who they are. You know what their fears are, what their life has been like. They are special. I don't get that in my other classes. For them I want to learn."

Other studies that examined the conditions that contributed to the academic success of Alaska Native students at the University of Alaska Fairbanks between 1989 and 1993 found similar results. For example, in her 1994 dissertation, Carol Barnhardt used multiple ethnographic approaches to examine the conditions that may facilitate the academic success of Native students, and found that the teaching and learning environments that were responsive to the interests and needs of these students; provided strong family and community support; supportive school and life experiences; and recognized exceptional individual efforts were all important factors in the academic success of these students. Similarly, in an unpublished study of UAF Alaska Native students, Campagna (1998) found that many students expressed regret and even hurt when asked about their relationship with village members who had not attended college. She refers to Stein's (1992) explanation of the conflict of first generation American Indian/Alaska Native college students between personal and family/tribe needs and priorities.

Similarly, other studies have identified factors that promote resilience and academic success among Native youth. Bergstrom, Cleary, and Peacock (2003) administered in depth interviews to 120 Native students from across the United States and Canada. This study identified connections to parents, communities, teachers, and schools as major contributors to the resilience of Native youth. Participants in this study also identified another important factor in their decision to stay in school, which was a close connection to their tribal culture. According to these respondents, feeling good about their tribal culture and living in both worlds (the Native community and the mainstream schools); participation in cultural activities; strong positive feelings of belonging to a Native community and family; appreciation of the influence of elders, grandparents, and parents; and participation in a school curriculum that included Native history, language and culture all promoted a good self concept, sense of direction, and tenacity. Although not explicitly stated, these results imply the importance of the need for relatedness in the academic success of Native students.

In addition to a strong connection to community and tribe, other research has found that spiritual and cultural factors are important in fostering Native student resilience that leads to academic success. Whitbeck, Hoyt, Stubben and LaFromboise (2001) interviewed 196 American Indian children in grades 5-8 and found that those who had stronger ties to traditional culture performed better in school. Similarly, Graham (2001) sampled 56 Native students and found a correlation between students who reported being spiritual and being competent in school. Evans (1997) conducted a retrospective qualitative design study by interviewing 26 students on the Great Basin Indian reservation. Participants suggested that they strived throughout their lives to

follow the "right path," a process made easier through the support of others, a belief in God or the Creator, and self caring.

In reviewing programs that were aimed at promoting the achievement of Native high school students, several elements have been identified that seem to foster the persistence and academic success among Native students. For example, a relationship between the University of Minnesota and the Circle of Life School at White Earth began in 1998 when elders invited the University to collaborate in addressing critical issues on their reservation (Carlson, 2004). There was a lot of concern for their youth, and the goal was to encourage interest and success in school. The group decided to develop a math and science summer school that was later expanded into the school year. Over the past three years students in this program saw their math proficiency scores increase from 39% to 73% and their science scores increase from 52% to 65% (based upon Terra Nova tests). In addition to increased test scores in math and science, school retention and graduation rates increased, and the school itself went from being one of the lowest ranking in performance to being ranked 17th nationally. In this program, reservation elders, along with University faculty and students from the University of Minnesota Extension Service, taught the students that modern sciences is a daily part of their lives, through a combination techniques including using traditional American Indian stories and hands on activities. For example, students learn that geometry is involved in the process of building birch bark canoes, as well as in making snowshoes and moccasins. Students also saw how chemistry is involved in the production of maple syrup and how biology plays an important role in the harvesting of deer. Students were also encouraged to understand concepts of engineering and technology by studying rocket science, bicycle

design, vehicle assembly, and small engine repair. This program was a successful example of how bringing in community members and elders, along with faculty members from the University, can promote success among Native students. Since this program began, high school graduation rates at the Circle of Life School have increased from 35 percent in 2002 to 58 percent in 2004. In addition, school attendance increased from 80 percent to 87 percent, and high school graduates began to consider college as a real option (Carlson, 2004).

Other researchers have focused their attention on discovering the contributors to success of those who persist and complete their schooling. Aitken and Falk (1983) conducted a study at Minnesota Chippewa Tribal College, and identified four major factors which contributed to students' remaining through graduation: personal motivation, adequate parental and financial support, positive faculty responsiveness, and support of friends. Wilson (1983) had similar findings from his research conducted in Wisconsin. He found that financial aid ranked first as a contributing factor to college completion, followed by family support, having a personal goal, determination, and intelligence.

Although psychometric based research may help identify factors that contribute to the academic success or failure of Native students, it has been pointed out that this type of research has been questioned because of the use of poorly developed psychometric studies that were not culturally sensitive. In their study involving Navajo students, McInerney & Swisher (1995) suggested that the primary limitation of psychometric research dealing with Natives in academic settings is that the research has not explained enough about what are the culturally relevant and irrelevant motivational characteristics.

The existing literature on native students' academic success has other limitations. In addition to lacking theoretical substance and psychometric data, some of the existing suggestions for promoting school achievement and persistence made by researchers have come under attack. For example, recommendations to improve BIA schools made by Latham (1989), were criticized by Reyhner (1992), for being based upon an ethno-centric, dominant culture viewpoint that ignored Indian education, past studies of Indian education, and current research on bilingual and multicultural education (Reyhner, 1992). Therefore, more research examining the school success of Native students would be very helpful.

In review, although most of the research I reviewed was not grounded in Self Determination Theory, and did not specifically identify the needs for competence, autonomy or relatedness as being necessary components for Native students' success, the results of many studies implied that they were crucial factors (Berman et al., 2003; Wilson, 1997; Barnhard, 1994; Campagna, 1998; Aitken & Falk, 1983; Reyes, 2000; McInerney & Swisher, 1995; and Reyes, 2000). Therefore, it would be useful to have a study grounded in SDT, focusing on Native students' academic success.

Theoretical background: Self Determination Theory

Self-determination theory (SDT) is a model of human motivation. It examines both intrinsic and extrinsic motivation, psychological needs, and environmental factors that may foster or hinder motivation, social functioning and personal well being. It is comprised of four mini theories, three of which are discussed in this paper: cognitive evaluative theory; organismic integrative theory and basic needs theory. Cognitive evaluative theory (CET) was first presented by Deci and Ryan in 1985 as a sub-theory

within SDT that aimed at identifying factors that explain variability in intrinsic motivation. It suggests that a person's intrinsic motivation is affected by changes in feelings of competence and self-determination. In addition, CET suggests that events can either hinder or facilitate feelings of competence and self determination, depending upon whether they are perceived as being informational, controlling, or amotivating.

CET posited that intrinsic motivation was connected to the needs for competence and autonomy and Deci & Ryan (2002) pointed out that aspects of the social environment affected intrinsic motivation. CET suggests that events that affect an individual's experiences of autonomy or competence in a negative manner, cause a decrease in levels of intrinsic motivation. On the other hand, events that promote a sense of autonomy and competence enhance intrinsic motivation (Deci & Ryan, 2000). In addition, CET points out that rewards can be viewed as being either controlling or informational. Those viewed as controlling undermined intrinsic motivation and those that are seen as informational increased intrinsic motivation. Because CET does not apply to activities that people do not find intrinsically motivating, optimally challenging, or aesthetically appealing, organismic integrative theory (OIT) was incorporated into SDT, to examine extrinsically motivated behaviors (Deci and Ryan, 1985).

Organismic integration theory was introduced in order to detail the different forms of extrinsic motivation and the contextual factors that either promote or hinder internalization and integration of the regulation for these behaviors (Ryan and Deci, 2000). It was recognized that not all behaviors are inherently interesting, and there are social pressures that require individuals to engage in activities that may not be exciting to them, but are socially valued or mandated. For example, not all adolescents find gaining

an education attractive, however it is required that they must attend school. Similarly, Native students may not be intrinsically motivated to succeed in school, possibly due to the differences between values embraced by the culture in which the student was raised, and those embraced and promoted within the educational system (Ogbu, 1995). Therefore, it is important to understand how to promote behaviors that are not initially intrinsically motivating, as well as how to self regulate these behaviors so they will continue over time. Ryan and Deci (2000) pointed out that the real question concerning extrinsically motivated behaviors is how individuals acquire the motivation to carry them out, and how this motivation affects ongoing persistence, behavioral quality, and well being. Self determination theory suggests that when a person (such as a teacher) tries to promote a certain behavior in others (such as a student), the other's motivation can range from amotivation or unwillingness, to passive compliance, or active personal commitment (Ryan & Deci, 2000). According to self determination theory, extrinsically motivated behaviors become self determined through the developmental processes of internalization and regulation. Internalization refers to people's "taking in" of a value and integration refers to the further transformation of that regulation into their own, so that it becomes a sense of their self. Organismic integration theory proposes degrees of extrinsic motivation, and presents a continuum for the different levels, ranging from amotivation to intrinsic motivation, with four levels of extrinsic motivation lying in between (see Figure 1). These differing levels of motivation reflect differing degrees to which the value and regulation of the requested behavior have been internalized.

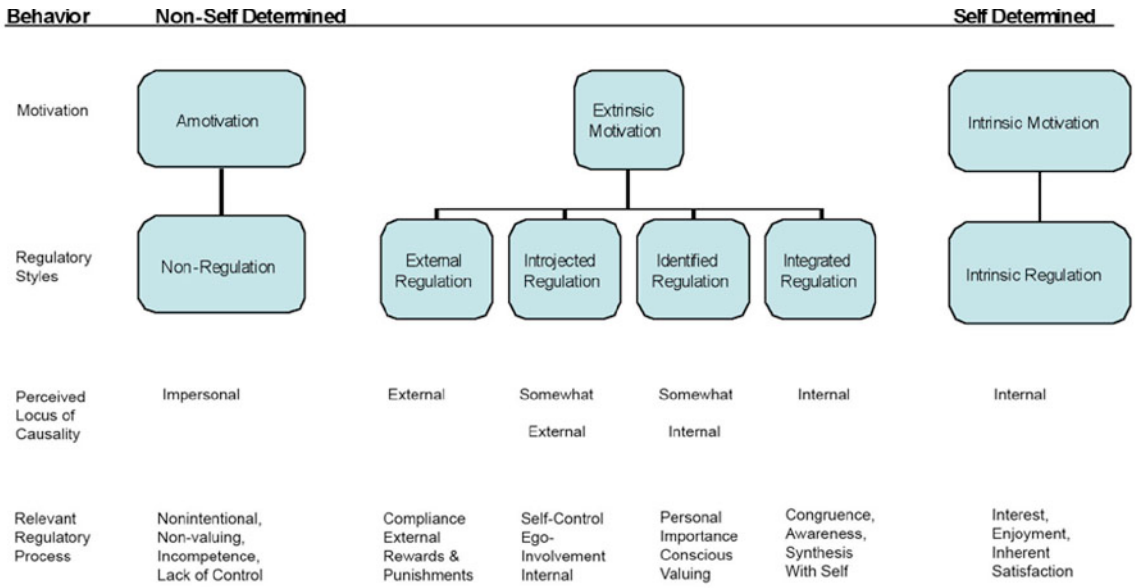


Figure 1. The Self-Determination Continuum Showing Types of Motivation with their Regulatory Styles, Loci of Causality, and Corresponding Processes

From "Self-determination theoery and the facilitation of intrinsic motivation, social development, and well being." by R.M. Ryan and E.L. Deci, 2000. *American Psychologist,* January, p. 72.

Another sub-theory of self determination theory is basic needs theory. Basic needs theory proposes that all people have three universal, psychological needs: autonomy, competence, and relatedness. It suggests that the social-contextual factors that provide people the opportunity to satisfy these needs will facilitate intrinsic motivation and the integration of extrinsic motivation, whereas those that prevent satisfaction of these needs will decrease intrinsic motivation and the integration of extrinsic motivation (Deci & Ryan, 1994). It is suggested that the underlying cause of engaging our environment and challenging our skills is psychological need involvement and psychological need satisfaction (Reeve, 1997). According to Self Determination Theory, a basic need is an energizing state that, if satisfied, conduces health and well-being, but if not satisfied, contributes to pathology and ill-being (Ryan & Deci, 2000). In SDT, needs are seen as innate organismic necessities, and are defined at the psychological level. This definition of needs differs from some other theorist's definitions (ex: Murray's) which viewed needs as acquired rather than innate, and physiological rather than psychological (Ryan & Deci, 2000).

Deci & Ryan (1994) argued that optimal learning requires intrinsic motivation along with extrinsic motivation that has been internalized and integrated with one's sense of self. While SDT has been applied to various cultures including Bulgarian and South Korean samples, it has not been used to examine the dropout rate among American Indian or Alaska Native students. This theory may prove to be very helpful in providing insight into both the academic achievement and the high dropout rate among this population, as well as identifying ways to motivate Native students who are currently extrinsically motivated and feeling the least amount of autonomy and relatedness.

For the purposes of this study, basic needs theory will be addressed in the most detail, however a review on two of the other mini theories that comprise self determination theory, organismic integrative theory and cognitive evaluative theory, are included in Appendix B. These are included to provide further understanding of the roles of intrinsic and extrinsic motivation as well as environmental factors that hinder or promote motivation and personal well being.

To many, it may seem like a contradiction of terms to apply the word self-determination to American Indian or Alaska Native students, since self-determination implies a sense of choice and autonomy. Historically, Native people have had many choices removed from them. These include decisions involving the freedom of language, cultural identity, government, residency, religion, expression of culture, reproduction (Johanson, 2000), education, and so forth. However, the fact remains that all people need to feel a sense of volition in their lives, and this need has been expressed among Native Americans in various forms including preference of residency, government, and parenting techniques. According to Scott (1986), most American Indians with tribal ties reside on reservations or in designated tribal areas. The tribes that exist in reservations are recognized by the federal government as semi-sovereign entities, a legal status accorded to no other group, including Native Americans who reside outside of reservations. The geographical isolation of many Native Americans enhances their ability to maintain traditional values and lifestyles, provides some autonomy over what new practices will be adopted, and allows for these choices to become integrated into a cultural scheme. Similarly, parenting techniques may also reflect a valuing of choice. Little Soldier (1989) suggested that from an outsider's perspective, Native American

parents may be viewed as too permissive because often times children are given the same respect as adults, although these parents teach their children to seek the wisdom and counsel of their elders. At the same time, children are encouraged to develop independence, to make wise decisions, and to stick to them. As a result, Native American children raised in traditional environments tend to have an internal rather than external locus of control, and are not used to viewing adults as authorities who impose their will upon others (Little Soldier,1989).

Within self-determination theory, autonomy does not refer to being independent or selfish, but rather, involves a feeling of volition that accompanies an act. When one considers the historical educational experiences of American Indians and Alaska Natives within the U.S. (and Canada), it is clear that this population has had very few choices. For example, many Native children were torn away from family and community and forced into boarding schools. Understandably, this was a very traumatic experience for these students. Many believe the boarding school, whether on or off the reservation, was the "institutional manifestation of the government's determination to completely restructure Native students' minds and personalities" (Adams, 1995, p. 97). Religious based schools and Bureau of Indian Affairs schools forbade the use of Native languages in the school environment and punished students for speaking in their traditional languages (William, 1994). Until 1976, few high schools existed in rural Native communities in Alaska. Adolescents who wanted a secondary education were forced to leave home and enter boarding schools or attend town or urban high schools through the boarding home program (Kleinfeld, 1992). Although a lawsuit (Tobeluk v. Lind) granted Native students in Alaska the right to have high schools in their home communities, a

high drop out rate among AI/AN high school students suggests that a sense of self determination in the academic setting may still be in question within this population. For example, the following quote from Warrior (1967, as cited in Herring, 1999, p. 133) demonstrates how some Native Americans feel they have no choice or control in their lives.

> We are not free. We do not make choices. Our choices are made for us; we are the poor. For those of us who live on reservations these choices are made by federal administrators, bureaucrats, and their eyes of men euphemistically called tribal governments. Those of us who live in non-reservation areas have our lives controlled by local white power elites. We have many rulers. They are called social workers, cops, school teachers, churches, etc.

Similarly, Cleary and Peacock (1998, p. 214) captured the attitudes and behaviors of Native students in the following quote by a Native teacher living in the southwest:

> Our students' grandparents remember being forced to go to school and forced not to speak their languages, and so that hostility factor is there. You're less likely to want to learn a language if you have had bad associations with it. English teaching is all associated with the coming of the white man. Another powerful thing about this culture is that if they (students) don't like something, they just ignore it. But what I started doing was just having them write journals all the time. And I'd give them topics, or I just let them write. And after a while they just wanted to write about what they wanted to write about.
>
> The term motivation means to be moved to do something, and without motivation

students are less likely to apply themselves, or persist when faced with challenges. Self-determination theory (SDT) is a model of human motivation developed by Edward Deci and Richard Ryan and is an organismic approach to motivation. It examines both intrinsic and extrinsic motivation, psychological needs, and environmental factors that may hinder motivation, social functioning and personal well-being (Ryan & Deci, 2000). Organismic theories are based upon the term organism, which is a living entity that interacts with its environment (Reeve, 1997).

The survival of an organism depends upon its environment, and because environments change, all organisms need to be flexible in order to adjust and accommodate to these changes. Organismic theories emphasize the person-environment dialect, where the environment acts upon the person and the person acts upon the environment. An organismic theory focuses on both the person's intrinsic motivation to look for and cause changes on the environment, as well as the environment's ability to generate in the person an extrinsic motivation to adjust and accommodate to the demands in the environment (Deci & Ryan, 1985, as cited by Reeve, 1997).

An individual is said to be intrinsically motivated when he or she participates in an activity because the activity is inherently satisfying, whereas an individual is said to be extrinsically motivated when he or she performs an activity because of an anticipated outcome (Ryan & Deci, 2000). This may include doing something for a reward or recognition, or to avoid punishment or other negative consequences. According to SDT, extrinsic motivation can greatly vary in its relative autonomy, meaning one can partake in an activity-even though extrinsically motivated based upon a feeling of choice (e.g.: when the person may understand the value of a behavior and do it because it is valuable

in the pursuit of other goals), or out of mere compliance (Ryan & Deci, 2000).

Understanding the influence that the environment and satisfaction of needs has on human motivation may prove to be valuable in educational settings-especially those that have high drop out rates. It would be extremely helpful to have insight into the drop out and success among Native students. Examining the role of psychological needs may provide this much needed revelation. According to Deci and Ryan (2000), the main plan of SDT has been to provide an account for the seemingly conflicting viewpoints of theories that make use of an organismic meta-theory. According to Reeve (1997), organismic approaches to motivation assume two things: a) human beings are inherently active, and b) the principles of differentiation and integration guide the development of internal structures.

Deci and Ryan (2002) noted that while organismic theories promote the view that people have an innate tendency towards psychological growth and integration. Self determination theory attempts to unify the different theories by acknowledging that people have an innate tendency towards growth and integration involving both autonomy and homonymy (ambiguity). However, SDT suggests that autonomy can be fostered or hindered by social-environmental conditions (Deci & Ryan, 2002). In other words, the foundations for SDT are placed within a dialectical view that incorporates the interaction between an integrating human nature and social environments that either foster or hinder an organism's innate tendencies for growth (Deci & Ryan, 2002). According to Reeve (1997), in a dialectic, the environment acts on the person and the person acts on the environment. Environments are viewed as being either supportive or antagonistic based upon whether or not they satisfy the three basic psychological needs hypothesized by

SDT. These needs are autonomy, relatedness, and competence. According to SDT, the satisfaction of these needs is essential for psychological well-being.

Basic Needs Theory

As pointed out earlier, one of the three mini theories within Self Determination Theory is Basic Needs Theory. This theory identifies three organismic psychological needs: autonomy, competence, and relatedness. According to Reeve (1997), when an activity involves our needs, we feel interest; when an activity satisfies our needs, we feel enjoyment. A study by Sheldon, Elliot, Kim, and Kasser (2001) found support for Deci and Ryan's (2000) postulates for SDT. Specifically, they found that the top four experiential contents and characteristics that made people the happiest were autonomy, competence, relatedness, and self esteem. Reeve (1997) argues that the underlying cause of engaging our environment and challenging our skills is psychological need involvement (which is one origin of interest) and psychological need satisfaction (one origin of enjoyment) (p. 75).

Other research has suggested a link between values and basic needs. Values have been defined as "beliefs that a specific mode of conduct or end-state of existence is personally or sociably preferable to an opposite or converse mode of conduct or end state of existence" (Rokeach, 1973, as cited by Tim Kasser, 2001, p. 123). Researchers have suggested that values stem in part from needs, and that values are the "cognitive representations and transformations of needs" (Rokeach, 1973, as cited by Kasser, 2002, p. 127). Values are said to give expression to needs. Values may affect behaviors by influencing the meanings individuals assign to specific objects and situations. Values also may influence behaviors through the goals they organize (Kasser, 2001). In addition,

values reflect both intrinsic and extrinsic motivations. Some are conducive to growth and intrinsically motivated actions, while others tend to prompt extrinsically motivated behaviors. Examples of intrinsic values are those that are likely to satisfy the basic psychological needs and may include values of affiliation, community, and self acceptance. Examples of extrinsic values are those that do not satisfy psychological needs, such as financial success, the desire to obtain social recognition, and values of physical attractiveness, such as in wearing designer clothes (Kasser, 2002).

Although Ryan and Deci (2000) suggested that the three needs in SDT are universal and developmentally persistent, it was not implied that their different means for satisfaction were unchanging across a lifespan, or that they were expressed the same way in all cultures. Ryan and Deci (2000) wrote, "The very fact that need satisfaction is facilitated by the internalization and integration of culturally endorsed values and behaviors suggests that individuals are likely to express their competence, autonomy, and relatedness differently within cultures that hold different values" (p. 75).

Autonomy

Autonomy refers to being self initiating and self regulating of one's actions (Deci et. al., 1991). Autonomy does not refer to being independent or selfish, rather, a feeling of volition that accompanies an act (Ryan & Deci, 2000). According to Reeve (1997), the synonym for self determination is autonomy. Self determination theory points out the importance of autonomy on intrinsic motivation (Deci & Ryan, 1995); well being (Reis, Sheldon, Gable & Ryan, 2002; Sheldon Ryan & Reis, 1996); children's learning (Grolnick & Ryan, 1987; Deci, Hodges, Pierson & Tomassone, 1992); development (Ryan, Deci & Grolnick, 1995); and across cultures (Deci, Ryan, Gagnei, Leone, Usunov

& Kornazheva, 2001; Ryan, Chirkov, Little, Sheldon, Timoshina, & Deci, 1999).

The majority of research suggests that autonomy and competence are primarily linked to intrinsically motivated behaviors, whereas extrinsically motivated behaviors have been linked to all three needs (Deci & Ryan, 2000; Ryan, Deci & Grolnick, 1995). Furthermore, research which has examined the roles of controlling and non controlling environments have shown that environments that thwarted autonomy (i.e., those that were seen as controlling and individuals felt the pressure to perform in a particular way), undermined intrinsic motivation (Deci & Ryan, 2000). Similarly, style of language and feedback can also influence perceptions of controlling or non controlling environments. Positive feedback enhances perceptions of competence, and negative feedback, particularly critical feedback, is seen as controlling and decreases intrinsic motivation (Grolnick & Ryan, 1987; Vallerand & Reid, 1984). Furthermore, more controlling forms of learning environments have been linked to lower quality of learning and personal adjustment, as well as higher drop out rates (Grolnick & Ryan, 1987; Ryan & Connell, 1989; Vallerand & Bissonette, 1992). Other studies have shown that autonomy plays the central role in the motivation of emotionally handicapped students, whereas competence plays the greater role in motivating students with learning disabilities (Deci, Hodges, Pierson, & Tomassone, 1992).

Competence

Competence is a psychological need that provides an inherent source of motivation to seek out and master optimal challenges. Competence involves understanding how to attain various external and internal outcomes and being efficacious in performing the requisite actions (Deci et. al., 1991). Defined formally, competence is

the need to be effective in interactions with the environment and reflects the desire to exercise one's capabilities and skills and, in so doing, seek out and master optimal challenges (Deci & Ryan, 1985, as cited in Reeve, 1997). Competence as a need implies that people intentionally and voluntarily strive to master their environments and to control the outcomes that happen to them. This need inspires people to develop areas in their lives that are not fully developed (Reeve, 1997).

As with people from all cultures, Native Americans express a need for a sense of accomplishment or ability, however this need may be expressed differently than by students from other ethnic backgrounds. For example, Cleary and Peacock (1998) suggested that American Indian children have traditionally been expected to act competently or not to act at all. They are encouraged to observe until they are sure that they can do well, and to fail is to feel a sense of shame. According to Cleary and Peacock (1998), it is for this reason that some American Indian children do not like to be put on the spot. Scott (1986), provided another example, when he wrote that in the case of education, Native American students have been encouraged to become "less Indian" as a strategy for academic success. However, if this is what is meant by success, many Native Americans would not view dropping out of school an indication of failure. For many Native Americans, success in education means mastering white ways on one's own terms by maintaining some commitment to Native American values and traditions. This suggests not only a need for competence but also for choice, as demonstrated by students' mastering of white ways on one's own terms. Hankes (1998) pointed out that Native American children are raised in an environment that discourages drawing attention to oneself by acting as though one is better than the other. Consistent with this is the

observation that for students in an Indian classroom, it is common for children who have demonstrated the ability to answer a particular question correctly, to refrain from attempting to answer the same question the next time it was asked.

According to Reeve (1997), the primary environmental condition that involves the need for competence is optimal challenge. In addition, he suggested that the main environmental condition that satisfies the need for competence is positive feedback. Consistent with the idea of optimal challenge, is Csikzentmihalyi's (1990; 1997) construct of flow. According to Csikzentmihalyi (1997), experiences of flow are described by people as the sense of effortless action they feel in moments that stand out as being the best in their lives. Flow is described as optimal experience, and occurs when both challenges and skills are high. In other words, challenges and skills are in balance, and then attention becomes ordered and fully invested. If challenges are too high, one gets frustrated, worried, and anxious. If challenges are too low relative to one's skills, one gets relaxed, then bored. If both challenges and skills are low, apathy sets in. Reeve (1997) noted that the most practical application of flow theory is that given optimal challenge (that is, the appropriate balance of skill and challenge), any activity can be enjoyed.

In order for people to perceive the competence of their performance, they need feedback. This feedback can come from the task itself, comparisons of current performance on past performance, and the evaluation of others. In general, most people enjoy feedback that confirms that they have a skill level above and beyond the challenge of a task (Reeve, 1997). Negative feedback has a tendency to undermine confidence, whereas positive feedback increases competence.

Relatedness

The third need identified by basic needs theory is relatedness, which involves developing secure and satisfying connections with others in one's social surroundings (Deci et. al., 1991). Andersen, Chen and Carter (2000) agreed that the desire for connection to others is a fundamental human need, and noted that a growing number of personality and social psychologists are seriously considering the idea that individuals strive for connection with others, and this has consequences on cognition, affect and behavior. Whereas Deci and Ryan assume a basic need for relatedness, they argue that it has a limited role, suggesting that relatedness needs affect children, but adults only indirectly (Andersen et. al., 2000). For example, Ryan and Deci (2000) suggested that in infancy, intrinsic motivation is "readily observable as exploratory behavior and, as suggested by attachment theorists, it is more evident when the infant is securely attached to a parent" (p. 71). In addition, they pointed out that similar to studies of mothers and infants that revealed both security and maternal autonomy support predicted more exploratory behavior in infants, SDT hypothesizes that a similar dynamic occurs in interpersonal settings over the life span. Specifically, SDT hypothesizes that intrinsic motivation is more likely to flourish in contexts that promote a sense of security and relatedness. For example, Anderson, Manoogian, and Reznick (1976) found that when children worked on an interesting task in the presence of an adult stranger who ignored them, it resulted in very low levels of intrinsic motivation among these children. Similarly, Grolnick (1986) observed lower levels of intrinsic motivation among students who perceived their teachers as cold and uncaring. Other researchers such as Andersen et. al. (2000) argue that people are continuously being socialized during adulthood, and that

romantic partners, friends, mentors, coworkers, and others, including spouses and children, all provide new socialization experiences. According to Andersen et. al (2000), it does not make sense that the need for warmth and tenderness from others, and the need to express the same, is not profoundly influential in adulthood.

Osterman (2000) reviewed a sense of belongingness among students. She pointed out that many researchers and educators believe that one of the most fundamental reforms needed in secondary or high school education is to make schools into better communities of caring and support for young people. According to Osterman (2000), community is not present until members experience feelings of belonging, trust in others, and safety. In addition, she noted arguments made for community as the basis for learning and an emotional support mechanism by Dewey and Vygotsky, but that schools as educational institutions pay little attention to the socio-emotional needs of students, individually or collectively. Osterman suggested there is little formal attention given to the affective needs of students and school culture is based upon beliefs and practices that nurture individualism and competition, rather than community and collaboration. Essential to this school culture are organizational policies and practices that methodically prevent the development of community among students and directly contribute to students' experiences of isolation, alienation, and polarization. Osterman (2000) felt that social contexts of school play a significant part in determining whether individual needs are satisfied, that needs are domain specific, and that needs must be met on an ongoing basis. Consequently, motivation and performance will differ depending on the specific context. Students who experience belongingness in school will function better because their needs are satisfied.

An example of this is Yaakoosge' Daakahidi (Tlingit for "House of Knowledge"), an alternative high school in Juneau, Alaska. This school is said to offer a last chance for students who have been unsuccessful in traditional high school environments. Principal Ronalda Cadiente feels that her school promotes success by providing more one on one student-teacher involvement. The school has only 90 students, and "creates an atmosphere where kids who may feel lost or invisible in a large traditional high school are able to find a connection" (Linik, 2004). According to the principal, this loss of connection is a common problem for Tlingit students, who make up about half of Yaakoosge Daakahidi's population.

Peterman (2001) wrote, "It is important to remember that inclusion is a basic human need and feeling ostracized from both the American dominant culture and more traditional American Indian cultures leads American Indians to fall into high public school dropout rates or high suicide rates" (p. 45). Similarly, Scott (1986) developed a model for predicting academic success among Native American college students, with the key variable being "attachment to Indian Culture." He suggested that the minority status of being Native American revolves around the attachment to Indian culture. However, to go to college, Native Americans typically leave small towns or reservations where Native American traditions are still meaningful, and enter into a community that lacks the support of these traditions or beliefs. Thus, according to Scott (1986), Native American students who are attached to the heritage of their tribes are not as able to cope with the college experience as well as those who are comfortable with and committed to white ways. Similarly, other researchers (Rodriguez, 1997; Baruth & Manning, 1992; Locust, 1988) have noted that AI/AN students often struggle with maintaining their cultural

heritage and values as seen in their ongoing ability to use tribal languages, participate in religious ceremonies, take pride in tribal clan and family ancestry, and remain faithful to tribal beliefs and value systems. Dodd et al. (1994) suggested that Native American students' sense of identity comes from their tribal affiliation. Thus, they stressed the importance of teachers who work with AI/AN students to support literacy and encourage involvement by including extended family members and recruiting their support for academic achievement as well as for reinforcing their efforts to pass on their culture to students. Similarly, Little Soldier (1989) suggested that another way the value of group centeredness is demonstrated among Native Americans involves the playing of team sports. He pointed out that Native Americans have a history of playing team sports and are avid team competitors, however traditional Native American culture teaches helping, rather than competing with other individuals.

Bethel, Alaska, a hub for the tundra villages that scatter the Yukon-Kuskokwim Delta, offers an example of an educational setting that promotes a sense of connectedness. Here, Loddie Ayaprun Jones runs a Yup'ik immersion kindergarten through the second grade program. Jones stated in an interview with Barton (2005), "Every day our students are reminded that they're Yup'ik. They say 'we have life.'" Yup'ik is spoken by the Native people of Western Alaska, and is the strongest indigenous language group in the state. Even so, the language is slowly dying, as a result of the media that floods children's lives on a daily basis. The goal of the program is to integrate the Western and Yup'ik cultures (rather than returning to an old way of life as some have critically claimed the program is attempting). Jones and many others believe that promoting a sense of cultural identity promotes higher achievement levels among

students, although others maintain that the data on this is not clear (Barton, 2004).

Basic Needs Theory Research

Research on basic needs theory has been in three different categories: diary procedures; goal pursuit and attainment; and cross-cultural application (Deci & Ryan, 2002). First, diary entries have been examined to determine whether or not daily variations in need satisfaction predict daily fluctuations in well being. In a study consisting of 76 students from an introductory Psychology class, Reis, Sheldon, Gable, and Ryan (1998) studied the extent to which one's well being fluctuates from day to day and from setting to setting. They felt that much of the within person fluctuation could be understood by examining how daily fluctuations of the environment offers fulfillment of basic psychological needs. Results of their study showed that in day level analysis, all three needs were associated with well being. This supported an earlier study by Sheldon, Ryan, and Reiss (1996), which examined the satisfaction of two needs, competence and autonomy, on daily well being. This earlier study also found support for the hypothesis that fulfillment of psychological needs for competence and autonomy were associated with greater daily well being. One limitation of this study was that it measured subjective well being and did not include objective ratings of health status or observer reports of emotional well being.

The second area of research on basic needs has concerned goal pursuit and attainment. Ryan, Sheldon, Kasser and Deci (1996) hypothesized that the pursuit and attainment of some life goals will provide relatively direct satisfaction of the basic needs leading to well being, whereas the pursuit and attainment of other goals does not contribute to and may even detract from basic need satisfactions. Kasser and Ryan

(1996) found that investment in, or attainment of, intrinsic goals (that is, those closely related to basic needs such as affiliation, personal growth, and community) is associated with enhanced well being. On the other hand, investment in, or success at extrinsic goals (that is, those that are not related with basic needs, such as wealth and fame), not only does not enhance, but can actually detract from well being. Similarly, Sheldon and Kasser, (1995) found that people who pursue personal strivings that are congruent with organismic needs scored higher levels on several healthy personality characteristics. Ryan, Chirkov, Little, Sheldon, Timoshira, and Deci (1999) replicated these findings in a Russian sample, attesting to the potential generalizability (external validity) of the findings across cultures. Other research by Deci and Ryan (1991) has shown that need fulfillment is related to intrinsic motivation. Deci and Ryan (2000) suggested that needs give goals their psychological potency and influence people's goal pursuits. In SDT, the three basic needs are considered essential for understanding what (goal content) goals are pursued, as well as why (the process) they are pursued.

A third area of focus in past research on basic needs theory, has been cross cultural application. According to the basic needs perspective, needs are universal, thus the relationship between need satisfaction and well being should be cross cultural. However, the meaning of specific goals is culturally influenced, so that the ways in which specific goals relate to well being can vary across cultures, although the relation between underlying need satisfaction and well being is theorized to be invariant (Ryan & Deci, 2000). For example, Deci and Ryan (2000) suggested that in collectivist cultures, people may lean more toward group norms so acting in agreement with them might lead them to experience relatedness and autonomy as a result of their having fully internalized the

collectivist values of their culture. On the other hand, in an individualist culture, acting in agreement with a group norm might be experienced as conformity or compliance and thus a threat to autonomy rather than an expression of it. Thus, behaviors that conform to group norms could have different meanings and impacts, depending upon the culture. This implies that when researchers investigate issues regarding basic needs within different cultures, a dynamic perspective needs to be taken. Researchers should go deep enough into psychological processes to find links between underlying needs and observable behaviors that vary within cultures (Deci & Ryan, 2000). Cross-cultural research connecting needs with motivational processes and contents is relatively new, but initial results are promising (Deci & Ryan, 2000).

Recent studies have shown how the means through which needs are satisfied may vary per culture (Iyengar and Lepper, 1999, as cited in Deci & Ryan, 2000). The study examined the effects of decisional choice, which has been found to support autonomy and intrinsic motivation within people in the United States. This study specifically looked at the effects of intrinsic motivation for Americans and Asians of: a) making choices individually, b) accepting the choices that are made by trusted in-group members, and c) having choices imposed by distant or non-trusted others. For both Americans and Asians, results indicated that having goals imposed by others resulted in the lowest levels of intrinsic motivation. The second finding was that for Americans, a group in an individualistic culture, individual decisions led to the highest level of intrinsic motivation. When decisions were made by trusted others, it led to the second highest level of motivation among the American sample. For the Asian sample (a culture that stresses collectivism), the opposite findings were revealed. In other words, when

accepting decisions that were made by trusted others, intrinsic motivation was the highest, and when individual decisions were made, the second highest level of motivation was observed. Deci and Ryan's (2000) interpretation of these findings was that the means through which autonomy is expressed can vary within cultures, as seen with the Iyengar and Lepper study. People within the American culture tend to feel more autonomy and volition when making their own decisions. People in some East Asian cultures feel more autonomy and volition when endorsing and enacting values of those with whom they identify.

Deci and Ryan (2000) suggested that it is important to look into cultural values, such as individualism and collectivism, to determine whether or not they have been well integrated or merely introjected. This type of research would confirm that the autonomous versus controlled processes through which cultural values are enacted will have different effects on well being (Deci & Ryan, 2000). When people have fully integrated values, they would be expected to enact them with the highest perception of choice, thus values would be expected to be associated with the most positive outcomes.

Although the heterogeneity of tradition and individual experience makes an attempt to develop a list of American Indian values difficult, many social scientists feel it is possible to identify certain core values that a majority of American Indian and Alaska Native people share. The following list was developed and thought to be representative of normative values common to most tribes: 1) sharing; 2) other-centered; 3) harmony with nature; 4) non-interference; 5) patience; 6) circular time; 7) non-confrontive; and 8) broad view of the family. Unfortunately, some of these values may be misinterpreted in the academic environment. For example, non-confrontation averts intergroup rivalry and

prevents any embarrassment that a less able member of the group might feel in an interpersonal relationship. Non-confrontation is often misinterpreted by non-Indians as lack of initiative and ambition (Brant, 1990).

Several studies have found support for the cross-cultural application of SDT. For example, Kim, Butzel, and Ryan (1998, as cited by Ryan & Deci, 2000) researched Korean and U.S. samples. They found a more positive relationship between autonomy and collectivist attitudes than between autonomy and individualistic attitudes. A different study by Sheldon, Elliot, Kim, and Kasser (2001) examined U.S. and Korean samples and found that self esteem, autonomy, competence, and relatedness all ranked at the top of both Korean and U.S. sample for needs. However, in the South Korean sample, the single most important need to be satisfied appeared to relatedness. This supports Deci and Ryan's (2001) claim that autonomy is a universal need. However, Sheldon et. al. (2001) noted that considering the collectivist and communal orientation that characterizes South Korean culture. The finding that relatedness was the most important need among South Koreans made intuitive sense.

Other studies have compared need satisfaction, motivation and well being between U.S. and Bulgarian workers (Deci, Ryan, Gagne', Leone, Usunov, & Kornazheva, 2001). The study tested a self-determination model of task engagement and psychological adjustment in the workplace. Perceived autonomy support was theorized to promote satisfaction of the intrinsic needs of competence, relatedness, and autonomy, which would in turn, promote task engagement and well-being. Results indicated the constructs were meaningful in each country and provided general support for SDT. The degree of autonomy support predicted overall need satisfaction in each culture, which in

turn, predicted task engagement and well-being. However, the results of this study also pointed out some differences in the two cultures. It was suggested that for Bulgarians, satisfaction of the basic needs was more influenced by factors beyond just managerial autonomy support than was the case for Americans. In other words, for Americans, need satisfaction at work may depend more on managerial climate and less on other factors, such as peer relationships. Thus, the findings suggested the importance of attending to differences in the means through which needs can be supported in different work contexts to promote the motivation of well being or workers (Deci et. al., 2001).

Other studies have found that Navajo students were significantly more affiliation oriented, more socially concerned, more recognition oriented, and more token oriented than Australian Anglo students (McInerney, Yeung, & McInerney, 2001). However, the same study found that Navajo students were also significantly more task-effort oriented, more competitive, and more power oriented than Australian Anglo students.

It appears that SDT has cross cultural application, however more research is needed to examine how needs may differ in priority within cultures, as well as how these needs are expressed within various cultures. Further research examining the values within different cultures, and how these affect need satisfaction and goal pursuit (intrinsic or extrinsic goal pursuit, as well as task and ego goals) would be beneficial. Furthermore, the application of SDT among American Indians and Alaska Natives has yet to be determined.

Summary

The existing literature indicates that Native students experience a high drop-out rate (Falk & Aitkens, 1984; Edwards & Smith, 1981), and achieve grades consistently

lower than other ethnic groups (Lunneborg & Lunneborg, 1986). Much less attention has been paid to the success of Native students, and the school experiences that might relate to this. Thus, in this study, I used self-determination theory to examine the school experiences of Native students attending college in Oklahoma.

Self-determination theory focuses on more stable similarities among groups than upon differences. For example, Basic Needs Theory, one of the four mini-theories that makes up Self Determination Theory (SDT) identifies three universal, innate psychological needs. This becomes important in the educational environment because if we can identify needs, then we can design instruction in order to satisfy, rather than thwart needs, and in so doing, increase motivation as well as a sense of well being among students. Most of the theories that have been reviewed in this paper have been applied to either Euro-American, African-American, Asian, or Hispanic populations, but not Native American or Alaska Natives. Examining what motivates American Indian and Alaska Native students academically at a more in-depth level, may reveal or indicated what theories best apply to this particular population.

In sum, the goal of this study was to examine the school experiences of Native students who were attending a four year college in Oklahoma (University of Oklahoma, Northeastern University, and East Central University) and the relationship between need satisfaction (as defined by Self Determination Theory) and academic success (demonstrated through high school completion, college enrollment, and both high school and college GPA). The seven general research questions deriving from this goal were:

1. Is there a positive relationship between the need satisfaction subscales (autonomy, relatedness, and competence) and academic success (HS GPA and college GPA)?

2. Is there a positive relationship between the need satisfaction subscales (autonomy, relatedness, and competence) and psychological well being scores?
3. Is there a positive relationship between the need satisfaction subscales (autonomy, relatedness, and competence) and satisfaction with life scores?
4. Which combination of basic need satisfaction scores (autonomy, relatedness, and competence) result in the best prediction of academic success (HS GPA and college GPA)?
5. Which combination of basic need satisfaction scores (autonomy, relatedness, and competence) result in the best prediction of psychological well being scores?
6. What are the perceived contributions to students' academic success in high school and college?
7. What are the perceived barriers to students' academic success in high school and college?

CHAPTER 3

METHODOLOGY

Purpose

Considering the high drop out rate among Native students, and the lack of research focusing on the academic success of Native students, the present study was designed to explore in more detail, the school experiences of Native students who attended four year universities within the state of Oklahoma by examining relationships between need satisfaction and academic success (HS GPA and college GPA) and psychological well being while in college. More specifically, the study examined: a) Is there a positive relationship between the need satisfaction subscales (autonomy, relatedness and competence) and academic success (HS GPA and college GPA)?; b) Is there a positive relationship between the need satisfaction subscales (autonomy, relatedness and competence) and psychological well being scores?; c) Is there a positive relationship between the need satisfaction subscales (autonomy, relatedness and competence) and satisfaction with life scales? d) Is there a particular combination of basic need satisfaction scores (autonomy, relatedness and competence) that best predicted academic success (HS GPA and college GPA)?; e) Is there a particular combination of basic need satisfaction scores (autonomy, relatedness, and competence) that resulted in the best prediction of psychological well being scores?; f) What are the perceived contributors to academic success in high school and college? ; and, g) What are the perceived barriers to academic success in high school and college?

The researcher hoped the results of this study would identify factors within the learning environment that related to students' academic success (as demonstrated by

High School GPA and college GPA, as well as the completion of high school and enrollment in college), and well being while in school (measured by the Psychological Well Being inventory and Satisfaction With Life Scale).

I explored these issues by distributing instruments both electronically and through hard copy. It was hoped that this research would provide insight into the school experiences of these students, revealing factors that may be related to the academic success and satisfaction of Native students. Considering the high dropout rate and low college enrollment among this population, information obtained on the school experience and factors that affect their school experiences may prove helpful in preventing future attrition among Native students.

There were several limitations to this study. First, this study included a limited population—college students attending school at one of three universities in the state of Oklahoma. Although students come from all over the state, there are only twenty four tribes that were represented in this study, which may cause the results to have a rather tribal slant (see Table 3 on p. 59). In the United States, there are over 500 recognized Native American tribes, and more intertribal differences than similarities, so presumptuous claims regarding generalizabililty cannot be made. Although the researcher is part Cherokee (1/8), it is possible that the interpretation of data collected from this study could be misinterpreted.

A further limitation of may be the retrospective nature of this study. Retrospective reports can provide perhaps the most detailed accounts of circumstances and experiences leading up to student success and resilience, but are also more likely to be inaccurate due to the limitations of memory.

Research Design

Correlational research methodology was used to identify any relationships between basic psychological needs and high school/college GPA, as well as basic psychological needs and the psychological well being of American Indian and Alaska Native college students. This method was selected because in correlational research, the researchers investigate possible relationships among variables without trying to influence them. Correlational research is often used for exploratory purposes and does not establish causation but rather, measures the association or co-variation of two or more dependent variables. Thus, the results of this study may provide the impetus for future experimental studies.

This study was partially retrospective in that students were asked to think back to their high school setting when answering the Basic Needs Satisfaction (for high school). Participants also were asked to answer this same inventory for their current University setting. An advantage of this technique is that it was not necessary to get a new sample of HS students, and it also allowed me to stay in a within subjects design without having to do a longitudinal study.

Multiple regression and beta weights were used to determine which combination of Basic Needs satisfaction best predict a sense of psychological well being, college GPA, and High School GPA.

Sample Population

The sample consisted of 76 Native American college students who were either presently attending or had recently graduated (within the last year) from one of three four-year Universities in Oklahoma, including Northeastern State University, East

Central University and the University of Oklahoma (both main campus and the College of Liberal Studies). The sample originally consisted of 91 participants, however the number was reduced to 76 as a result of the partial completion of surveys by some participants. Of the remaining 76, a little over half were female (n=42), the rest were male (n=34). Participants ranged from 19-55 years of age, with the average age of about 32 years. (See Table 3 for frequencies of demographic information).

Northeastern State University is a four year public university located in Tahlequah, Oklahoma. It offers Bachelor's, First-professional degree, and Master's degrees. In 2004, it had a total enrollment of 8,082 students, 7,186 of which were undergraduates. Of the undergraduate enrollment, 26% identified themselves as being either American Indian or Alaska Natives. East Central University is a four year public university located in Ada, Oklahoma, that offers Bachelor's and Master's degrees. In 2004 it had a total enrollment of 4,067 students, and an undergraduate enrollment of 3,260 students, of which 17% identified themselves as being either American Indian or Alaska Native. The University of Oklahoma also is a four-year public university that offers Bachelor's, Doctor's, First-professional degree, Master's, Post-Masters certificate, and Post-baccalaureate certificates. It is located in Norman, Oklahoma, and had a total enrollment of 24,205 students in 2004, 6% of the total enrolled population identified themselves as being American Indian or Alaska Natives. Of the total enrollment, 17,771 of these students were enrolled as undergraduates (National Center for Education Statistics and the Carnegie Foundation, 2004).

Purposive sampling was used to identify American Indian and Alaska Native college students. The criteria for selection required students: a) Identify themselves as

being either American Indian or Alaska Native; b) were at least 18 years of age; c) were currently enrolled or graduated within the last year from one of three Oklahoma Universities selected; d) were voluntarily willing to participate in the study.

The rationale for selecting the first criterion was twofold. First, the study focused on American Indian and Alaska Native students, therefore participants had to meet this criterion. Second, it was important that students identified themselves as being American Indian or Alaska Native since definitions and criterions for being identified as American Indian or Alaska Native vary per tribe. For example, some tribes require individuals to have a particular blood quantum (usually between $1/16^{th}$ and $1/32^{nd}$ minimum), whereas agencies require tribal registry in order to be recognized as being Native.

Instruments

Instruments included a Basic Needs Satisfaction at School inventory developed by Deci and Ryan (2002), Psychological Well-Being Scales developed by Carol Ryff at the University of Wisconsin, Madison, the Satisfaction With Life Scale (SWLS), which is a global measure of life satisfaction developed by Ed Diener and colleagues (Diener, Emmons, Larsen, & Griffin, 1985). A questionnaire to collect demographic information from students regarding their sex, age, current University, college grade point average, and ethnic background (including the percentage of American Indian or Alaska Native ancestry as well as tribal affiliation) was also administered. Instruments and demographic questionnaire are attached (see Appendixes C-H).

Basic Need Satisfaction at School

The Basic Need Satisfaction at Work instrument, developed by Deci and Ryan to assess the satisfaction of the three basic psychological needs as defined by Self

Determination Theory, was revised to address the school domain. This inventory forms three subscale scores by averaging item responses for each subscale after reverse scoring the items that were worded in the negative direction. The subscales are the three basic psychological needs (autonomy, competence and relatedness). The format of this inventory is a web based 7 point Likert-type response format anchored with "not true at all" and "very true." Participants are instructed to indicate how true each of the statements are regarding their feelings about their school (high school and college) by clicking on the corresponding number.

Scoring for the basic needs inventory was accomplished by first forming three subscale scores by averaging item responses for each subscale after reverse scoring the items that were worded in the negative direction. Specifically, any item that has (R) after it in the code below should be reverse scored by subtracting the person's response from 8. The subscales are: Autonomy: 1, 5(R), 8, 11(R), 13, 17, 20(R); Competence: 3(R), 4, 10, 12, 14(R), 19(R); Relatedness: 2, 6, 7(R), 9, 15, 16(R), 18(R), 21.

Psychological Well Being Inventory

The Psychological Well-Being Scales were developed by Carol Ryff at the University of Wisconsin, Madison to measure six dimensions of psychological well-being: autonomy, environmental mastery, personal growth, positive relations with others, purpose in life, and self-acceptance. This self report scale was developed to assess individual's well-being at a particular moment in time within these six dimensions. Internal consistency (alpha) coefficients for each scale are as follows: autonomy .83; environmental mastery .86; personal growth .85; positive relations with others .88; purpose in life .88; and self acceptance .91. (Ryff, 1989). The inventory was set up by

Ryff by mixing items from the separate scales (by taking one item from each scale successively and making it into one continuous self-report instrument). Participants respond using a six-point format: strongly disagree (1), moderately disagree (2), slightly disagree (3), slightly agree (4), moderately agree (5), strongly agree (6). Higher scores on each scale indicate greater well-being on that dimension. Responses to negatively scored items (-) are reversed in the final scoring procedures so that high scores indicate high self-ratings on the dimension assessed. (See Table 1 on page 50.)

Table 1

Sample Items used on Basic Need Satisfaction at School Inventory

Autonomy
1. I felt that I could make a lot of inputs about how my schoolwork got done.
2. I felt pressured at school.
3. I was free to express my ideas and opinions at school.

Competence
1. I did not feel very competent when I was at school.
2. People at school told me that I was good at what I did.
3. I was able to learn interesting new skills at my school.

Relatedness
1. I really liked the people that I attended school with.
2. I got along with the people at school.
3. I pretty much kept to myself when I was at school.

Satisfaction With Life Scale

The Satisfaction With Life Scale (SWLS) contains five statements such as, "In most ways my life is close to my ideal." Participants indicate their agreement with each item "in general" using a six point scale. The SWLS is a global measure of life satisfaction and has been used in previous research, along with the Basic Need Satisfaction inventories (Sheldon, Ryan, Deci, & Kasser, 2004; Elliot & Sheldon, 1996; Sheldon & Elliot, 1999; Sheldon & Kasser, 2001).

The self-report questionnaire was used to collect demographic information from students about their sex, age, university, college GPA, and ethnic background, (including percent of American Indian/Alaska Native ancestry as well as tribal affiliation), involvement in traditional Native activities, and open-ended questions regarding perceived contributions to success in high school and college, as well as perceived barriers to academic success. (Please refer to pp. 186-205 for a complete copy of all instruments).

Data Collection

Data was collected in person and online through a website that included all instruments and demographic surveys. No names were requested on these documents, only the students' code names that they select for themselves. Every possible avenue for protecting the students' identity was taken. Native students who were enrolled in the College of Liberal Studies Bachelors of Liberal Studies and Masters of Liberal Studies programs at the University of Oklahoma, online classes in the College of Arts and Sciences at OU, Native American Brotherhood Association at OU, American Indian Student Association at OU, the Native American Association at ECU, and Native

American Student Association at NEU, received e-mails inviting them to participate in this study. There were no responses from individuals involved in the student associations at either ECU or NEU. Participation from students at ECU and NEU ended up being by word of mouth, since the researcher knew people who attended both universities.

Before agreeing to participate, a written overview of the study along with the expectations for participants and for myself, were posted on the website for all potential participants to read and review. In addition, the website specified that participants could withdraw from the study at any time (which later presented somewhat of a problem since there were originally 91 participants, but only 76 of these elected to complete all of the surveys). All participants were required to be at least 18 years of age, and were asked type their code name at the end of the invitation to participate, and check the appropriate box if they agreed to participate under the identified terms.

Methods of data collection included: surveys (Basic Psychological Needs at School Inventory, Satisfaction with Life Scale, and Psychological Well Being Inventory), as well as a self-report questionnaire used to collect demographic information, self reported college GPA from students, and information regarding perceived contributors and barriers to academic success in high school and college. All instruments were available online for students to complete and submit electronically, although some students requested hard copies to complete.

Participants were asked to complete two versions of the Basic Psychological Needs instrument. The instructions on one version asked students to reflect back upon the high school from which they graduated, and complete the instrument as it related to that school environment. The instructions for the other version of the survey asked students to

think about the university they currently attended (or from which they recently graduated), and complete the survey as it related to that school. College data was collected first, then high school data, in hopes of preventing bias in answers.

Data Analysis

Results of the surveys (Basic Psychological Needs Inventory and Psychological Well-Being Scales) were analyzed using quantitative approaches. More specifically, multiple regression was used to examine the relationships between need satisfaction and high school GPA; need satisfaction and college GPA; need satisfaction and psychological well being, and need satisfaction and satisfaction with life. Beta weights were used to examine whether or not there is a stronger relationship between the satisfaction of any particular need and High School GPA; whether there is a stronger relationship between the satisfaction of any particular need and college GPA; and whether or not there is a stronger relationship between the satisfaction of any particular need and psychological well being. Dependent t tests were used to examine differences in means between need satisfaction in high school and need satisfaction in college, as well as differences in means between scorings on individual subscales of need satisfaction in college as well as those in high school. Qualitative data were collected through the open-ended questions in the demographic questionnaire, and results were coded using open and axial coding.

Limitations

The major limitation of this study included the relatively small sample size and the its restricted range. “Academically successful” students from three universities within the state of Oklahoma were represented in this study. Academic success was defined by high school and college grade point average, high school graduation, and college

enrollment or recent graduation. This, coupled with the fact that only twenty four of the over five hundred recognized tribes were represented, may affect the generalizability of the study to other Native American and Alaska Native students. Other possible limitations included the design of the study. It was correlational, meaning that although relationships were identified, no claims regarding causation may be made. Finally, a portion of this study was retrospective in nature, relying upon the self reports of individuals. Although the retrospective element may mean that the responses may not be accurate, it was considered an acceptable risk during the initial exploration of the topic.

CHAPTER 4

RESULTS

As stated in Chapter 1, the study reported here examined the school experiences of Native Americans, and the relationships between the satisfaction of the three basic psychological needs (as defined by SDT) in high school and college, and academic success, as well as measures of well being. For the purposes of this study, academic success was identified by high GPA in both high school and college, as well as graduation from high school and current enrollment or recent graduation (within the last year) from college. In addition, this study examined perceived contributors and barriers to academic success. This chapter reports the results of this study, and is organized in terms of the specific research questions posed in Chapters 2 and 3. The results of statistical analysis are reported first, followed by qualitative analysis. Then other findings from the data that are relevant to the focus of this study are presented.

Data Preparation

Preliminary Analysis

Data were collected online, and then transferred from Excel to SPSS format, which involved cleaning up the data (such as deleting empty columns), and reversing scores on some items in both the Needs Satisfaction and the Psychological Well Being Inventory. In addition, some of the data had to be omitted from the analysis because although there originally were 91 participants, only 76 of these completed all of the surveys. Specifically, 91 students completed demographic questionnaires, 85 completed the PWB, 85 Basic Needs in High School, 82 SWLS, and 76 Basic Needs in Current School. Most of those who did not complete all of the surveys were older (in their 40's)

and also did not complete the college surveys or all of the qualitative questions in the demographic questionnaire.

Descriptives

The majority of participants in this study had high G.P.A.'s in both high school and college, with low variability in either level of school. The average high school G.P.A. was 3.32 and a standard deviation of .47. For college, the average G.P.A. was 3.43, with a standard deviation of .48. Participants also scored high on well-being measures, averaging 4.8 on SWLS and 4.7 on PWB measures. Need satisfaction scores also were high in high school with little variability. Mean scores for need satisfaction in high school were: 3.38 for autonomy; 4.79 for competence; and 4.93 for relatedness. Mean scores for need satisfaction in college were: 4.74 for autonomy; 5.40 for competence; and 4.88 for relatedness.

Demographics

The majority of participants in this study were between the ages of 19-30 years old (47%), the average actual age was 32 years old, approximately half were female (55%), and attended the University of Oklahoma (84%). The tribes most frequently represented by participants in this study were Cherokee, Choctaw, and Comanche. Although only 11% of participants spoke their tribal language, and only about 13% of participants' parents spoke their tribal language, one third of participants in this study participated in traditional Native American activities. These activities included pow-wows, religious activities, Native language courses, sweatlodges, tribal arts, and "other" activities. The majority of participants in this study attended public high schools, while 11% attended private high schools, and 1% were home schooled in high school. (See

Tables 2-4 to review demographic information, descriptive statistics and correlations.)

Reliability Estimates

The reliability estimates are presented in Table 2. All estimates were based on Cronbach alpha coefficients.

Basic Need Satisfaction

Using Cronbach's alpha, each subscale of the Basic Need Satisfaction in High School inventory was adequately high: Autonomy subscale, α=.76; Competence subscale, α= .73; Relatedness subscale, α= .88. The reliability of each subscale of the subscales of the Basic Need Satisfaction in College inventory was adequate: Autonomy subscale, α= .69; Competence subscale, α= .70; Relatedness subscale, α= .82.

Satisfaction With Life Scale and Psychological Well Being Inventory

The reliability of the Satisfaction With Life Scale (SWLS) was high, α= .90, and was the reliability of the truncated version of the Psychological Well Being (PWB) inventory was adequate, α= .82.

First, reliability estimates were computed for each of the scales, then regression analysis, paired samples t tests, ANOVAs and MANOVAs were conducted. Next, the qualitative data from the demographic questionnaire were reviewed and coded. The following section contains the results of this study.

TABLE 2: Descriptive Statistics

	N	Mean	Std. Dev.	Variance	Alpha
HS_GPA	76	3.32	.467	.218	----
Male	34	3.20	.476		
Female	42	3.42	.467		
Coll_GPA	76	3.43	.480	.230	----
Male	34	3.42	.392		
Female	42	3.43	.546		
SWLS	76	4.80	1.32	.230	.90
Male	34	4.89	1.34		
Female	42	4.72	1.32		
PWB	76	4.74	.623	.388	.82
Male	34	4.78	.678		
Female	43	4.72	.581		
BN_A High School	76	3.38	1.11	1.23	.76
Male	34	3.50	1.12		
Female	42	3.29	1.10		
BN_C High School	76	4.79	1.20	1.45	.73
Male	34	5.00	1.17		
Female	42	4.62	1.22		
BN_R High School	76	4.93	1.33	1.80	.88
Male	32	5.20	1.31		
Female	42	4.72	1.33		
BN_A College	76	4.74	1.10	1.22	.69
Male	32	4.40			
Female	42	5.01			
BN_C College	76	5.40	1.04	1.07	.70
Male	32	5.01			
Female	42	5.70			

TABLE 2 (cont'd): Descriptive Statistics

	N	Mean	Std. Dev.	Variance	Alpha
BN_R College	76	4.88	1.17	1.38	.82
Male	34	4.48			
Female	42	5.19			
Age	76	32.2	9.86	97.29	----
Male	34	32.6	10.21		
Female	42	31.9	9.69		

Note: HS_GPA: High School Grade Point Average; Coll_GPA: College Grade Point Average; SWLS: Satisfaction with Life Scale; PWB: Psychological Well Being Inventory; BN_A High School: Basic Need Satisfaction-Autonomy in High School; BN_C High School: Basic Need Satisfaction-Competence in High School; BN_R High School: Basic Need Satisfaction-Relatedness in High School; BN_A College: Basic Need Satisfaction-Autonomy in College; BN_C College: Basic Need Satisfaction-Competence in College; BN_R College: Basic Need Satisfaction-Relatedness in College.

TABLE 3 Demographic Frequencies

Demographic	Number	Percentage
Age		
19-30	36	47.4
31-42	22	28.9
43-55	18	23.7
Gender		
Male	34	44.7
Female	42	55.3
University		
OU	64	84.2
ECU	11	14.5
NE	1	1.3
Tribal Affiliation		
Absentee Shawnee	2	
Apache	2	
Arapaho of OK	1	
Blackfoot	4	
Caddo	3	
Cherokee	30	
Chickasaw	3	
Choctaw	18	
Comanche	5	
Creek	3	
Crow	1	
Kiowa	2	
Lakota	1	
Mashantucket Pequot	1	
Mississippi Choctaw	1	
Mohawk	1	
Navajo	2	
Onondaga	1	
Osage	2	
Pawnee	1	
Pima	1	
Sioux	1	
Southern Cheyenne	2	
Stockbridge Munsee-Band of Mohican	1	

TABLE 3 (cont'd) Demographic Frequencies

Demographic	Number	Percentage
Fluent in Tribal Language		
Very	2	3
Somewhat	2	3
A few words	8	11
Not at all	64	84
Parents Fluent in Tribal Language		
Yes	10	13
No	66	87
Participate in Traditional Native American Activities		
Yes	25	33
No	51	67
Types of Native American Activities		
Native Language Courses	7	9
Pow-Wows/ Native Dance	16	21
Potlatches		--
Sweatlodge	7	9
Native Arts (carving, weaving)	7	9
Religious Activities	11	14
Other	13	17
In high school Attended:		
Indian Boarding	0	--
Tribal	0	--
Public	67	88
Private	8	11
Alternative	0	--
Home	1	1

Note: Number and percentages of people representing various tribes adds up to more than the total number of participants because several participants were affiliated with more than one tribe. Number and percentages of people representing various traditional activities adds up to more than the total number of participants because several participants were participated in more than one activity. All tribal affiliations mentioned, along with their frequency, are represented in the above table.

TABLE 4 Correlations Between All Measures

	1	2	3	4	5	6	7	8	9	10
1. BN_A College	-----	.699*	.688*	.112	-.009	.100	-.046	.016	.156	.009
2. BN_C College		-----	.603*	.103	.050	.062	.019	.094	.106	-.045
3. BN_R College			-----	.101.	.032	.138	-.038	.031	.188	-.027
4. BN_A High School				-----	.714*	.630*	-.039	-.062	.082	-.069
5. BN_C High School					-----	.618*	.094	.029	.135	-.095
6. BN_R High School						-----	.055	.110	.063	-.005
7. PWB							-----	.313*	.114	.169
8. SWLS								-----	-.064	.110
9. HS_GPA									-----	.297
10. C_GPA										-----

Note: HS_GPA: High School Grade Point Average; Coll_GPA: College Grade Point Average; SWLS: Satisfaction with Life Scale; PWB: Psychological Well Being Inventory; BN_A High School: Basic Need Satisfaction-Autonomy in High School; BN_C High School: Basic Need Satisfaction-Competence in High School; BN_R High School: Basic Need Satisfaction-Relatedness in High School; BN_A College: Basic Need Satisfaction-Autonomy in College; BN_C College: Basic Need Satisfaction-Competence in College; BN_R College: Basic Need Satisfaction-Relatedness in College. *Also Note:* * indicates significance at the .01 level for a 2 tailed test.

Primary Analysis

The goal of this study was to examine the school experiences of Native students who are attending a four year college in Oklahoma and the relationship between need satisfaction (as defined by Self Determination Theory) and academic resilience and success (HS completion and college GPA, respectively). The seven general research questions derived from this goal were:

1. Is there a positive relationship between the need satisfaction subscales (autonomy, relatedness and competence) and academic success (HS GPA and college GPA)?
2. Is there a positive relationship between the need satisfaction subscales (autonomy, relatedness and competence) and psychological well being scores?
3. Is there a positive relationship between the need satisfaction subscales (autonomy, relatedness and competence) and satisfaction with life scores?
4. Which combination of basic need satisfaction scores (autonomy, relatedness and competence) result in the best prediction of academic success (HS GPA and college GPA)?
5. Which combination of basic need satisfaction scores (autonomy, relatedness, and competence) result in the best prediction of psychological well being scores?
6. What are the perceived contributions to students' academic success in high school and college?
7. What are the perceived barriers to students' academic success in high school and college?

The following sections show the results of this study, as they pertain to the individual research questions above, as well as other findings relevant to the focus of this study.

Quantitative Results

Need Measures in High School as Predictors of High School GPA

A multiple regression analysis was conducted to examine relationships and evaluate how well satisfaction of the three basic needs (autonomy, competence, and relatedness) in high school predicted high school GPA. The predictors were the three needs (autonomy, competence and relatedness), while the criterion was high school GPA. The linear combination of the needs measures was not significantly related to high school GPA, $F(3,72)=.468$, $p>.05$. The multiple correlation coefficient was .14, indicating that approximately 2% of the variance of the high school GPA index in the sample can be accounted for by the linear combination of strength measures. There were positive, but non significant correlations between the three needs in high school and high school GPA (see Table 4 for details on correlations). The results of this multiple regression suggest that need satisfaction in high school is not a good predictor of high school GPA. The limited variability between the means and standard deviations may be a result of the fact that these students represented examples of "academic success." In other words, these students already were a select group based upon their high GPA, high school graduation, and college enrollment.

Need Measures in College as Predictors of College GPA

A multiple regression analysis was conducted to evaluate how well need satisfaction in college predicted college GPA. The predictors were the three need indices and the criterion variable was college GPA. The linear combination of need measures was not significantly related to college GPA, $F(3,72) = .147$, $p>.05$. The multiple correlation coefficient for the sample was .078, indicating that approximately .6% of the

variance of college GPA in the sample could be accounted for by the linear combination of the measures of need satisfaction in college. The bivariate correlation between autonomy and college GPA was positive but non significant, and the correlations between competence and college GPA and relatedness and college GPA were both negative but non significant. Collinearity diagnostics did not reveal multi-collinearity (VIF scores were not less than .10). The results of this multiple regression suggest that need satisfaction in college is not a good predictor of college GPA. Alpha was set at .05, and 70% power has been achieved for this test, with a projected effect size of .30 (Cohen, 1988). See Table 4 to review correlations between all measures. Again, the limited variability between the means and standard deviations may be reflective of the fact that these students represented examples of "academic success."

Need Measures in College as Predictors of Psychological Well Being (PWB)

A multiple regression analysis was conducted to examine the relationship between needs in college and psychological well being, and to evaluate how well need satisfaction in college predicted Psychological Well Being. The predictors were the three need indices (autonomy, competence, and relatedness), while the criterion variable was the overall Psychological Well Being index. The linear combination of need measures was not significantly related to PWB, $F(3,72) = .902$, $p>.05$. The multiple correlation coefficient for the sample was .089, indicating that approximately .9% of the variance on the PWB index in the sample was accounted for by the linear combination of measures of need satisfaction. The bivariate correlation between competence and PWB was positive but non significant, and the bivariate correlations between relatedness and PWB, and autonomy and PWB were negative, but non significant (see Table 4 for details on

correlations). Collinearity diagnostics did not reveal multi-collinearity. Thus, need satisfaction in college is not a good predictor of scores on the PWB inventory. (See Tables 4 and 5 for more details.)

Need Measures in College as Predictors of Satisfaction With Life (SWLS)

A multiple regression analysis was conducted to examine relationships between the three needs in college and well being as measured by the Satisfaction With Life Scale. The linear combination of need measures was not significantly related to the SWLS, $F(3,72) = .334$, $p>.05$. The multiple correlation coefficient for the sample was .117, indicating that approximately 1.4% of the variance of the measures on the SWLS could be accounted for by the linear combination of measures of need satisfaction in college. The bivariate correlations between all of the needs and scores on the SWLS were positive, but were non-significant (see Table 4 for details on correlations). The results of this multiple regression suggest that need satisfaction in college is not a good predictor of scores on the SWLS. See Tables 4 and 5 for more details.

Subsidiary Analysis

Although not the primary focus of this study, the following results were found.

Relationship between SWLS and PWB

A simple correlation analysis was conducted to examine the relationship between scores on SWLS and the PWB inventory. The results showed scores on the SWLS were significantly related to scores on the PWB inventory, with significance at $p<01$. The sample correlation was .313, indicating that approximately 10% of the variance on the PWB scores could be accounted for by the scores on the SWLS. The results indicate that as the scores on the SWLS increase, the scores on the PWB inventory also tend to

increase.

Mean Differences in Basic Need Satisfaction in High School

Paired-samples t tests were conducted to evaluate whether there was a statistically significant difference between the means of the three basic psychological needs (autonomy, competence and relatedness) in high school. The results indicated the mean for the satisfaction of the need for competence in high school (m = 4.79, SD = 1.20) was significantly greater than the satisfaction of the need for autonomy in high school (m = 3.38, SD = 1.11), t (75) = -13.979, p = .000. Results also indicated the satisfaction for the need for relatedness in high school (m = 4.93, SD = 1.33) was significantly greater than the mean for the satisfaction of the need for autonomy in high school (m = 3.38, SD = 1.11), t (75) = -12.629. Results did not indicate a significant difference in the means between the satisfaction of the need for relatedness in high school (m = 4.93, SD = 1.33) and the mean for the satisfaction of the need for competence in high school (m = 4.79, SD = 1.33), t (75) = -1.10. There was a medium effect size with power of .7 (refer to Table 6).

Mean Differences of Need Satisfaction in College

Paired samples t tests were conducted to evaluate whether there was a difference between the means for satisfaction of the three difference basic psychological needs (autonomy, competence, and relatedness) in college. The results indicated that the mean for the satisfaction of the need for competence in college (m = 5.39, SD = 1.04) was significantly greater than the satisfaction of the need for relatedness in college (m = 4.87, SD = 1.17), t (75) = 4.590, p=.000. Results also indicated that the mean for the satisfaction of the need for competence in college (m = 5.39, SD = 1.04) was

significantly greater than the mean for the satisfaction of the need for autonomy in college (m= 4.74, SD = 1.10), t (75) = 6.87, p =.000. However, results did not indicate a significant difference between the means for the satisfaction of the need for relatedness in college (m = 4.87, SD = 1.17) and the satisfaction of the need for autonomy in college (m = 4.74, SD = 1.10), t (75) = 1.289, p = .201. There was a medium effect size with power of .7 (refer to Table 6).

Mean Differences in Basic Need Satisfaction between High School and College

A paired samples t test was conducted to evaluate the difference between need satisfaction in high school and college. The results indicated that the mean for the satisfaction of the need for competence was significantly greater in college (m = 5.39, SD = 1.04) than for high school (m=4.79, SD=1.20), t (75) = -3.38, p=.001. Results also indicated that the mean for the satisfaction of the need for autonomy (m = 4.74, SD = 1.03) was greater in college than in high school (m = 3.38, SD = 1.11), t (75) = -8.01, p = .000. Although the mean for the need for relatedness was slightly higher in high school (m=4.93, DS=1.13) than in college (m=4.87, SD=1.17), the results did not indicate any statistical significance in the differences in the means, t (75) = .33, p = .74. There was a medium effect size with power of .7 (refer to Table 6).

Gender Effects on High School GPA

Although not the focus of this study, a one way analysis of variance (ANOVA) was conducted to evaluate differences in gender and High School GPA. The dependent variable was High School GPA and the independent variable was gender (male and female). The ANOVA was significant, F(1,74)=4.36, p=.04, showing that females scored higher than males in this study. The strength of the relationship between gender and high

school GPA was .06 as assessed by partial η^2, accounting for 6% of the variance in the dependent variable. There was a medium effect size, with power of .5 (see Table 2).

Gender and Age Effects on College GPA

A 2 x 3 ANOVA was conducted to evaluate the effects of gender (male and female) and age (19-30 yrs, 31-42 yrs, and 43-55 yrs) on college GPA. The ANOVA indicated no significant interaction between gender and age on college GPA, F(2, 70)=.30, *p*=.74, partial $\eta^2 = .10$. There was not a significant main effect for gender, F(1,70)=.11, *p*=.74, $\eta^2 = .002$. The age main effect was significant, F(2,70)= 4.037, p= .022, partial $\eta^2 = .103$. Dunnett C indicated a significant difference between participants in age group 3 (43-55 yrs) and age group 1 (19-30 yrs) with a mean difference of .332. Participants in age group one had the lowest college GPA (see Table 2).

Gender and Age Effects on the Satisfaction with Life Scale (SWLS)

A 2 x 3 ANOVA was conducted to evaluate the effects of gender (male and female) and age (19-30 yrs, 31-42 yrs, and 43-55 yrs) on SWLS. The ANOVA indicated no significant main effects for age, F(2,70)=.29, p=.75, partial $\eta^2 = .008$, or for gender, F(1,70)=.018, p=.90, partial $\eta^2 = .000$, and the interaction was not significant, F(2,70)= 2.95, p=.059, partial $\eta^2 = .08$ (see Table 2).

Gender Effects on Basic Need Satisfaction in High School

A one-way multivariate analysis of variance (MANOVA) was conducted to determine the effect of gender (male and female) on three dependent variables (satisfaction of the needs for autonomy, competence, and relatedness in high school). No significant differences were found between genders on the dependent measures. Wilk's $\lambda = .96$, F (1,74) = 1.008, $p > .05$. The results of this MANOVA suggest that although

males scored higher on the satisfaction of all needs in high school, there were no significant differences in means between the genders in need satisfaction in high school (see Table 2).

Gender Effects on Basic Need Satisfaction in College

A one-way multivariate analysis of variance (MANOVA) was conducted to determine the effect of gender (male and female) on three dependent variables (satisfaction of the needs for autonomy, competence, and relatedness in college). Significant differences were found between the two genders on the three dependent variables. Wilk's $\lambda = .87$, $F(1, 74) = 3.52$, $p < .05$. A significant difference was found between the two genders on the dependent measure, need for autonomy, $F(1,74) = 6.159$. A significant difference was also found between the two genders on the dependent measure, need for competence, $F(1,74) = 9.324$, as well as on the dependent measure, need for relatedness, $F(1,74) = 7.468$. The multivariate $\eta^2 = .13$ indicates 13% of multivariate variance of the dependent variables is associated with the gender factor, with females scoring higher on satisfaction of all three needs in college.

TABLE 5 Need Satisfaction in College as Predictors of Well Being

Measure	BN_A		BN_C		BN_R	
	ß	t	ß	t	ß	t
PWB	-.10	-.52	.11	.65	-.04	-.22
SWLS	-.10	-.53	.16	.97	.00	.00

Note: SWLS: Satisfaction with Life Scale; PWB: Psychological Well Being Inventory; BN_A: Basic Need Satisfaction-Autonomy in College; BN_C: Basic Need Satisfaction-Competence in College; BN_R: Basic Need Satisfaction-Relatedness in College.

TABLE 6 Paired Samples t test: Differences in Need Satisfaction

School	μ	SD	t	df	sig (2- tailed)
High School					
Pair 1 Autonomy Competence	-1.41	.88	-14.0	75	*.000
Pair 2 Autonomy Relatedness	-1.55	1.07	-12.6	75	*.000
Pair 3 Competence Relatedness	-.14	1.12	-1.10	75	.274
College					
Pair 1 Competence Relatedness	.52	.99	4.59	75	*.000
Pair 2 Competence Autonomy	.66	.83	6.87	75	*.000
Pair 3 Relatedness Autonomy	.13	.90	1.29	75	.201
HS & College					
Pair 1 HS Autonomy Coll Autonomy	-1.35	1.47	-8.01	75	*.000
Pair 2 HS Competence Coll Competence	-.601	1.55	-3.38	75	*.000
Pair 3 HS Relatedness Coll Relatedness	.063	1.650	.330	75	.742

Note: HS Autonomy: High School Autonomy; Coll Autonomy: College Autonomy; HS Competence: High School Competence; Coll Competence: College Competence; HS Relatedness: High School Relatedness; Coll Relatedness: College Relatedness. * indicates statistical significance.

Qualitative Results

The demographic questionnaire contained the following three open ended questions:

1. "What factors do you feel contributed the most to your decision to stay in high school and put forth the necessary effort?"
2. "What factors do you feel contributed the most to your decision to stay in college and put forth the necessary effort?"
3. "Did you feel that you had any barriers to your success in school? If so, please explain what they were and how you overcame them."

Several themes emerged. Data were examined, phenomenon were identified, labeled, categorized, and related together in an outline form. This involved reviewing the data several times, examining the data closely and looking for general themes that emerged. After themes were identified, data were reviewed again several times, looking for relationships and subcategories. For inter-rater reliability, data were also reviewed by two female, Native American graduate students, providing confirmation of the researcher's interpretations.

Success in High School

Participants mentioned a variety of reasons for their success in high school, including family, career goals, wanting to feel competent, and the influence of friends, teachers, counselors, and coaches.

Relationships

Family

The majority of students who mentioned family as being a major contributor to their decision to stay in high school stated that dropping out of school "was not an

option" because of "family values" or "expectations of their parents." Staying in high school was something that was "expected" of them, and "their parents would not accept anything else." Staying in school was "what you did." For example, one student wrote, "There was never a question whether or not I would stay in school. Dropping out of school has never been a thought in my mind nor my family's." Another student wrote, "The values of my parents and my family contributed to my desire to continue my education." For many students, staying in high school was something that was expected of them because their parents finished high school and/or college. This is best exemplified by one student's response. "The values of my parents and my family contributed to my desire to continue my education. Both of my parents were college graduates and they raised my family to do the same." Other students mentioned extended family members' influence on their decision to stay in high school and put forth the necessary effort. For example, one student wrote, "I believe it was my grandparents who inadvertently instilled education as a tool to success."

Students mentioned parental influence in two ways: through support and non support. Supportive parents were encouraging, and instilled values that a high school degree was important. Some students said that their "parents were the biggest factor," while others credited staying in high school because of "family values," "family expectations," and "parental direction." This is supported by the following statements: "My parents made me stay in high school, and encouraged me to do well in school" and, "My parents would never have let me quit." In some cases, parents influenced participants to succeed in high school by placing them in environments that were more conducive for academic success. For example, one student wrote, "My parents sent me to

a private boarding school away from the reservation and its influences. I was around people who weren't like me and it helped me to be more open minded. It mainly got me away from the negativity that is a huge cloud over a reservation." In some cases, family members influenced success through a lack of support. For example, some participants viewed family members as being something negative. In other words, students saw their family members as something that they did not want to become, thus students were influenced to succeed in high school in a different way than those who viewed their family members as being supportive and encouraging. For example, one student gave the following reason for staying in high school. "The fact that both of my parents are incarcerated and I wanted to turn out better than they did, for me and my family." Another wrote, "Neither of my parents completed high school and pushed me toward that goal. I wanted to get a better job than my parents had."

Friends/Teachers/Counselors and Coaches

Another theme that emerged in students' responses to the question regarding perceived contributors to their academic success and perseverance in high school was their relationship with others in high school. Some students stated that friends, teachers and social activities were contributors to their academic success in high school. One student who attended a private Catholic high school attributed her academic success to her teachers and the nuns in the school when she wrote, "the nuns and teachers really cared about us."

Some students felt that their relationships with coaches, team mates and others helped them through high school. One student wrote, that "sports (football) and social activities helped me to stay in school" and he "enjoyed (his) classmates." Students

mentioned “loving the athletics and social relationships.” One student wrote that his “friend’s mother encouraged him to continue” in high school, while another student stated that she “participated in sports and that was a huge motivator to excel in school.” Her “coach emphasized and demanded academic excellence. She would do grade checks on us every week even when we weren’t in season. I had a lot of adults who cared about my success.” Similarly, another contributed her academic success in high school to her “Native American counselor, a few great teachers and encouragement from friends and heritage clubs.”

Competence

Academic

A second theme that emerged as being a contributor to the academic success of students in high school was a desire to show competence–either academic competence or financial stability/success. Several students mentioned the desire to succeed as being a contributor to their success in high school. This is demonstrated through one student’s response. “I wanted to learn and wanted to succeed.” Another student mentioned struggling with reading and writing, but excelling in art and math, and that he “liked feeling like (he) was better than the other students in some courses since (he) felt just the opposite in reading and writing.” Another wrote, “I would never have thought about quitting because I would have felt like a failure. High school is too easy to not finish.” Another student wrote, “I wanted to succeed in life, and I knew getting a good education was vital.” Still another wrote, “I wanted to be successful in life at everything that I do.”

Career/Financial

The general consensus among students who mentioned finishing high school in order to achieve financial success or meet career goals was that "without an education, you won't go anywhere in life." Many students "wanted a reliable and good future" and to "succeed at a financially stable job." Many students perceived finishing high school and attending college as something that was mandatory in order to succeed (financially) in life. One student wrote, "I wanted to get ahead in life and felt that going to college would help me to do this, by opening up opportunities for higher paying jobs." Another student stated that the biggest contributor to his success in high school as being "a chance at a better life; it is difficult to get ahead without proper education." Similarly, another student wrote, "I felt that I had to stay in school, and also because it could help me later in life." Another student wrote that he "wanted to receive a diploma to go into the military."

In addition to focusing on career goals and monetary goals in a positive way, some students saw finishing high school as a means of "escaping poverty and prejudice." One student wrote, "I wanted to get out of there (home town) and do my own thing and be successful at the same time."

Success in College

When asked, "What factors do you feel contributed the most to your decision to stay in college and put forth the necessary effort?" three main themes emerged: relationships with others; competence, and feelings of autonomy.

Relations with Others

The most common theme that emerged when reviewing the reasons given by participants for staying in college and putting forth the necessary effort was their relations with others. Although family was mentioned the most frequently, friends, teachers/counselors, and the desire to give back to others also were mentioned as motivators for staying in college.

Family and Teachers

The majority of students indicated that family played a huge influence on their motivation to stay in college and put forth effort. For some students, parents, spouses, or extended family members (such as their "Auntie" or "cousin") had encouraged them to get a college degree. For example, one student wrote, that it was her "personal desire, as well as that of (her) parents to finish college and obtain a degree." Another student wrote that it he was "living the dream of the parents to complete a college degree," while another credited their motivation in college to "encouragement from spouse and family." Two student's responses best typify the influence of family on college success. They wrote, "I want to be successful, knowledgeable, the first in my family to go to college, and I needed to support my child." Several students indicated that their desire to provide for their children and family spurred them on in college. For example, one student wrote, "My children's future is what makes me determined to complete my education."

For other participants, teachers and counselors were credited as providing the necessary encouragement to complete college. For example, one student wrote that he stayed in college because of, "A couple of high school teachers who believed in me."

Relationship with God

Some of the participants in this study revealed that they were able to overcome barriers and succeed in college because of their relationship with God. For example, one student mentioned that her perceived barriers to college success were having to take care of her siblings and deal with an abusive husband. She credited her relationship with God as giving her the ability to overcome this and continue with school when she wrote, "Hard work and a lot of praying is how I overcame that." Another student wrote, "All of my success has been done through hard work, practice, and faith in the Lord." Similarly, one student credited her spiritual upbringing as helping her succeed in college when she wrote, "Our parents were extremely wise and based their confidence in Godly things so that we could rise above plots of man."

Competence

Career and Financial Success

The second most common theme that emerged in response to the question regarding perceived contributors to academic success in college was the perception of a college degree enabling financial success. However, reasons for the desire to obtain success in finances/career varied. The majority of students indicated that they wanted to obtain financial success and stability for their family, however others indicated wanting to achieve financial success for themselves, while others wanted to achieve financial success in order to gain social status and boost their sense of pride.

A portion of the students indicated wanting to show competence in completing college in order to give back to the community. Some students indicated a desire to feel personally competent and increase their personal sense of pride–either because they had

made mental comparisons to what life was like for other Native Americans, or to prove something to themselves. This is demonstrated in the following responses. “As I began doing research on Native Americans and post-secondary education, I began to realize there were low post-secondary graduation rates among Native Americans, and decided that I wanted to go beyond that.” Similarly, another student wrote, “I wanted a better life for myself than a reservation life.” Students who wanted to prove competence to themselves or family wrote things such as, “I want to be the first male in my family to ever graduate college,” and “My B.A. would be the first in the immediate household.” Similarly, another student wrote, “A person that obtains a university degree has had to overcome obstacles, work hard, and succeed in many ways. Therefore, the decision to stay in college and do the effort proves to the person that he or she can succeed in life under stressful situations.”

Competence and Relatedness

For some students, the need for competence based on the desire to help others in the community played a motivating role in college. This is demonstrated by the following statement made by a participant.

> “I wanted to finish my education so that I could give back to others. It is important to me that I have a career that is meaningful and makes a difference. I want to give help to others who have less than I did, and provide guidance and encouragement to those who may not have it.”

Similarly, another student wrote, “The factor that has influenced me the most to stay in college is the knowledge and the status it will give me to change the world.”

Autonomy

Several students indicated that they felt that their decision to stay in college and put forth the necessary effort to do well was because a college degree was perceived to offer them more choices in life. Students expressed feeling that that either the college environment offered more choices than the high school environment, or that by earning a college degree, they would have more choices regarding career and lifestyle in the future. Students indicated that they could "choose (their) own major, so although there were some classes that they had to take and did not enjoy," they had "more choices regarding classes" and "did not have to be around people (they) did not like." "For the most part, (they) could go to class and then go home." For example, one student wrote, "I found college was different from high school in that you did have autonomy. I could learn about subjects and issues I found relevant." Similarly, another student wrote, "Once I had a choice in the classes I took, I fell in love with learning. I took classes I was interested in and it pushed me to not only attend, but to do well." Another student credited flexibility in course selection for his decision to stay in college. He "enjoyed the classes (subjects in my major)" which "helped motivate (him) to stay in college. Another student wrote, "I succeeded because I found a major I naturally fit into."

In some cases, having more choices regarding coursework helped students overcome other barriers. This is best exemplified in the following statement. "Innately, I am not a quitter. I was an athlete when I was an undergrad and really struggled trying to balance the poor education that I had when I entered college, with my sports schedule. I had dreamed of being pre-med, but I just didn't have the time to put into school like I needed. When I found Native American Studies, it gave me hope and helped me to find

my academic niche. If it weren't for NAS, I'm not sure how things would have gone. I wouldn't have quit, I just don't know what I would have graduated with." Similarly, another student wrote, "I changed schools a lot and then ended up with a degree from (anonymous school). They were able to take most of my courses from all of the places that I attended and put them together for my Bachelor's degree."

In addition to choices in academic schedules and course work, some students indicated feeling like they would have "more choices for employment" if they earned a college degree. For example, one student wrote, "I wanted a better life for myself than a reservation life. I wanted to ensure a much better future for my children than what I had." In some cases, autonomy was mixed with competence. For example, one participant wrote, "I want to escape poverty and prejudice."

Barriers to Academic Success

When asked, "Did you feel that you had any barriers to your success in school? If so, please explain what they were and how you overcame them?" several themes emerged.

Relationships with Others

The responses made by participants in this study revealed that perceptions of interpersonal relationships with family, peers, friends, and professors had a particularly strong influence on students' perceptions of barriers to academic success.

Family and Tribe

Specifically, family was credited most frequently has having the strongest influence. Participants in this study indicated that family acted as a barrier to academic success in two ways. First, family acted as a barrier when participants perceived a lack

choice, or lack of involvement/encouragement from family members, thus they expressed feelings of resentment. Participants tended to voice feelings of resentment if their family members "were not involved" or "did not push" students enough to succeed academically, or if there were family members who were abusive to participants in any way. For example, one student wrote, "My parents should have pushed me hard from the beginning of school, so I would have never known not to give 100%. I was an average student in high school. Now I see the importance of really studying hard. My G.P.A. is slowly climbing up the scale again." Similarly, another student wrote, "I was not pushed enough by my parents. I had a self desire to achieve." Another student wrote, "I believe that parenting has a lot to do with academic success. My parents, although (they are) great parents, neither (of them) attended college. Both grew up in very small towns, and both could offer very little credible advice about academics. This handicapped me and it wasn't until I almost lost all of my opportunities in college that I realized what was happening, thus I changed and made it through."

Some students identified family members as perceived barriers to academic success when family members were seen as being either abusive, or as having abandoned them, forcing them to raise siblings. For example, one student wrote that "family violence" was a perceived barrier. Another woman wrote, "I had a husband that was abusive, and he did not want me to go to college…" Another student wrote, "At the age of 16 my mother left me with my two sisters to raise. Hard work and a lot of praying is how I overcame that. When I finally enrolled into college my two sisters were grown, but at that point I had two children of my own, and a husband who was abusive, and he did not want me to go to college." The second way in which family members were perceived

as barriers to academic success were when participants made choices to place family as a priority over academics. For example, several participants mentioned marriage and child care as barriers to academic success. A female student wrote, "I got married while I was an undergraduate student. While I would not change that, it was hard to be a wife and a student." Child care was mentioned as a barrier to academic success quite often. One student experienced feeling that both childcare and being bicultural were barriers to her academic success. She wrote, "Yes, I have barriers to my success in post-secondary education. One is being a single parent and the other is living bi-cultural. I have not actually overcome these barriers. I just deal with them on a daily basis. I am a full time student with reading and writing papers and learning higher academia. I am also a full time mother tending to three children which two are under the age of three. I am also full time with my culture, meaning I attend ceremonies as well as non-ceremonies in which I participate. This can become a barrier because I have to fully engage myself where I am at the moment. Whether it be at a ceremony, school, or at home. I do this because I choose to be bicultural and be a role model for my children, (demonstrating) that it is possible to be Indian and educated at the same time." Another wrote, "When I got married and had my children, it was harder to go back after each birth and give my classes my all."

Friends, Peers and Professors

In addition to their relationships with family members, some students found it difficult to succeed in school because of friends (or lack of friends), peers, or teachers. Some students expressed feeling that their friends were negative influences, while others

mentioned feeling isolated in the school environment. An example of friends acting as barriers is provided in the following statement made by one participant.

> "Social activities were a big barrier for me. Making new friends was good, but for a couple of years, I let my friends influence my decision making. For example, I might go out and stay out late knowing I had class early the next morning. I wised up but not before my G.P.A. suffered. Now I am working a full time job and going to school part time to improve my G.P.A."

Several students expressed feeling like they "did not fit in" with the other students in their schools, and this acted as a barrier to their academic success. For example, one student wrote, "The feeling of being invisible is a big barrier for any Native American, student or non-student. I think that I overcame that feeling by realizing that I am someone and will be someone important." Another student wrote, "I was different from almost everyone in my school. I was the poor kid without the stylish clothes, overweight, bad haircut, etc. We lived on a farm next to the wealthy section of town so I was out of place." Similarly, another student wrote, "I did not fit in with my peers. I survived by becoming a teacher's pet." Another student wrote a similar statement. "Finding friends in high school was by far the hardest thing to do."

Some participants expressed feeling that professors acted as barriers to their academic success. For example, one student wrote the following statement. "Finding honest and trusting friends as well as teachers, was a problem." Supporting this, another student wrote that "professors" were a barrier to his academic success because he felt he was "discriminated against" based upon his ethnicity.

Competence/Self Efficacy

Several students in this study indicated feeling academically handicapped by a lack of language, reading, writing, and technical skills. This perceived incompetence was attributed to several things, ranging from culture, poor academic preparation in high school, academic counseling, and family. The feeling that culture somehow contributed to low self efficacy is best represented by the following three statements made by different participants. "We (Native Americans) were conditioned to fail in highly technical or sophisticated ideals." A different student expressed feeling that Native Americans are often handicapped by:

> "The overall lackadaisical mindset that most Native American people have. It seems that there are only two types of Native Americans in life. The overly successful ones and the blue collar ones. I feel I tend to fall in the middle of those two. I am trying to overcome the barriers because I do not want my children to have to bear these barriers by being raised in it."
>
> Another participant wrote,
>
> "In my own particular case, I had to overcome several barriers. The first one was language. I had to be in a different culture and adapt to a modern (computers) system of education that I was not familiar with. The only way to overcome was to immerse myself into the challenge and not try to find shortcuts. I told myself, 'If others can do this, why not me?' Then, success, for me, is failure turned inside out."

Several students indicated feeling incompetent in college because of previous experiences in either high school or college. More specifically, some students felt that

their high school education did not prepare them for the challenges of college. This is best represented by the following two statements made by participants.

> "My high school education definitely did not prepare me for the rigors of college. I went to a tutor a lot. The academic advisement also hurt me. I had an advisor based out of the athletic department and she had no idea of how to help me succeed academically. She told me to take classes I was not ready for. When I couldn't pass these, I felt like a loser. A big contributor to that was the University that I attended did not have placement tests. I was getting put in math classes way above my skill level."

Another student wrote, "Being from a small town and attending a high school in a rural town prevented me from being exposed to more challenging courses."

Other students expressed that previous academic experiences acted as barriers to their academic success. This is demonstrated in the following statements made by two participants. "I had a low GPA and wasn't able to be accepted into the University. First, I had to go to a Junior College and get my GPA up. By the time I got to the University, I had improved my math and reading skills, and was able to excel." A different student wrote, "I struggled (and still do) with English and writing. My mom hired tutors when I was in high school but reading and writing are subjects that I do not enjoy."

Some students also mentioned feeling that their family contributed to their lack of competence. Reasons given were not being "pushed enough" by parents, their parents not helping them to prepare for the rigors of college (because they had not gone to college themselves), and having abusive spouses that shattered their sense of confidence.

Other students talked about "low self esteem." One student wrote, "I had difficulties staying focused on school work, and caring about my studies due to depression, social anxiety, and other problems. This seriously affected my GPA, from a 3.7 to a 1.8, and was almost the end of my university education."

Perceived Lack of Choices

Perceived loss of autonomy due to circumstances that were perceived as being beyond participants' control also were mentioned as barriers to academic success. Three subcategories arose from within this theme: lack of finances, discrimination, and addiction.

Financial Pressures

Next to relationships with family, friends, and so forth, financial hardship was identified as presenting a barrier to academic success. For example, one student wrote, "I had money and family problems and had to take time off a lot." An excellent representation of the barrier that financial pressures placed on academic success is the following statement made by a student. "The main barrier to getting an education was money. There was not a lot of money available except for student loans. I am Cherokee but not on the tribal role, so I did not have access to many of the grants that others who are even less Native American than I am, have." Another student wrote, "I had to pay my own way through college. I did not receive any financial, emotional, or logistical support from my family to do so." Good examples of the barrier that finances posed to Native American students in this study are seen in the following two statements made by different participants. "Mainly, financial barriers. It's very hard to be productive in school when you're constantly worrying about money." "My family didn't have a lot of

money so I was responsible for all of my finances. I worked full-time during my entire undergraduate studies. It was difficult…" Finally, financial hardship also affected some students in terms of available transportation. For example, one student wrote, "Transportation was an issue. I had to share transportation."

Discrimination

Discrimination was based upon both gender and ethnicity, as demonstrated by the following statement. "I felt that there was some discrimination because of my being Indian and female. It put restrictions on earning potential." Another woman wrote, "Being female (acted as a barrier). I just worked hard to beat a system that was blatantly designed for white males."

Addiction

Drug and alcohol addiction also acted as a barrier to the academic success of several participants in this study. This is best represented in the following statement. "Addiction has been the biggest barrier to most things in my life. I am only able to have success academically and professionally today because I'm in recovery."

CHAPTER 5

DISCUSSION AND CONCLUSION

Due to the high drop out rate among American Indian and Alaska Native students, there is a strong interest in learning about what motivates AI/AN students to succeed in academic settings, and what factors impede their progress. For the purposes of this study, academic success was defined by high school and college GPA, high school graduation, and current enrollment or recent graduation from a four year university in Oklahoma. High school graduation was identified as a form of academic success because of the high drop out rates for American Indians and Alaska Natives (Swisher & Hoisch, 1992; Pallas, 1986). Current college enrollment (or graduation within the last year) also was included in the definition of academic success because of the low college enrollment rate for Native Americans and Alaska Natives (Babco, 2005). Thus, in light of the high drop out rate and low college enrollment and completion rates among Native Americans and Alaska Natives, high school graduation and college enrollment (or recent graduation) were included in the definition of academic success.

Recognizing that learning hinges upon student experiences both within and outside of the classroom, the primary goal of this study was to examine the school experiences of AI/AN students, using the framework of Self Determination Theory. According to this theory, learning environments that facilitate the satisfaction of the three basic needs promote intrinsic motivation and self determined forms of extrinsic motivation. Specifically, Needs theory was used to examine the school experiences of AI/AN students, and answer seven research questions through a combination of quantitative and qualitative approaches.

In this chapter I discuss the results of this study, their implications, whether or not the results answered the research questions, other important findings, and how the results of this study relate to previous research. In addition, I provide suggestions for future research.

Limitations

This study had several limitations. First, it was based on self report instruments, thus respondents could consciously distort their responses if they are motivated to do so (for example, social desirability). According to Nancarrow and Brace (2000), social desirability occurs when, in some circumstances, respondents may be tempted to give the socially desirable response rather than describe what they actually think, believe or do. This has typically been assumed to be a function of two factors, the general strength of need for approval felt by an individual (personality trait) and the demands of a particular situation. The second limitation was the partially reflective nature of this study. Although participants were either in college or had recently graduated at the time of their participation in this study, they were asked to answer the Need Satisfaction in High School inventory by reflecting back to their experiences in high school. Because of this, it was possible that memories of their high school experiences were not as vivid, and perhaps not as accurate. Another limitation was the limited sample size. Participants from this study attended (or had recently graduated from) one of three selected universities located in the state of Oklahoma, and the majority of these were from the University of Oklahoma. The University of Oklahoma has the lowest Native American student population of the three universities represented in this study, thus this population may have unique characteristics. In addition, only student who were already deemed

"successful" were included in this study. Furthermore, participants represented only 24 out of over 500 recognized tribes. Although there are more similarities than differences between the tribes, the majority of participants in this study represented Cherokee, Choctaw, and Comanche tribes. The final limitation was that only 76 of the 91 original participants' results were used in this study because some students chose not to complete all of the surveys.

Quantitative

Research Questions #1 and #4

The first question examined whether or not there was a positive relationship between the need satisfaction subscales (autonomy, relatedness, and competence) and academic success (measured by HS GPA and college GPA). The results of this study indicated that there was a positive, but non significant relationship between the satisfaction of needs in high school and high school GPA. Specifically, results revealed the correlation between autonomy in college and college GPA was positive but non significant, and the correlations between competence and college GPA and relatedness and college GPA were both negative but non significant, and that need satisfaction in college was not a good predictor of college GPA. A possible explanation for the absence of expected correlations between need satisfaction and GPA is the lack of variability in the achievement indices (when looking at the means and standard deviations). Participants in this study were selected because they represented examples of academic success. Therefore, GPA's were relatively high among all participants.

The fourth research question asked what combination of basic need satisfaction scores (autonomy, relatedness, and competence) were the best predictors of academic

success (HS GPA and college GPA). The results of multiple regression analysis used in this study showed no statistical significance, thus the results did not indicate that the satisfaction of any of the needs were good predictors for GPA either in college or high school. Similarly, regression analysis showed no significant difference in the correlations between need satisfaction in college and college GPA. Thus, it was concluded that for the population in this study, need satisfaction in college was not a good predictor of college GPA. These findings were not consistent with those made by Grolnick and Ryan (1987), who suggested that autonomy plays the most important role in academic performance (recall). Similarly, Deci, Hodges, Pierson, and Tomassone (1992) found that for children between the ages of 8-14, self perceptions of competence played a central role in predicting achievement and adjustment for children with learning disabilities, and autonomy was central for children with emotional handicaps.

Although the results from this study were not consistent with those from other similar research (Grolnick and Ryan, 1987; Deci et al, 1992), this sample has a restricted range due to the fact that it is a specialized group. Participants in this study represented examples of academic success, therefore, they already had high GPA's. This may have limited the findings concerning the predictability of need scores and GPA. For future studies, it might be important to include a wider range of participants in the sample. In other words, rather than only including students who demonstrate academic success (that is, high GPA, high school graduation, and college enrollment or recent graduation), it would be useful to sample students who dropped out of high school, or who did not enroll in college.

Research Questions 2, 3 and 5

According to SDT, satisfaction of the three basic needs (autonomy, competence, and relatedness) promotes psychological well being. Two scales, Ryff's (1989) Psychological Well Being inventory (PWB), and Diener's (1984) Satisfaction With Life Scale (SWLS), were used to measure well being in this study. Two instruments were selected to measure well being because each instrument asks different questions, and complements the another. Past research suggests there are two forms of well being: hedonic and eudaimonic (Ryan and Deci, 2001; Pavot and Diener, 1993; Ryff, 1989, etc.). Ryan and Deci (2001) noted that previous research suggests that well being is probably best conceived as a multidimensional phenomenon that includes aspects of both the hedonic and eudaimonic conceptions of well being. The PWB inventory is based upon the eudaimonic viewpoint, and focuses on psychological well being, which is defined more broadly in terms of the fully functioning person. The PWB inventory is divided into six subscales including autonomy, environmental mastery, personal growth, self acceptance, positive relations with others, and purpose in life. On the other hand, the SWLS is based upon the hedonic viewpoint, which focuses on subjective well being, which is often equated with happiness. Ryan and Deci (2001) defined it as "more positive affect, less negative affect, and greater life satisfaction" (p. 161). Unlike the PWB inventory, the SWLS does not assess satisfaction within specific domains. It is a narrow band instrument, intended to assess the cognitive, rather than affective component of subjective well being. The SWLS assesses global judgments of individuals' lives, whereas the PWB assesses specific domains.

The second research question aimed at answering whether or not there was a

positive relationship between the need satisfaction subscales (autonomy, relatedness, and competence) and PWB scores. The results of this study indicated positive but non significant relationships between competence and PWB scores, and negative but non significant relationships between both relatedness and autonomy on PWB scores. The third research question examined whether or not there was a positive relationship between the need satisfaction subscales (autonomy, relatedness, and competence) and SWLS. The results of this study indicated that there was a positive but non significant relationship between need satisfaction subscales and SWLS. The fifth question examined the combination of basic need satisfaction scores (autonomy, relatedness, and competence) and determining which were the best predictors of psychological well being scores. The multiple regression analysis indicated that basic need satisfaction scores in college were not good predictors of either PWB or SWLS scores in the population under study. These findings do not support earlier findings by Ryff and Singer (2000), who found that having positive relations with others was essential for well being. The lack of significant relationships may be a result of the lack of variance in the sample. The well being measures had high means and small standard deviations. In addition, although it is available in several languages, including Dutch, French, Russian, Korean, Hebrew, and Mandarin Chinese, the SWLS has not been normed to Native Americans or Alaska Natives. Therefore, the results of the multiple regression analysis in this study, which indicated that the satisfaction of the three basic needs were not good predictors of scores on the SWLS, may have something to do with the appropriateness of cross cultural application of the SWLS.

Although non significant, the strongest correlation was between competence and

SWLS, and the second strongest correlation was between relatedness and SWLS. Although these results did not indicate that relatedness had the *strongest* correlation to satisfaction in life ratings, results did indicate that they had the *second strongest* relationship. These results support earlier research by DeNeve (1999), who suggested that out of all factors that influence happiness, relatedness is at, or very near the top, of the list.

Other findings

Although not part of the original research questions, other interesting findings emerged. The following section describes some of these discoveries.

Subscales of PWB

The PWB inventory, developed by Carol Ryff (1995), has six dimensions that cover a broad view of wellness. The six constructs are self-acceptance, positive relations with others, autonomy, environmental mastery, purpose in life, and personal growth. These subscales not only *define* PWB but specify *what promotes* emotional and physical health. Participants in this study scored the highest on the "personal growth" subscale of PWB, second highest on "purpose in Life," third highest on "autonomy," the second lowest on "positive relations with others" and the lowest in "environmental mastery." My findings were similar to those made by Ryff (1995), who found that as a whole, Americans scored the highest on "personal growth," and ironically, the lowest on "autonomy." However, contrary to her findings, participants in my study scored the second highest in "purpose in life" and the lowest in "environmental mastery" rather than autonomy.

According to Ryff (1995), high scores on "personal growth" indicated that

individuals in this study "had feelings of continued development, viewed themselves as growing and expanding, were open to new experiences, had a sense of realizing their potential, saw improvement in their selves and behavior over time, and were changing in ways that reflected more self knowledge and effectiveness" (p. 107).

In this study, the second highest scores of PWB subscales were in the "purpose in life" category. According to Ryff (1995), individuals who score high in the purpose in life subscale, "have goals in life and a sense of directedness; feel there is meaning to present and past life; hold beliefs that give life purpose; and has aims and objectives for living" (p. 101).

The third highest scores among participants in this study were on the autonomy subscale within PWB. According to Ryff (1995), individuals who score high on the autonomy subscale are "self determining and independent; able to resist social pressures to think and act in certain ways; regulate behavior from within; and evaluate self by personal standards" (p. 101). According to Ryff (1995), there has been much discussion regarding contrasts between cultures that value individualism and those that value collectivism. Ryff (1995) noted these ideas suggest that the more self oriented aspects of well being, such as self acceptance or autonomy, might have greater importance in our Western culture, while the dimensions of well being that deal with the "others-oriented dimensions of well-being" might have greater significance in collectivist cultures (p. 102).

In this study, participants scored the lowest on "environmental mastery." According to Ryff (1995), a person who scores high in environmental mastery "has a sense of mastery and competence in managing the environment; controls a complex array

of external activities; makes effective use of surrounding opportunities; and is able to choose or create contexts suitable to personal needs and values" (p. 101). In contrast, an individual who scores low on environmental mastery "has difficulty managing everyday affairs; feels unable to change or improve surrounding opportunities; and lacks sense of control over external world." The low scores made by participants in this study may be reflective of general feelings regarding perceived inabilities to manage or control one's general environment. For example, many participants expressed feeling a sense of frustration or helplessness over things in their environment that they had very little or no control over. These environmental factors included language barriers, having "no say or input" in academic settings, poverty/financial problems, family problems (spousal abuse, being abandoned by parents and left to raise siblings), addiction, and discrimination (either gender or ethnic based). Interestingly, scores on autonomy were not the lowest among participants in this group, but rather, ranked third, after purpose in life.

Gender and High School GPA

The results of this study revealed a significant difference between the sexes and high school GPA, with females scoring higher than males. These results were consistent with earlier research suggesting females make better grades and score higher on creativity measures than males (Stephens, Karnes, and Whorton, 2001; Lewin, 2006). Differences can be seen as early as the third and fourth grade among Choctaw children, where girls obtained higher scores than boys with significant differences in Originality and Creative Index scores (Lewin, 2006). Furthermore, regardless of race or socioeconomic group, women are far more likely than men to get bachelor's degrees, and women get better grades than men (King, 2000; Whorton, 2001).

Another interesting discovery was the significant difference found in age groups and college GPA. There was a significant difference found between age groups one (19-30 yrs) and three (43-55 yrs), with those in age group one having the lowest GPA's. These results support other research which suggests that older students tend to perform better in college (Owens, 2003). Although some students enter college around age 18, others either wait to attend college, or return in their 30s and beyond. Since 1970, the number of students over 25 years of age entering American higher education institutions has increased from 28% to 44% (U.S. Department of Education, 1996). Older students tend to be more mature, and less interested in pursuing social interests that might interfere with college performance.

In addition to significant differences in age groups and college GPA, there were significant differences found between the sexes and needs in college. Males scored lower than females on all three needs in college. Research indicates that males have a lower college completion rate than females (King, 2000; Lewin, 2006; and Stephens et al, 2001). For males, the low college completion rate may have something to do with lower need satisfaction in college. Although the results of this study showed significant differences between the sexes and basic needs in *college*, it did not show significant differences between the sexes and need satisfaction in *high school*. This may be a result of the partially reflective nature of the surveys. Participants were currently either in college or had recently graduated, and were asked to complete the surveys for high school by reflecting back to their high school experiences. Thus, the high school memories for need satisfaction may not be as accurate.

Gender and Well Being

Although this particular study did not reveal any significant differences between age groups and PWB scores, the results of this study were consistent with some of Ryff's findings. Ryff's (1995) research identified a pattern of significant differences between age groups and ratings of well being. Ryff found that measures for personal growth decreased with age, and autonomy increased with age. In addition, she found that women of all ages consistently rated themselves higher on positive relations with others than do men, and that women tend to score higher than men on personal growth. The results of my study did not reveal any significant differences between the sexes and scores on PWB subscales.

Qualitative

Research question #6: Contributors to academic success

The sixth research question attempted to identify contributors to students' academic success in high school and college. The answer to this question was found by asking students two open ended questions. The first question was, "What factors do you feel contributed the most to your decision to stay in high school." The second question was, "What factors do you feel contributed the most to your decision to stay in college?" In addition, results from the paired samples t tests provided supporting evidence for the answers to these questions.

High School

When asked, "What factors do you feel contributed the most to your decision to stay in high school?" the analysis of qualitative data revealed two major themes. These two main themes were "relationships with others" and "competence." In particular, relationships with family, followed by those with friends, teachers, counselors, and

coaches played major roles in participants' efforts to stay in high school and put forth the necessary effort to succeed. An additionally interesting find was that these relationships influenced students' success in two ways. For some students, family and tribal members were supportive and acted as positive influences through their encouragement. This was particularly evident through parents' involvement. Parental support ranged from verbal encouragement and direction (such as "Parental direction to get as much education as possible."), positive modeling (such as, "Both parents finished school and desired the same for their children," and "Both of my parents graduated from college and I never thought about not finishing high school and going to college."), to influencing the school environment itself (such as, "My parents sent me to a private boarding school away from the reservation and its influences.").

However, for some students, family members acted as very negative models. For example, one student gave the following reason for staying in high school: "The fact that both of my parents are incarcerated and I wanted to turn out better than they did, for me and my family." Similarly, another student wrote, "Neither of my parents completed high school and pushed me toward that goal. I wanted to get a better job than my parents had." In these cases, it appears that individuals did not adopt the values of their parents, but rather, the values of the dominant culture. This observation, that parents/family can have such a strong negative influence on individuals, motivating them to want to become the very opposite of what was modeled by family members, is interesting. Phinney, Dennis, and Osario (2006) found a similar trend among minority college students. Phinney et al. (2006) noted that minority students frequently reported being told that they should not aspire to go to college by high school counselors and parents. Rather, they were

encouraged to go to vocational school or work. Students who *did* want to attend college frequently reacted to these negative messages by wanting to prove wrong, those who tried discouraging them.

The discovery of the role of relatedness on students' success in high school is fascinating on several levels. First, it is interesting because most of the existing research on self determination and the role of needs, suggests that competence and autonomy play the most important role, and relatedness plays a more distal role (Deci and Ryan, 2000). Self determination theory hypothesizes that although intrinsic motivation will be more likely to flourish in contexts characterized by secure relatedness, there are situations in which relatedness is less central to intrinsic motivation than autonomy and competence (Deci and Ryan, 2000). However, results from the qualitative data in this study, as well as supporting evidence from the paired samples t tests (see below) indicated that for participants in this study, who were successful in school, a sense of relatedness to school through relationships with coaches, peers, counselors or family was important. Among this sample of successful students, scores on the need for relatedness were high for students in high school. Future studies are needed to determine whether or not this is a developmental statement, a cultural statement, or part of the success element.

According to Oishi, Diener, Lucas, and Suh (1999), cross-cultural researchers have long recognized that the types of goals people pursue differ across cultures. For example, Sheldon, Elliot, Kim, and Kasser (2001) noted that in South Korea, the single most important need to satisfy appeared to be relatedness, and concluded that "although all humans may need certain experiences to be happy, it appears that different cultures may emphasize or condone some experiences more than others, leading to meaningful

variations within the basic set" of needs (p. 335).

Historically, the Native American culture has been considered a collectivist culture, and in collectivist cultures, the goals that individuals pursue are often shared by in group members. In these cultures, achieving one's goals also means meeting parental and familial expectations. The results from this study indicated that participants pursued educational goals that were often shared by family members. Similarly, Iyengar and Lepper (1999) noted that those who belong to more collectivist cultures strive for interconnectedness and belongingness with their social groups, and seek to maintain harmony through fulfilling the wishes of the group members. However, according to self determination theory, this kind of motivation is extrinsic, although it may be an example of a more self determined regulatory style. In other words, in the case of identified regulation, the behavior is personally valued as a result of one's having identified with the underlying value of the activity. Thus, the individual has begun to incorporate the value of the activity into one's sense of self. Or, in the case of integrated regulation, it is the result of the integration of identified values and regulations into one's coherent sense of self.

Participants in this study also credited their relationships with teachers, counselors, coaches and peers as contributing to their academic success in high school. A good example of this is found in the following statement made by a participant in this study that she, "participated in sports and that was a huge motivator to excel in school. (Her) coach emphasized and demanded academic excellence. She would do grade checks on us every week even when we weren't in season." Similarly, another student expressed that her academic success in high school was due in part, to her "Native American

counselor, a few great teachers and encouragement from friends and heritage clubs." These responses are consistent with previous research which discusses the influence that instructors can have on the amount of academic effort students exert (Hirschy, 2002; Coldbeck, Cabrera, & Terenzini, 2000). Ryan, Stiller, and Lynch (1994) found greater intrinsic motivation among students who described their teachers as being warm and caring. Similarly, Deci and Ryan (2000) suggested that secure relational bases provide a backdrop, or distal support, for intrinsic motivation. In other words, secure relational bases provide a sense of security, which is needed for exploration and motivation. Not only does the need for relatedness energize exploration, but it also interacts with the other two needs, autonomy and competence. The results of this study supported the work of Ryan, Deci, and Grolnick (1995) who suggested that people often participate in activities to strengthen their connections to others. Reis, Sheldon, Gable, Roscoe, and Ryan (2000) identified seven behaviors that resulted in feelings of relatedness. These included: a) communicating about personally relevant matters; b) participating in shared activities, c) having a group of friends to spend social time with; d) feeling understood and appreciated by others; e) participating in enjoyable activities; f) avoiding arguments with others; and g) avoiding feelings of insecurity that direct attention on oneself and away from others.

Competence was the second general theme that emerged as being a contributor to the academic success of students in high school. Deci and Ryan (2000) suggested that the optimal circumstances for intrinsic motivation are those that promote the satisfaction of the needs for autonomy and competence. Specifically, they suggested that perceived competence is necessary for any type of motivation, but perceived autonomy is required for intrinsic motivation. The results of this study revealed that competence played an

important role in the academic success of students in high school. The theme of competence in the results of this study were further categorized into academic competence and future financial competence. Furthermore, responses regarding competence varied along the continuum of extrinsically motivated behaviors. Some students' responses, such as, "I would never have thought about quitting because I would have felt like a failure," and "High school was too easy not to finish," indicated introjected regulatory styles (i.e., behaving in a certain way because one thinks one should, or out of guilt). Introjection refers to a lesser degree of internalization in which a value or regulatory process is taken in but not accepted as one's own. Other student responses such as, I knew I needed a high school degree," or, "I wanted to learn and I wanted to succeed" were more indicative of identified and integrated regulatory styles (ie, behavior is not only personally valued, but incorporated into one's sense of self). Whereas identification results in a sense of personal endorsement of one's actions, introjection is a controlled form of behavior regulation that is accompanied by feelings of pressure or compulsion.

Upon first glance, the reasons given by students in this study for staying in high school seem to be more extrinsically motivated. However, answers ranged along the SDT continuum, from external to more identified and integrated regulatory styles. Without conducting longitudinal studies, it is impossible to know how the differences along the SDT continuum influence the academic performance of these participants' college career. However, longitudinal research by Koestner and Losier (2002) showed that students who had introjected regulatory styles, and pursued their education because of internal pressures related to guilt avoidance and self esteem maintenance, showed a pattern of

greater psychological distress as they made transitions from high school to college, or graduated college. Furthermore, the impact of introjected academic regulation was not restricted to school related emotions but generalized to global adjustment as well.

Results from paired samples t tests supported the qualitative findings regarding the emphasis of different needs in high school. Paired samples t tests revealed significant differences between need scores in high school. Specifically, the results indicated the mean for the satisfaction of the need for competence in high school was significantly greater than the satisfaction of the need for autonomy in high school, and that the need for relatedness in high school was significantly greater than the mean for the satisfaction of the need for autonomy. Between the three needs scores, the relatedness scores were the highest, followed by competence and then autonomy.

This was an interesting discovery because in the majority of the research on SDT, the need for relatedness is seen as playing a more distal role than the other needs (Andersen, Chen, & Carter, 2000; Deci & Ryan, 2000). Deci and Ryan (2000) assume a basic need for relatedness, but stress that it has a limited role, and suggest that relatedness needs affect adults only indirectly. Rather, the fulfillment of psychological needs for competence and autonomy play the most important roles in daily well being (Sheldon, Ryan, & Reis, 1996). However, the results of this study indicate that for Native American high school students, the satisfaction of the need for relatedness played a very important role in high school, and it leads one to wonder how vital it was in the decision these students made to complete high school.

Anderson et al. (2000) disagree with Deci and Ryan regarding the importance of the role of relatedness. They argue that people are continuously being socialized during

adulthood, and romantic partners, friends, mentors, coworkers, and others, including spouses and children, all provide new socialization experiences. In addition, they posit that people have a continued need for warmth and tenderness from others, and to express the same, and this need is profoundly influential in adulthood as well as childhood.

Although past research suggests the roles of autonomy and competence as being primary (Deci & Ryan, 2000), and the role of relatedness being more distal, participants in this study indicated that relatedness played a central role in their academic success in high school. Autonomy was not really identified on its own, but more subtly implied as being related to competence. Specifically, it was important for students to show their family that they were competent and it was also important to find higher paying jobs. A high school degree was seen as a way of meeting those goals, and offering a sense of choice in the future. The differences between the results of this study and those of previous studies may have cultural explanations. Deci and Ryan (2000) noted that there is considerable variability in the values and goals held between different cultures, and some of the ways in which needs are satisfied may differ considerably from one culture to the next. It was suggested individuals from collectivist cultures lean towards group norms. Thus, acting in accordance with group norms actually leads to the satisfaction of relatedness and autonomy needs, because individuals from collectivist cultures have fully internalized the collectivist values of their culture. This is in contrast to those from individualist cultures. People from individualistic cultures may view acting within a group norm as being restrictive or confining, thus a threat to autonomy. Again, Native American cultures have historically been viewed as collectivist cultures, and this may sensitize needs to relatedness, but the of this study, indicating that need satisfaction for

relatedness was high, may be due to the fact that this was a specialized group. Specifically, the sample consisted of Native American students who demonstrated academic success through GPA, high school graduation, college enrollment or recent graduation from college. Further research is needed to determine what, if any, role collectivist cultural values play in the need for relatedness in Native American students' academic success.

The results of this study, showing the role of relatedness and competence in the high school setting for Native American students has potentially important implications. Ryan, Deci, and Grolnick (1995) pointed out that the three needs (autonomy, competence, and relatedness) not only help explain intrinsic motivation, but provide an account of why various contextual conditions support (versus thwart) intrinsically motivated behavior. Conditions that allow satisfaction of the three needs support intrinsic motivation, whereas those that inhibit their satisfaction undermine intrinsic motivation. Thus, the information from this study could be applied to create high school environments that better meet the needs of Native American and Alaska Native students. The participants in this study represented examples of "successful Native students." For these students, relatedness played a central role in their academic motivation in high school. A longitudinal study by Lan and Lanthier (2003), found that among high school dropouts between 8th grade and 12th grade, relationships with teachers, perceptions of school, motivation in school work, and participation in school activities were significantly below the national average in the 10th and 12th grades. Perhaps if school environments can better satisfy needs, in particular the need for relatedness, motivation can be promoted, and attrition rates among Native students will decrease.

Other researchers also have stressed the importance of relatedness in the school environment. Dewey (1926/1966) emphasized education as a "vitally social or vitally shared experience, through which social groups maintain their existence" (p. 6). Similarly, Osterman (2000) suggested that a sense of belongingness/relatedness could be met by promoting a sense of community in schools. Community, according to Osterman (2000), exists when its members experience a sense of belonging or personal relatedness. Furthermore, members of a community share an emotional sense of connection, and feel that the group will not only satisfy their needs, but they will be cared for or supported by the community.

Intuitively, it makes sense that need satisfaction in high school contributes to the individual's success and completion of high school. The results of the paired samples t tests confirmed what students were saying about contributors to their academic success in high school: that relationships and competence played important roles. In addition to parental influence, participants in this study mentioned the influence of teachers, peers, coaches and counselors, all within the school environment. This supports past research by Reis et al. (2000), who found that on days that individuals reported feeling understood and appreciated, as well as talking about meaningful matters during social interactions, they also felt most closely connected with others. In addition, hanging out with others, doing pleasant or fun things, and avoiding self consciousness also went along with relatedness. High school can be a time of intense social bonds for students. Developmentally, it is a time when relationship with peers becomes increasingly important, and friendships formed during the high school years can end up being lifelong. The results of this study indicate that the needs for relatedness and competence both

played important roles in the academic success of this group of participants. This may be an important factor to consider while striving towards creating high school environments that promote academic success for Native students.

College:

When students were asked, "What factors do you feel contributed the most to your decision to stay in college and put forth the necessary effort?" three main themes emerged: competence, relationships with others, and flexibility/choices in life (autonomy).

The most common theme that emerged when reviewing the qualitative data regarding reasons for staying in college and putting forth the necessary effort, was relationships with others. In addition, these relationships served as either positive or negative models. What is interesting about the results concerning the role of relationships with others is that participants in this study indicated relationships played a very important role in academic success both in high school and college. Results of paired samples t tests revealed that relatedness was identified as the primary need in high school, and as the secondary need in college. These results support earlier research by Sheldon, Elliot, Kim and Kasser (2002) showing that in South Korea, a collectivist culture, the single most important need to satisfy was relatedness. For participants in this group, different types of relatedness were revealed, including relationships with family, peers, teachers, tribal members, and coaches. Some individuals expressed the motivation to do well in college because of the encouragement they received from family members, friends, or coaches, while others indicated that it was their desire to "give back to others" or their relationship with God that energized them to continue. SDT assumes that all

cultural practices are learned through the various forms of socialization. However, these learned norms translate into motivational energy only if people internalize the meanings and values behind these norms and practices (Chirkov, et al., 2005). The findings of this particular study support the statements made by Chirkov et al. (2005) in that students in this study often attributed their academic success to family, peers, counselors, teachers, and tribal members. In the majority of cases, these esteemed others valued an education. Thus, their values were taken in and incorporated into students' sense of self.

A fascinating phenomenon was identified among students and their attributions for success in school. When reviewing the reasons given for academic success in college, the three themes of competence, relatedness and autonomy emerged. However, within the categories of relatedness students were doing something interesting. Rather than being motivated by only the encouragement or positive modeling of family or community, (such as, "It was my personal desire as well as that of my parents to finish college and obtain a degree" and "Since I was little, my father instilled in me the importance of a college degree. I always knew I would receive my degree even if it took a while…") some students were motivated by wanting to become the opposite of what some family or community members represented. Evidence for this was seen in participants' statements such as, "Neither of my parents finished school. I wanted to get a better job than my parents had," and "As I began doing research on Native Americans and post-secondary education, I began to realize there were low post secondary graduation rates among Native Americans, and decided I wanted to go beyond that." In other words, some family or community members were seen as being encouraging and supportive, inspiring students to succeed, and to please parents. However, in other cases, students viewed

family or community members as something negative, and as something that students did not want to become. Thus, the theory of possible selves may come into play.

According to Markus and Nurius (1986), possible selves represent ideas of what individuals might become, either positive or negative. In other words, possible selves are perceptions of what a "student might become, what they want to become, or what they are afraid of becoming" (p. 954). Often, these possible selves are results of social comparisons contrasted to those of others in their lives. Markus and Nurius (1986) pointed out that unwanted possible selves are often tied to painful images. For example, one student wrote that she put forth the effort necessary in college because, she "wanted a better life for (herself) than a reservation life." And another student wrote, "Both of my parents were incarcerated and I wanted to turn out better than they did, for me and my family." These examples represent possible selves of what students were afraid of becoming. Similarly, other comments made by students represented how competence and relatedness worked together to form a possible self that the individual could become and wanted to become. Markus and Nurius (1986) suggested that individuals' self knowledge of what is possible for them to achieve acts as a motivator because it serves to frame behavior and guide its course. For example, one student wrote, "Since I was little my father instilled in me the importance of a college degree. I always knew I would receive my degree even if it took a while. I have two kids of my own, they need to know that a degree is important to get ahead in the world. My husband is working on his Master's degree and soon so will I."

For the participants in this study the relationships they had with "others" was not limited to relationships with other people. For some students, it was their relationship

with God that provided the necessary strength and motivation to overcome barriers in life and to put forth effort and stay in school. This is best demonstrated by the following two statements. “Hard work and a lot of praying is how I overcame…,” and, “All of my success has been done through hard work, practice, and faith in the Lord.” These findings support earlier research by Whitbeck et al. (2001), who found that spiritual and cultural factors were important in fostering Native student resilience, leading to academic success. Similarly, Graham (2001) found a positive correlation between students who reported being spiritual and their competence in school. In addition, qualitative research by Evans (1997) found that students on the Great Basin reservation strived to follow the “right path,” which was made easier by a belief in God or the Creator.

The results of this study revealed that for some students, a close relationship with God contributed to academic success in college. These findings support earlier work by Graham (2001), who found that spirituality reported by adolescent students was related to competence in the school environment. Other researchers have found spirituality to play a contributing role to the academic success and resilience of Native students as well (Coggins, Williams, & Radin, 1997; Jackson, Smith, & Hill, 2003; Strand & Peacock, 2002). Whitbeck et al. (2001) suggested that spirituality was too often overlooked in the assessment of Native students, as it is an essential dimension of American Indian culture. Coggins et al. (1997) found that culture plays an important role in the educational process, and maintaining traditional AI values, is associated with higher grades and lower dropout rates. According to Coggins et al. (1997), traditional American Indian values can be demonstrated through participation in things like traditional ceremonies and being a member of a strong family. Similarly, Whitbeck et al. (2001) described enculturation as a

construct that included involvement in traditional AI activities, identification with AI culture, and traditional spiritual involvement. Whitbeck et al. (2001) measured involvement in traditional activities by involvement in pow-wows, use of tribal language, and involvement in other traditional activities, such as weaving or beading (Whitbeck et al., 2001).

Although enculturation was not the focus of my study, about one third of the participants indicated participating in traditional Native American activities, including pow-wows, speaking or learning native languages, sweatlodges, etc. (see Table 3). Participation in these activities may promote a stronger sense of relatedness to the culture and tribal members. Previous research that has examined the effects of enculturation on academic success and psychological well being have been mixed. Past research that examined the effects of traditional culture on academic performance may be grouped into two very broad categories, First, the traditional culture may function as a protective mechanism. Second, it may result in cultural discontinuity that occurs when American Indian students are thrust into an intensive socialization environment that contradicts their traditional values, and emphasizes those of the main culture instead (Whitbeck et al., 2001).

While some studies have found that higher levels of enculturation into the traditional American Indian culture were more strongly correlated with dropping out of school (James, Chavez, Edwards, & Oetting 1995; Brady, 1996), others have found that identification with traditional culture served as a resilience factor, and was associated with pro-social behaviors (Hornett, 1990; Whitbeck et al., 2001; Zimmerman, Wahienko, Walter, & Dyer, 1994; Strand & Peacock, 2002; Jackson, Smith, & Hill, 2003). The first

set of findings (those that correlate enculturation to higher dropout) suggest that enculturation promotes cultural discontinuity. That is, when a minority child is raised in a unique cultural environment, and is later thrust into a school system that promotes the values, communication, and learning styles of the dominant culture, it results in confusion, and ultimately higher dropout rates. In contrast, the latter findings that enculturation promotes academic resilience, are based on the idea that a positive cultural identity contributes to a sense of efficacy and self esteem. This higher sense of self esteem may protect the individual in an environment that promotes values contrary to his or her own. In turn, this sense of resilience increases academic success. From this perspective, traditional culture instills students with pride in cultural heritage and gives them the direction they need to negotiate their way through the cultural contradictions they experience when attending schools based on the dominant white culture (Zimmerman, 2001). Cleary and Peacock (2003) found that American Indian children interviewed from across the United States and Canada reported a connection to tribal culture as a reason for their decision to stay in school. Feeling good about their tribal culture was a consistent theme among these students, who talked about their ability to feel comfortable living in both worlds (the Native community and the mainstream schools).

Again, although enculturation was not the focus of this study, self determination theory may provide explanation for the seemingly contradictory findings regarding enculturation and academic success. According to self determination theory, motivation ranges from amotivation to intrinsic motivation, with four levels of extrinsic motivation lying between amotivation and intrinsic motivation. According to this self determination

continuum, the four levels of extrinsic motivation range from external, introjected, identified, and integrated regulation. These levels of motivation reflect differing levels of internalization of behaviors or values. In other words, a person's adherence to external influences may reflect mere obedience or coercion, or it might represent a reflective valuing of the direction or guidance that these inputs provide. Identified and integrated regulatory styles are the most self determined levels of extrinsic motivation, and although not intrinsic, are the two forms of extrinsic motivation that most closely resemble intrinsic motivation. Perhaps the ability to live successfully in two worlds is based upon how internalized external influences and values have become. Studies that have found enculturation related to higher levels of school dropout may reflect lower levels of internalization of the values from both cultures. These students may have internalized the values of the traditional culture, but not those of the dominant culture. As a result, they may be experiencing more introjected regulatory styles, causing them to struggle with anxiety and feelings of guilt, if they do try to embrace the values of the dominant culture.

However, studies that have found enculturation increases resilience, may reflect more self determined regulatory styles (either identified or integrated regulation) or even intrinsic motivation. In other words, these students may have successfully internalized the values of both their traditional American Indian culture, as well as those of the dominant culture, successfully integrating both into their sense of self. Additional research is needed to determine how well self determination theory explains the seemingly contradictory findings regarding the role of enculturation on academic success and resilience.

The second most common theme that emerged in college was the decision to stay

in college in order to show competence (primarily in order to show competence in one's career or chosen profession, but also in academics). The theme of competence is supported by statements such as, "I dropped out of college for thirty years before coming back to finish. Since I had waited so long to return, I wanted to do my best and succeed," and "I wanted to succeed in life, and I knew getting a good education was vital." Others wrote that they put forth the necessary effort in college in order to gain a "sense of pride" and "respect." For example, one student said that he stayed in college because he wanted to "escape poverty and prejudice." However, reasons to obtain this success varied. Some students were motivated to finish college for "money and respect" or "the need to find a successful career," indicating more extrinsic goal orientations (those for financial success, image, and fame). Other students indicated more intrinsic goals (those for personal growth, emotional intimacy, and community involvement) in comments such as, "I wanted to finish my education so that I could give back to others…I want to help others who have less than I did, and provide guidance and encouragement to those who may not have it." Past research has suggested that well being is enhanced by the attainment of intrinsic goals, whereas extrinsic goals provided little benefit (Sheldon & Kasser, 1990; Kasser & Ryan, 2001). Ryan and Deci (2000) suggested that there are several factors that may cause individuals to focus on more extrinsic goal pursuits. These include exposures to commercial media (increasing the desire for materialism), or deficits in need fulfillment. For example, Kasser, Ryan, Zax, & Sameroff (1995), found that poor caregiving sometimes increases the desire for material things as a means of compensation.

Many students wanted to finish college because they felt it provided the necessary

skills they needed to help others. For example, one student wrote, "What has driven me to continue my education is the fact that I do not like the world as it is and by getting my education I hope to change the world a little at a time." Responses made by a couple of students demonstrated a combination of competence and relatedness. For example, one student wrote, "The factor that has influenced me the most to stay in college is the knowledge and the status it will give me to change the world." Another student stated,

> "I wanted to finish my education so that I could give back to others. It is important to me that I have a career that is meaningful and makes a difference. I want to give help (to) others who have less than I did." And, "I would like to be able to turn around and help other Natives to do—and want to do—the same thing."

Similarly, another student wrote, "I always wanted to finish college, but my children's future is what makes me determined to complete my education."

These findings support past research that identified the role that competence plays in achievement and adjustment (Deci et al., 1992; Reis et al., 2000). However, other research suggests that rather than the combination of relatedness and competence, it is the combinations of competence and autonomy or relatedness and autonomy that play more important roles in academic motivation and achievement. For example, Deci, Vallerand, Pelletier, and Ryan (1991) felt that competence was important as a prerequisite for motivation, but that it is not a sufficient condition for intrinsic motivation or self initiation. They used the example of an individual who might be highly competent and highly motivated, but who is regulated externally or by introjects, thus not self determined. Similarly, other research (Vansteenkiste, Simons, Lens, Soenens, & Matos,

2005; Chirkov & Ryan, 2001) has suggested that autonomy develops best when students feel a sense of relatedness or closeness to adults and encourage autonomy through autonomy supportive learning environments (in other words, those that are not viewed as being controlling).

Phinney et al. (2006) suggested that cultural values are likely to influence the reasons that people have for attending college. While students from individualistic cultures are likely to be motivated by self-focused desires to achieve individual standards of excellent, those from collectivist cultures are likely to be motivated by the needs and demands of others. Phinney et al. (2006) pointed out that adolescents from ethnic minority groups tend to be from lower socioeconomic backgrounds and tend to have parents who did not attend college. Because of this, these youths are less likely to attend college, but if they do, individuals from lower socioeconomic groups will have more to gain if they succeed in college. It was further suggested that young people who watch their parents struggle with poverty, may desire to gain an education in order to help their family financially (Phinney et al., 2006). Similarly, Fuligni (1997) found that adolescents from immigrant families had a stronger emphasis on education than those from non-immigrant families.

The third theme that arose as a response to staying in college and putting forth the necessary effort, was perceived choices or autonomy. Autonomy was expressed in two general ways. First, the college environment was seen as offering more autonomy. For example, one student wrote, “I found college was different from high school in that you did have autonomy. I could learn about subjects and issues I found relevant,” Other students credited flexibility in course selection to their decision to stay in college. This is

seen in statements such as, “I could choose my own major, so although I have to take required courses that I do not enjoy (English), I have more choice in my classes.” Similarly, another student wrote, “Once I had a choice in the classes I took, I fell in love with learning. I took classes that I was interested in and it pushed me not only to attend, but to do well.”

For many students, a college degree was perceived as enabling more flexibility and choices regarding career and lifestyle. Not only did the college environment itself offer more choices (in terms of schedules, coursework, time spent in class, etc.), but many participants expressed that earning a college degree would offer more flexibility in their future lifestyle. Staying in college was a means to an end, but it was something that they felt would ultimately provide them with more choices in the future. This is best demonstrated by the following statement made by a participant. “I wanted a better life for myself than a reservation life. I wanted to ensure a much better future for my children than what I had.” Similarly, another participant wrote that the thing that contributed the most to his decision to stay in college was that he felt he would “have more choices in employment.” In addition, students indicated feeling that in the college environment, they “had more choices regarding classes” and “did not have to be around people they did not like.” Results of the paired samples t tests supported the qualitative findings. The paired samples t tests revealed that there were significant differences in the satisfaction of needs in college, and the need for competence in college was significantly greater than the satisfaction of the need for relatedness, and that the mean for the need of competence was significantly greater than the mean for the satisfaction of the need for autonomy in college. In the college environment, the mean scores for competence were the highest,

followed by relatedness, and then autonomy. This is interesting because while the need for relatedness was the highest in high school, the need for competence was the highest in college. Competence may increase in college because students are able to select courses that they are interested in, resulting in more effort. Additionally, for many, college is often taken more seriously than high school.

The results of paired samples t tests which examined mean differences of need satisfaction between high school and college indicated that the mean for the satisfaction of the need for competence was greater in college than in high school, and a significant difference between the need for autonomy showed a greater satisfaction of this need in college than high school. Although the mean for the need for relatedness was slightly higher in high school than in college, the results did not indicate any statistical significance in the difference between the means for relatedness in high school and college. However, it is important to note that the means stayed relatively high in both high school (m=4.93) and college (m=4.87). The means for competence in college was the highest (m=5.4), followed by relatedness (m=4.9) and autonomy (m=4.7). What is interesting is that there was a significant difference between autonomy measures in high school and college, as well as a significant difference between the measures of competence in high school and college. Relatedness measured high in both academic levels, but rather than taking precedence as it did in high school, competence became the primary need in college. Furthermore, autonomy measures showed a large increase from high school to college.

Research questions #7: Barriers to academic success

The final question asked students about perceived barriers to academic success in

high school and college. The following open ended question was posed to students: "Did you feel that you had any barriers to your success in school? If so, please explain what they were and how you overcame them." Results revealed three main themes: relationships with others; competence/self-efficacy; and perceived lack of choices.

Relationships

Results indicated that participants viewed relationships with others as being a particularly strong barrier to academic success. Initially, this finding was surprising, since participants had credited family and relationships with others having such a huge influence on academic success in both high school and college. However, upon further reflection, it made sense that if family and relationships with others could have such a strong influence on success, it could also have the opposite affect, posing as a barrier to academic success as well. Family was credited as having the most influence, followed by relationships with friends, peers, and professors. Upon closer examination, interactions between relationships and autonomy had an interesting influence on perceived barriers to academic success. Participants in this study often expressed resentment towards family members if they were viewed as being non supportive, or if family members restricted their choices. For example, one student wrote, "My parents should have pushed me hard from the beginning of school…" and another wrote, "I was not pushed enough by my parents." Still another student echoed feelings about how family members represented barriers to academic success when she wrote, "My parents, although great parents, neither attended college. This handicapped me and it wasn't until I almost lost all of my opportunities in college that I realized what was happening." These findings support the work of Hirschy and Wilson (2002), who noted evidence of differences regarding

persistence rates of students whose parents did not attend college versus those students whose parents did attend college, showing that students whose parents attended college had showed more persistence.

Some students expressed feeling that family members restricted their choices through neglect or abuse. For example, one student wrote,

> At the age of 16 my mother left me with my two sisters to raise. Hard work and a lot of praying is how I overcame that. When I finally enrolled into college my two sisters were grown, but at that point I had two children of my own, and a husband who was abusive, and he did not want me to go to college.

Even when participants had a choice regarding family or cultural situations, these decisions were often seen as barriers because it frequently meant having to choose family/culture over an education. For example, one student wrote,

> "Yes, I have barriers to my success in post-secondary education. One is being a single parent and the other is living bi-cultural. I have not actually overcome these barriers. I just deal with them on a daily basis. I am a full time student with reading and writing papers and learning higher academia. I am also a full time mother tending to three children which two are under the age of three. I am also full time with my culture, meaning I attend ceremonies as well as non-ceremonies in which I participate. This can become a barrier because I have to fully engage myself where I am at the moment. Whether it be at a ceremony, school, or at home. I do this because I choose to be bicultural and be a role model for my children, (demonstrating) that it is possible to be Indian and educated at the same time."

Difficulty forming relationships was also mentioned as an academic barrier. Specifically, several students mentioned feeling like they "did not fit in." For example, one student wrote, "The feeling of being invisible is a big barrier for any Native American, student or non-student. I think that I overcame that feeling by realizing that I am someone and will be someone important." Similarly, another student wrote, "Finding friends in high school was by far the hardest thing to do," and another wrote, "I was different from almost everyone in my school."

Some participants felt that professors presented obstacles to their academic success in college. For example, one student expressed feeling discriminated against by her professors when she wrote, "I felt there was some discrimination because of my being Indian and female in a system that was blatantly designed for white males" and another wrote that the biggest barrier to his college success was "professors (I felt that I was discriminated against)…I feel that I have been discriminated against because I am not East Indian, which is the majority group in Mechanical Engineering." Mickelson (1980) pointed out that the college environment reflects the social relationships of upper class, white collar work, and while some students from blue collar or minority backgrounds quickly learn the rules, they may still feel like outsiders. Similarly, Harbour, Middleton, Lewis, and Anderson (2003) noted that members of minority populations feel subtle pressure for assimilation in college, influencing persistence, attrition, and graduation rates. Assimilation, according to Brilliant (2000), acts as a process of absorption, and members of minority groups are both explicitly and implicitly pressured to accept the norms and mores of the dominant culture, and repress their own cultural identity.

Competence/Self Efficacy

The second theme that emerged as a perceived barrier to academic success was competence/self efficacy. Several students in the study indicated feeling handicapped by a perceived lack of competence in language, reading, writing, and technical skills. Several things were noted as possible causes of perceived incompetence, including culture, lack of academic preparation in high school, inadequate academic counseling, and family. Some felt that culture directly contributed to incompetence. This perception is best demonstrated by the following statement, "We (Native Americans) were conditioned to fail in highly technical or sophisticated ideals." Another student wrote, "In my own particular case, I had to overcome several barriers. The first one was language. I had to be in a different culture and adapt to a modern (ie, computers) system of education that I was not familiar with."

These statements seem to support Bourdieu and Passeron's (1977) claims that students are not equally equipped to attend college, as only some students benefit from higher levels of cultural capital (ways of thinking and mores). Families that are not as connected to sources of cultural capital may not prepare their students adequately for the transition to college.

Several students mentioned feeling that their high school experiences did not adequately prepare them for college, thus they were perceived as barriers to academic success. For example, one student wrote,

> My high school education definitely did not prepare me for the rigors of college. I went to a tutor a lot. The academic advisement also hurt me. I had an advisor based out of the athletic department and she had no idea of how to help

> me succeed academically. She told me to take classes I was not ready for. When I couldn't pass these, I felt like a loser. A big contributor to that was the University that I attended did not have placement tests. I was getting put in math classes way above my skill level.

Other students mentioned having low GPA's entering college, and struggling with English and writing, while some students talked about low self esteem, and how it negatively influenced their GPA. These results supports earlier research which suggests that the majority of American Indian and Alaska Native children experience inferior elementary and secondary education as a result of limited academic resources in remote rural locations and reservations (Gilbert, 2000). Babco (2005), found that Native American high school students are not taking the same math or science courses in high school as whites and Asians. For example, "in 2000, only 2.4% of Native American high school graduates had taken calculus compared to 4.7% of African Americans, 5.6% of Hispanics, 12.5% of whites, and 30.8% of Asians who had done so. Similarly, in the same year, only 1.7% of Native Americans had taken AP calculus compared to 2.6% of African Americans, 3.6% of Hispanics, 8.4% of whites, and 24% of Asians" (p. 3).

Autonomy

Lastly, participants indicated feeling a loss of autonomy due to financial pressures, discrimination, and addiction. Next to relations with others, financial hardship was mentioned the most frequently as being a barrier to academic success. These were all things that students felt that they had no control over. In other words, students had an external locus of causality. These findings coincide with those by Reyes (2000), who identified several factors that contributed to Native students' success, including financial

support. Some other factors identified by Reyes (2000) as barriers to academic success included poor academic preparation, especially at the high school level, difficulty financing college education, and inadequate childcare. In addition, some students mentioned abuse being a perceived barrier to academic success. While some mentioned alcohol and drug abuse others mentioned spousal abuse. The results of this study regarding abuse as a perceived barrier to academic success coincide with earlier findings made by Bowker (1992). He found that alcohol and drug abuse, physical abuse, and single-parent families were all early warning signs in identifying girls who are potential drop outs.

Summary

In sum, participants in this study indicated that relatedness and competence played the most important roles in high school, but relatedness, competence and autonomy were all mentioned as key factors in college. Satisfaction of the needs for competence and autonomy were both significantly higher in college than in high school. These findings support the work of Deci and Ryan (1994) who suggested that to the extent that behaviors are experienced as being freely chosen, they are considered autonomous or self determined. Conversely, if behaviors are perceived as being coerced, they are seen as being controlling. For most students, high school is mandatory, whereas college is optional. Thus, students in college might be expected to indicate greater satisfaction of autonomy in college than high school. The results of this study showed the importance of all three needs in academic success among Native students in college. However, relatedness played a much more important role for participants in this study, than previous research suggests. Earlier research (Grolnick & Ryan, 1987; Deci et al.,

1992), suggests that autonomy and competence play primary roles in well being and academic success, whereas relatedness plays a more distal one.

When participants were asked open ended questions regarding perceived contributors to academic success, students in this study mentioned relatedness and competence as playing the most important roles in high school, whereas in college, relatedness, competence and autonomy were important factors. The differences in needs may reflect cultural differences as well. Ryan and Deci (2000) noted that although the three basic psychological needs are universal, the satisfaction of these needs is facilitated by the internalization and integration of culturally endorsed values. As a result, individuals from different cultures are more likely to express these needs differently.

Suggestions for future research

Suggestions for future research include: a) longitudinal research to follow the academic success through college and compare regulatory styles; b) include broader samples to include students who represent success as well as those who have dropped out of school; c) examine the needs of students in Junior Colleges and Tribal Colleges, since the majority of Native Americans are enrolled in two year colleges as opposed to four year colleges, d) examine regulatory styles of Native American and Alaska Native students who maintain strong ties to Native culture and do well in school, to those who maintain strong ties to Native culture and those who drop out; and d) broaden the sample to include more tribes. This sample included participants that represented only 24 tribes.

Conclusion

In sum, the results of this study revealed that academically successful Native American and Alaska Native students' need satisfaction followed somewhat different

patterns in high school and college. Relatedness and competence played important roles in high school and college, while autonomy became more noticeable in college. In addition, satisfaction of the need for relatedness played a bigger role in Native students' academic motivation than expected based on both previous research and self-determination theory. Specifically, most of the existing self determination research suggests that relatedness plays a distal role in well being and the academic success of individuals, than autonomy and competence (Grolnick & Ryan, 1987; Deci et al, 1992).

Thus, the results of this study show that self-determination theory may be a potentially useful theory for additional research aimed at explaining variations in the academic achievement of Native students. Furthermore, self-determination theory may also serve as a useful foundation for thinking of interventions that might possibly improve the academic engagement and retention of Native students who are at risk of dropping out of school. Too often, Native students have been discouraged from completing their academic pursuits. We, as educators, need to find ways of encouraging, rather than discouraging Native students, by creating motivating and effective learning environments. It is our role to encourage students to push on, in spite of obstacles. This was best said by Teedyuscung, a member of the Deleware tribe, who lived from 1705-1763.

> When you begin a great work you can't expect to finish it all at once; therefore do you and your brothers press on, and let nothing discourage you till you have entirely finished what you have begun.
>
> Now brother, as for me, I assure you I will press on, and the contrary winds may blow strong in my face, yet I will go forward and never turn back, and

continue to press forward until I have finished, and I would have you do the same (as cited in Nerburn and Mengelkoch, 1991, p.25).

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Appendix A

American Indian and Alaska Native Dropout

Appendix A

American Indian and Alaska Native Dropout

A considerable amount of literature examines the dropout rates among Native students. The statistics are alarming nationwide, and according to the National Center for Education Statistics, the high school completion rate in Northwest states ranges between 55 and 65 percent. In Oregon and Alaska, Native students are twice as likely to drop out as their white, non-Hispanic peers, and in Montana, they are three times as likely to dropout of high school (Linik, 2004). Although middle school can be a difficult time for all students, it is particularly difficult for Native students. Studies show that by the eighth grade, a drop in achievement between Native students and their non-Indian classmates can be seen. Linik (2004) suggested that it is somewhere between fourth and eighth grade that students begin forming their identities, which includes internalizing traditional values and beliefs that come from family, home and community. Around this time, however, these children also begin to find that their values conflict with those that they are encouraged to adopt in school. As a result, the children begin disengaging from school, and by ninth and tenth grade, these students begin dropping out of school.

When reviewing studies that have attempted to quantitatively describe the Native dropout rate, several factors emerge that make establishing such a rate difficult. Auerbach, Fuchs and MacGregor (1970, as cited by Swisher and Hoisch, 1992) discussed some of the complications created by the multiple school systems which Native students are eligible to attend. These three school systems include federal, state and private. Unfortunately, these three systems have not come to an agreement with respect to maintaining comparable records or using similar methodologies to compute the dropout

rate; therefore, combining the data from these three types of systems into a national picture for the incidence of dropout out among Native students is next to impossible. To complicate this issue, students often transfer, both between systems and across state lines, making the tracking of student progress even more difficult. Due to problems with verifying the status of students who transfer (whether it is actually a transfer or the student dropped out between systems), dropouts may be misclassified as transfer students and transfer students may be classified incorrectly as dropouts. Even so, research concerning dropout rates can be useful for demonstrating the effectiveness of school systems and the magnitude of the dropout problem.

The Alaska Department of Education has several criteria for defining drop outs including: students who have left school without graduating or completing an approved program; students who have moved out of the district, or the state and are not known to be enrolled elsewhere; students attending schools not approved by the district or participating in adult education programs; or students who were suspended or expelled and haven't returned to school.

In the past, studies of dropout among the Alaska Natives, including Aleut, Yup'ik and Inuit, were not as numerous as those of American Indian populations in other sections of the country. This is due in part to the scattering of the Alaska Native ethnic groups over a wide area, isolated by natural phenomena, frequently in villages of no more than a handful of families (Osterhout, 1979).

Existing literature on dropout rates among Native students tends to focus on several areas, including cultural differences, effectiveness theory, deficit theories, critical theories, cultural discontinuity (St. Germain, 2001), Personal Investment (McInerney &

Swisher, 1995) and the goal theory of achievement motivation (McInerney, Roche, & McInerney (1995). For example, McInerney et al (1995) attempted to demonstrate the cultural relevance and applicability of goal theory in explaining and interpreting motivation in schools settings. These researchers administered the Inventory of School Motivation, an instrument to reflect components of Maehr's Personal Investment model (Maehr, 1984; Maehr & Braskamp, 1986) to five hundred and twenty nine 9-12 grade Navajo students attending Window Rock High School on the Navajo reservation.

Although dropout phenomenon among Native students has been examined using several theories, the bulk of existing literature tends to focus on cultural differences and cultural discontinuity. When students' cultures differ, problems tend to arise in the academic environment. For example, when white children enter the local public school system they move into a setting that is generally compatible with their family culture, styles of learning and middle-class values, thus, they are more aware of the expectations placed upon them. On the other hand, when Native children enter the educational system, they are often entering a system that is culturally foreign to them. Typically, a belief enforced by educators is that cultures are fundamentally similar. This is coupled with the assumption that when there are differences, the Anglo-American way is best. Thus, teachers attempt to cope with cultural differences by devising strategies to work around them (Houser, 1991; Coggins, Williams and Radin, 1997). Therefore, the expectations placed on the Native children are to not only succeed in school, but to function in a bi-cultural world. Other factors cited as determinants of poor academic performance and dropout among Natives have included demographic variables such as home background and geographic isolation; educational variables such as inappropriate forms of testing

including standardized, norm referenced tests, irrelevant curriculum, passive teaching methods, tracked classes, large school size, uncaring teachers, lack of parental involvement, and negative teacher expectations. In addition, socio-economic factors such as poor health and poverty, as well as biological and cultural factors such as mismatches between native learning styles/motives and those fostered by a western-oriented school systems (Reyhner, 1995; Bordeaux, 1995; McInerney & Swisher, 1995). Reyhner and Dodd (1995) identified obstacles towards the college success of Native students, including prejudice, finances, language and alcohol (in descending order).

Ledlow (1992) pointed out that one of the problems associated with attempting to explain Native dropout through cultural discontinuity is that there is little or no explicit research to prove the hypothesis. The cultural discontinuity hypothesis assumes that culturally based differences in the communication styles of the minority students' home and the Anglo culture of the school lead to conflicts, misunderstandings, and, ultimately, failure for those students. The research focuses on the process, rather than the structure of education and concludes that making the classroom more culturally appropriate will mean a higher rate of achievement. For example, a qualitative study conducted by Jeffries, Nix and Singer (2002), revealed that many American Indian and Alaska Native students reported feeling “pushed out” by large schools that failed to integrate them, as opposed to the students having made a priori decision not to be a part of the system. There was a sense of “disconnection” with the educational experience, coupled with encounters with real and perceived structural barriers that alienated American Indian students from the traditional schooling environment. Ledlow (1992) noted that although cultural discontinuity hypothesis has played the strongest role in influencing the direction

of research on American Indian dropouts, or at least used as an underlying assumption to guiding the research questions, it has not convincingly been demonstrated to be true.

Swisher and Hoisch (1992) pointed out that a common belief held by many is that dropouts are alike and leave school for much of the same reasons: they dislike and reject school. However, Wax (1967, as cited by Swisher and Hoisch, 1992), stated that Native students leave school under different conditions and for different reasons. Statements made by many students who have dropped out of school have explicitly stated that they did not wish to leave school and saw themselves as "pushouts" or "kickouts" rather than "dropouts." In addition, Wax (1967, as cited by Swisher and Hoisch, 1992) quoted a Sioux youth, who said, "I quit, but I never did want to quit!" In other words, although many people suggest that most Native students leave school because they either disliked or rejected it, remarks made by Native students do not support this. Rather, these students indicated that they left because they felt that the system was pushing them out—that the system was set up in a manner that was not conducive to the success of Native students.

In the McDowell report (November, 2001) a household survey was conducted on the barriers to educational success in Alaska. Respondents were asked several questions that investigated educational barriers. The survey asked questions regarding perceptions of the system's fairness, treatment of Alaska Natives, and participants' perceptions on what was keeping Alaska Natives from finishing high school. The results showed that a significant portion of Alaska Natives questioned the fairness of the system and believed that they did not get educational opportunities equal to those given other Alaskans. Over four in ten Alaska Natives felt the Alaska educational system favored non-Native students. Households with and without children held similar views. These viewpoints

concerning inequality were expressed more strongly by Alaska Natives who lived in urban areas (50 percent) and were between the ages of 35 and 54 (47 percent). Other data in the study verified the perception of prejudice is stronger in urban Alaska where Native students were more likely to be the minority. In this same report, participants were asked why Alaska Natives did not complete high school. The number one reason given was that "family does not encourage schooling" (30%). The second reason given was alcohol and drug use (16%); followed by a lack of interest/motivation (14%); couldn't see the benefit of education (12%); teachers did not understand Natives (8%); prejudice/discrimination (8%); schools did not encourage Native success (8%); family responsibilities (6%); difficulty with classes/learning (5%); not prepared in lower grades for high school (5%); classes were not geared towards Natives (5%); lack of self-esteem/confidence (5%); and other (35%). (Note that the responses in this study did not add up to 100% because most respondents gave more than one answer).

History of AI Education/Boarding Schools

Compared to American Indians in the lower 48 states, the history of education among Alaska Natives has some unique features. One main difference is that Alaska's Natives, Eskimos, and Aleuts have never been relocated to reservations, or removed from lands that they once occupied (Ousterhout, 1979). While Alaskan natives were not denied access to territorial schools, the distance of native communities from the population centers where such schools were built tended to lower the school enrollment of Native students in Alaska. Secondary education was particularly problematic, due to the more complex requirements of the traditional high school program in terms of facilities, specialists and curricula.

The legacy of Native education in America is tainted with suffering and mistreatment, and Indian boarding schools in particular, tend to have negative connotations attached to them. The following two quotes provide some insight on the attitudes many American Indians and Alaska Natives had towards the educational system in general, as well as boarding schools:

> You see, we have given you our children, not our servants, or our slaves, but our own. We have given you our hearts-our children are our hearts-but bring them back again before they become white men. We wish to see them once more Indians, and after that you can make them white men if you like. But let them not get sick or die. If they get sick, we get sick; if they die, we shall die. Take them; they are yours (Chief Illim-Spokanee, 1825, quoted in The Oregon Historical Quarterly, Fall 2000).
>
> I can understand now why there appears to be such a widespread prejudice on the part of the Indians against residential schools. Such memories do not fade out of the human consciousness very rapidly" (R.A. Hoey, Canadian Indian Department Official, June 1942).

In Alaska, boarding schools have had both positive and negative affects on Alaskan Natives and their communities. Soon after the purchase of the state of Alaska from Russia in 1867, traditional forms of education were slowly replaced by Western education as missionaries began coming into the state. However, it was not until 1884, with the passing of the First Organic Act, that the District of Alaska was given the responsibility of educating children of all races. In the late 1800's Alaskan Natives were only offered an elementary education that stopped at the eighth grade. However, as more and more white people came into the state with the expansion of the salmon industry in 1878 and the gold rush in 1880, more schools were needed to meet the demands of a growing number of students. White settlers demanded an educational system that offered

twelve years of formal education rather than eight. This initiated a dual system that segregated white students from Alaska Native students. While the white students received twelve years of education, the Native students were only able to receive eight, unless they attended a boarding school in the lower 48 states: Chemawa, OR, Chilloco, OK, Carlisle, PA, and Riverside, CA. This proved to be problematic for Native students and their families for many reasons, so in the 1920's three vocational boarding schools were established within the state of Alaska. However, these fell into disrepair, and by 1947 only one boarding school remained-- Mt. Edgecumbe. Soon, Mt. Edgecumbe High School had a full enrollment of Native students from non-high school villages throughout the state.

By the 1960's, the enrollment of students exceeded Mt. Edgecumbe's capacity, so again, the Federal Government began sending Native students to Indian boarding schools in Chimawa, Oregon and Chilloco, Oklahoma. Once more, many parents objected to this approach of sending their children so far away from home to receive an education. The feelings expressed by many families were that loss of family and home contact was not worth the price of an education. Kleinfeld, McDiarmid, & Hagstrom (1985) noted that in 1972, 22% of the 1724 Native students who entered boarding schools left the same year. In 1973, the dropout rates were even higher, with 34% of the 1561 Native students who entered high school that year left (Kleinfeld et al, 1985). In an attempt to overcome the problems associated with boarding schools, the Boarding Home program was developed. This program allowed Native students from remote villages to live in larger towns where secondary education was available, by placing them with a host family. The regional schools were high schools that were built in larger population centers such as Nome,

Bethel and Kodiak. This program also had problems, including but not limited to, poor academic performance, early dropout rates, and frequent transferring between schools.

The Tobeluk v. Lind case in 1976 resulted in several significant changes in the educational system across Alaska. According to the terms of this settlement, a school district was required to provide a local secondary education if the school community requested one, the community had an elementary school, and there were children available to attend the school (4 AAC 05.040). Presently, there are only 3 public boarding schools operating in Alaska. These include two small schools in Galena and Nenana, and Mt. Edgecumbe. Most Alaska Native students who live in rural villages attend local high schools, sometimes with enrollments of less than 100 students. In fact, about 60 percent attend high schools with less than 40 students (Kleinfeld et al, 1989). However, some students elect to attend Mt. Edgecumbe High School, or make private arrangements to live with relatives and attend other public schools. For example, during the 2002-2003 school year, the Larsen Bay School had three teachers to work with approximately 24 students in grades K-12. The high school population at this school is often a small percentage of its student body because many high school students seek the opportunities that Mt. Edgecumbe and other residential or larger high schools might provide.

Appendix B

Theoretical Background of Self Determination Theory and Other Theories

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Theoretical Background of Self Determination Theory and Other Theories

Self Determination Theory: A closer look

Although I am exploring the academic success of American Indian and Alaska Native students using self determination theory, I felt that it would be beneficial to provide a brief overview of two other theories that have commonly been applied to the dropout problem among Native students: Personal Investment theory and Cultural Discontinuity.

Cognitive Evaluation Theory

Over the past thirty years, SDT has evolved in the form of mini theories. The four mini theories that comprise SDT are cognitive evaluation theory, organismic integration theory, causality orientations theory, and basic needs theory. The first mini theory that was developed was cognitive evaluation theory (CET). Cognitive evaluation theory is based upon the assumption that people have innate needs for competence and self determination, and suggests that a person's intrinsic motivation is affected by changes in feelings of competence and self determination (Deci & Ryan, 1985). In addition, events can either hinder or facilitate feelings of competence and self determination, depending upon whether they are perceived as being informational, controlling, or amotivating. Cognitive evaluation theory has been presented as having three propositions (Deci & Ryan, 1985).

The first proposition deals with peoples' intrinsic need to be self-determining. It suggests that, "External events relevant to the initiation or regulation of behavior will affect a persons' intrinsic motivation to the extent that they influence the perceived locus

of causality for that behavior. Events that promote a more external perceived locus of causality will undermine intrinsic motivation, whereas those that promote a more internal perceived locus of causality will enhance intrinsic motivation" (Deci & Ryan, 1985, p. 62). In other words, events that promote an external perceived locus of causality (PLOC) undermine intrinsic motivation and control behavior, whereas those that foster an internal PLOC enhance intrinsic motivation and support autonomy.

The second proposition of CET refers to peoples' intrinsic need to be competent and master optimal challenges. It deals with individuals' perceived competence and levels of intrinsic and extrinsic motivation. It states, "External events will affect a persons' intrinsic motivation for an optimally challenging activity to the extent that they influence the persons' perceived competence, within the context of some self determination. Events that promote greater perceived competence will enhance intrinsic motivation, whereas those that diminish perceived competence will decrease intrinsic motivation" (Deci & Ryan, 1985, p. 63). In other words, when an individual is in an environment where he or she feels optimally challenged (ie, the challenges do not exceed his or her competencies, nor do they fail to challenge an individual), and the individual feels a sense of self-determination, his or her intrinsic motivation will be increased.

The third proposition of CET suggests that certain environmental events will have different effects on peoples' intrinsic motivation. More specifically, it is proposed that environmental events can be viewed as being either informational, controlling or amotivating by an individual. The third proposition states, "Events relevant to the initiation and regulation of behavior have three potential aspects, each with a functional significance. The informational aspect facilitates an internal perceived locus of causality

and perceived competence, thus enhancing intrinsic motivation. Deci and Ryan (1985) defined informational events as those that allow choice (no pressure), and that provide information that is useful to a person in their interactions with the environment. However, a distinction was drawn between informational and permissive environments. Permissive environments not only lack control, but structure, and lead to neglect. There is a difference between the two because informational environments provide feedback, or structure, while permissive environments do not contain this information. The controlling aspect promotes an external perceived locus of causality, thus undermining intrinsic motivation and promoting extrinsic motivation. The amotivating aspect facilitates perceived incompetence, thus also undermining intrinsic motivation and promoting amotivation. The relative salience of these three aspects to a person determines the functional significance of the event" (Deci & Ryan, 1985, p. 63-64). Deci and Ryan (1985) pointed out that research suggested that choice and positive feedback tend to be perceived as informational, deadlines and surveillance tend to be viewed as controlling, and negative feedback tends to be amotivating.

In the late 1980's, CET was developed to include interpersonal communication and intrapersonal regulation. First, it was suggested that the interpersonal climate within which communication is given can influence whether it is viewed as information or controlling (Deci & Ryan, 2002). For example, if positive feedback is administered within a climate of pressure, and emphasizes what people "should do," then it tends to be perceived as controlling. In addition, limit setting and competition can have either an information or controlling effect.

The second extension concerned internal initiating events, or intra-personal

regulation. Ryan (1982) suggested that many actions are initiated and regulated by events inside oneself and are relatively independent of the social context. In other words, an individual may pressure or reinforce himself to do things. However, pressuring oneself does not represent self-determination. Deci and Ryan (1985) wrote of regulating oneself informationally or controllingly, and used the terms internally informational and internally controlling respectively. In later work, Deci and Ryan (2002) wrote of ego involvement and task involvement. If individuals do something to prove to themselves that they are good at the activity and worthy individuals, then they are said to have ego involvement, which is considered to be controlling and diminish intrinsic motivation. On the other hand, if individuals involve themselves in an activity because of the task itself, rather than because of the implications for their own feelings or worth, they are said to be task involved, which maintains or increases intrinsic motivation.

Cognitive evaluative theory suggested that relatedness plays a more distal role in fostering intrinsic motivation than either autonomy or competence does. However, SDT still recognizes that intrinsic motivation will be more likely to flourish in contexts characterized by a sense of secure relatedness (Ryan & Deci, 2000; Deci & Ryan, 2000). For example, research indicates students who perceived their teachers as being warm and nurturing demonstrated higher levels of intrinsic motivation than those who did not (Ryan & Grolnick, 1986; Ryan, Stiller & Lynch, 1994, as cited by Deci & Ryan, 2000). Deci and Ryan (2000) emphasized that what appears to be important is a secure relational base as a backdrop, offering distal support. This promotes a sense of security that makes the expression of this innate tendency more likely and robust.

To review, CET is one component of SDT, and focuses on the needs for

competence and autonomy. This theory only applies to activities that are appealing and offer a sense of novelty, challenge and aesthetic value. It is not applicable to activities that are not appealing because these activities would not be considered to be intrinsically motivating. It argues that socio-contextual events (such as feedback and communication) can promote feelings of competence and enhance feelings of capability for that action. It also points out that a perception of competence will only enhance intrinsic motivation when accompanied by a sense of autonomy, or as deCharms (1968) would say, an internal perceived locus of causality. Thus, according to CET, people must feel both competent, and self determined before they can be intrinsically motivated (Ryan & Deci, 2000). A third factor in CET is relatedness, and SDT hypothesizes that intrinsic motivation is more likely to be apparent when individuals feel a sense of security and relatedness.

Organismic Integration Theory

Organismic Integration Theory (OIT) is a sub-theory of SDT that addresses the self-regulatory process associated with varying forms of extrinsic motivation (Baldwin, 2003). Deci and Ryan (2002) acknowledged the fact that people's behavior is not always intrinsically motivated. There are social pressures that require individuals to engage in activities that may not be interesting to them, but are socially valued or mandated. For example, not all adolescents find gaining an education inherently interesting, however it is required that they must attend school. Similarly, Native students may not be intrinsically motivated to succeed in school, possibly due to the differences between values embraced by the culture in which the student was raised, and those embraced and promoted within the educational system (Ogbu, 1995). Therefore, it is important to

understand how to promote behaviors that are not initially intrinsically motivating, as well as how to self regulate these behaviors so they will continue over time. Ryan and Deci (2000) pointed out that the real question concerning extrinsically motivated behaviors is how individuals acquire the motivation to carry them out, and how this motivation affects ongoing persistence, behavioral quality, and well being. Self determination theory suggests that when a person (eg., a teacher) tries to promote a certain behavior in others (eg., a student), the other's motivation can range from amotivation or unwillingness, to passive compliance, or active personal commitment (Ryan & Deci, 2000). These differing levels of motivation reflect differing degrees to which the value and regulation of the requested behavior have been internalized. SDT proposes that extrinsically motivated behaviors become self determined through the developmental processes of internalization and integration. Internalization refers to people's "taking in" of a value and integration refers to the further transformation of that regulation into their own, so that it becomes a part of the self (Ryan & Deci, 2000).

According to Deci and Ryan (2002), from the beginning of their research, they had assumed that it was possible to be autonomously extrinsically motivated, and research within the second mini theory of SDT, organismic integration theory (OIT), examined this issue in more detail. Deci and Ryan (2002) described OIT as being based upon the assumption that people are naturally inclined to integrate their ongoing experiences. It was further suggested that if external prompts were used by significant others to promote participation in an uninteresting activity, that individuals would have a tendency to internalize the activity's initially external regulation. In other words, they would become consistent with the person's other values and needs. To the extent that

this occurs, the individuals would be autonomous when displaying this extrinsically motivated behavior because it would no longer feel controlled by others. Autonomous functioning is associated with lower ego involvement and should result in lower resistance (Deci & Ryan, 2002). According to Deci and Ryan (2002), OIT was developed to: a) explain the development and dynamics of extrinsic motivation; b) the degree to which individuals experience autonomy while engaged in extrinsically motivated behaviors, and c) the processes individuals use to take on the values and mores of their groups and cultures.

This last goal of OIT includes the processes of adapting to the demands and constraints of the cultural environment. Cultural adaptation entails "taking on" important ambient practices and values, whether or not they are intrinsically motivating. Deci and Ryan (1985) described this process of assimilating cultural norms and regulators as internalization. This helps to ensure one's own survival as well as that of the culture. Cultural stability is derived, largely, from the degree to which central mores and practices of the culture are adequately internalized by its members. If the important regulations and beliefs of a society are taken in and integrated smoothly into the psychological structure of the individual within it, then there is internal equilibrium (Deci & Ryan, 1985). Pressures from other cultures may require change, but at least the existing cultural patterns are grounded or anchored in the lives of its participants. On the other hand, when cultural patterns are too controlling or conflicting for individuals within it, there is internal disequilibrium. Organismic integration theory describes the process by which culture is absorbed and integrated by its members, and suggests that the information is assimilated through the process of internalization (Deci & Ryan, 1985).

Through OIT, a taxonomy of motivational types was developed based upon a continuum. The types of motivation were arranged from left to right based upon the degree that the motivations were self determined (see Figure1). At the far left of the continuum is amotivation, at the far right is intrinsic motivation, and in between the two are four levels of extrinsic motivation. Amotivation results from not valuing an activity (Ryan, 1995), not feeling competent to do the activity (Bandura, 1986), or not expecting it to yield a desired outcome (Seligman, 1975). When people are amotivated they either act passively or not at all. According to Deci and Ryan (2002), people who are amotivated may go through the motions but without intent.

The term extrinsic motivation refers to the performance of an activity in order to attain some separable outcome (Ryan & Deci, 2000). Four levels of extrinsic motivation result from different degrees of internalization and integration. These four levels are: external regulation, introjected regulation, identified regulation and introjected regulation (Figure 1). The type of extrinsically motivated behaviors that are the least autonomous are externally regulated behaviors. These are behaviors that are performed by individuals merely to satisfy an external demand-in other words, to obtain rewards or avoid punishment. These types of behavior have an external perceived locus of causality and are at the heart of operant conditioning theories (Skinner, 1953, as cited by Deci & Ryan, 2002). Examples of such regulation would include engaging in behaviors to attain a reward or avoid a threatened punishment.

A second type of extrinsic motivation is introjected regulation. This involves taking in a regulation, but not fully accepting it as one's own (Ryan & Deci, 2000; Deci & Ryan, 2002). These are behaviors performed by individuals because one thinks he

should, or because they would feel guilty if they did not. Introjected regulation is theorized to be quite controlling because these include behaviors that are performed to avoid guilt and shame. An example of introjection is ego involvement, in which people are motivated to demonstrate ability, or avoid failure, in order to maintain feelings of worth (Ryan & Deci, 2000). Ego involvement is considered to be internally controlling and deCharms (1968, as cited in Deci & Ryan, 1985) likened ego involvement, the state in which one's self esteem is on the line, to extrinsic motivation and extrinsic perceived locus of causality. People who are ego involved evaluate themselves in terms of the outcomes they attain (Deci & Ryan, 1985). An example of introjected regulation might be when a student studies hard because he believes he should go to college like everyone else and will feel like a failure and ashamed if he does not.

A third type of extrinsic motivation is identified regulation. This type results when a behavior or regulation is adopted by the self as personally important or valuable. Identified regulation occurs when one does not behave simply because one feels he should, but rather, because the behavior is personally valued. For example, a student who chooses to study for an exam because doing well in school is personally important to him/her, and because it fits into the self selected goal of going to college.

Finally, the most autonomous form of extrinsic motivation is integrated regulation. Integration occurs when identified regulations become fully assimilated to the self-in other words, they have become congruent with an individual's other values and needs (Ryan & Deci, 2000; Deci & Ryan, 2002). An example might be an Alaska Native (AN) student from a small, rural town in Alaska. This student might identify with being both a good student and a devoted member of the Haida tribe. These two identifications

could seem conflicting to the student and thus cause tension, even though they are both valued by the student. These identifications can, however, become integrated and harmonious with each other, although doing so may require making adjustments. For example, he may need to change how he spends his time, or which friends he chooses to surround himself with. Only when these two identifications have become integrated and harmonious with each other and the rest of the student's sense of self, will the internalization process be complete (Deci, Vallerand, Pelletier, & Ryan, 1991). Although integrated regulations share similar qualities as intrinsic motivation, they differ because rather than being committed for the sheer enjoyment of the activity, they are done to attain personally important outcomes (Ryan & Deci, 2000; Deci & Ryan, 2002). According to Deci and Ryan (1994), an integrated regulatory style, together with intrinsic motivation, represents the basis for self determined functioning.

Ryan and Deci (2000) stressed that although the process of internalizing regulations may occur over time, the continuum is not a developmental one, and it is not necessary for individuals to go through every stage. Rather, depending upon the amount of prior experience and the current situational climate people are in, they can take in regulation at any point along the continuum.

Ryan and Connell (1989) tested the idea that the different types of motivation lie along a continuum by examining the achievement behavior of school children. The study revealed that all four regulatory styles (external, introjected, identified and intrinsic) were intercorrelated. It also revealed that the different types of motivation were associated with different experiences and outcomes. For example, externally regulated children displayed less interest, value, and effort towards achievement, and these children tended

to deny responsibility for negative outcomes, placing the blame on teachers or other children. Introjected regulation was positively related to putting forth more effort, yet also to feeling more anxiety and coping more poorly with failure. On the other hand, identified regulation was associated with more interest and enjoyment of school and with more positive coping styles, as well as more effort. Similarly, other studies revealed that more autonomous extrinsic motivation was associated with more engagement (Connell & Wellborn, 1991), better performance (Miserandino, 1996), lower dropout (Vallerand & Bissonnette, 1992), higher quality learning, and better teacher ratings (Ryan & Deci, 2000).

For an individual to partake in behaviors that are not inherently interesting, these behaviors must first be prompted by a significant other or a group endorsing the action. As a result of this sense of connection to the individual or group displaying the behavior, as well as an attempt to gain either implicit or explicit approval for doing so, the individual likely partakes in the behavior himself (Ryan & Deci, 2000; Deci & Ryan, 2002). This suggests that for internalization, the need for relatedness is centrally important. Supporting this claim, Ryan, Stiller, & Lynch (1994, as cited by Deci & Ryan, 2002) found in their study that children who felt a secure connection to, and sense of caring by their parents and teachers, were the ones who more fully internalized the regulation for positive school related behaviors. It has been pointed out that while relatedness seemed less important than autonomy and competence for maintaining intrinsic motivation, relatedness appeared to play a much more important role in promoting internalization. Not to say that competence and autonomy aren't important in the process of internalization-they are. It appears that all three of the basic needs:

autonomy, competence and relatedness play important roles in facilitating integration of extrinsic motivation (Ryan & Deci, 2000). People are more willing to adopt activities that they feel efficacious in, and OIT suggests that competence facilitates internalization (Ryan & Deci, 2000; Deci & Ryan, 2002). According to Deci and Ryan (2002), autonomy appears to play a critical role in whether or not something is fully internalized (integration) or partially internalized (introjected).

In review, one of the four mini theories that comprises self determination theory, organismic integrative theory, recognizes that not all behaviors or tasks are going to be inherently interesting. Thus, it addresses the social and environmental factors related to amotivation as well as the processes of internalizing and integrating different forms of extrinsically motivated behavior.

In sum, SDT is a model of human motivation rooted in the innate needs of competence, relatedness and autonomy and it is an overriding framework for intrinsic and extrinsic motivation. Fulfillment of these needs is a prerequisite for optimal human functioning. This theory addresses the natural tendency for humans to actively engage in the world and provides a framework for investigating the social or environmental factors that enhance or hinder innate needs (Baldwin, 2003). The motivational processes that underlie self determination are elaborated in two of the sub-theories of SDT, cognitive evaluation theory and organismic integrative theory. Cognitive evaluation theory conceptualizes intrinsic motivation as the prototypic form of self determined, motivated, intrinsically regulated behavior (Ryan & Deci, 2000). While CET focuses on the effects of social and environmental conditions on intrinsically motivated behaviors, it does not apply to activities that people do not find interesting, optimally challenging or

aesthetically appealing. Much of human behavior is not intrinsically motivated. Thus, OIT was developed to explain the development and dynamics of extrinsic motivation, the degree to which individuals experience autonomy while engaged in extrinsically motivated behaviors, and the processes individuals use to take on the values and mores of their groups and cultures.

Cognitive evaluative theory and organismic integrative theory combine to provide an overall understanding of self-determined behavior that is characterized by intrinsic and extrinsic motivation. Forms of self-determined behavior vary in regulatory style and perceived locus of causality (Baldwin, 2003). Intrinsic and extrinsic motivations are viewed as opposites on a continuum of self-determined behavior (Figure 1). Within this continuum, six forms of motivation have been identified (Ryan and Deci, 2000). At one end, is amotivation, which describes behavior that is both non-intentional and non-regulated. At the other end of the continuum is intrinsic motivation, which represents behavior that is characterized by the pursuit of an activity that one finds inherently interesting and satisfying. Between amotivation and intrinsic motivation lies extrinsic motivation. Ryan and Deci (2000) proposed extrinsic motivation as having four forms: external, introjected, identified and integrated.

Personal Investment Theory

Maehr (1984) suggested that classroom motivation should be viewed in a broader context of motivation theory than just achievement motivation. He stated that although achievement motivation theory was clearly a concern, it was "equally clear that not all those associated with, or in schools were concerned with achievement" (p. 116). Therefore, Maehr developed a theory of Personal Investment, which overlaps other

theories, in particular, work that examined the roles of the social and cultural context in determining motivational patterns in performing achievement tasks. Maehr (1984) suggested that motivation could be identified by certain behaviors, including direction, persistence, performance, continued motivation and variation in performance. When these are identified, a person was said to be investing his or her personal resources in a certain way, hence the term, "personal investment."

In Maehr's (1984) model, he examined what brought these behaviors into existence, or what the antecedents of these patterns were. The central answer that he came up with, was that it was the meaning that the person attached to the situation that was of primary importance. For example, success or failure at a particular task does not necessarily mean the person feels that he or she succeeded or failed. Rather, it is the subjective definition of success or failure that counts (p. 123). In other words, even though external factors influence an individual in any given situation, those external influences are filtered through that person's perceptions of things. Thus, external events are affected by the meanings that the individual has imposed on them. Put another way, people make different judgments about the worth, or value of a task or activity, and it may be these different judgments that explain cross-cultural variations in achievement. Maehr (1984) suggested that people project different mages of what they would like to become, and these images are derived from experiences that they have personally had within their culture. Thus, people from various cultures each have their own visualizations of what success is. The critical point, is that as particular events are interpreted as conforming to these personal images of success, information that is perceived as indicating that the individual is becoming what he or she wants to become,

is defined as success. Thus, meaning is a critical factor in determining motivation. According to Maehr (1984), a person is not likely to partake in an activity if it is not personally meaningful or valued (p. 123). Maehr (1984) further proposed that the meaning that one attaches to achievement is comprised of three basic components. These include: a) beliefs about the self, b) perceived goals of a behavior in a situation, and c) perceived alternatives for pursuing these goals, or the action possibilities. In addition, these elements were said to operate collectively, and that they were interrelated and overlapping in nature.

According to Maehr (1984), beliefs about one's self are the organized collection of perceptions, beliefs, and feelings related to who one is, and this includes judgments about one's competence. In other words, people are more likely to participate in activities that they feel competent in and will continue performing in these areas. However, competence interacts with other facets of meaning, in particular, with goals that a person has. The term goal, as used by Maehr, referred to the "motivational focus of the activity" (p. 127). In other words, what was the value of the activity, and what does one hope to get out of performing the activity? There are a variety of goals, and they include tasks goals (or learning goals), ego goals (performance goals), social solidarity goals (the goals associated with pleasing significant others), and extrinsic rewards (goals associated with earning money or gaining a prize of some sort). Maehr (1984) noted that the ultimate point to be made about goals was that they affect our behavior. For example, if one is driven by ego goals, yet lacks a sense of competence, the behavior demonstrated is typically avoided. However, those individuals who possess a sense of competence will not only be more likely to approach tasks, but to persist.

Finally, one's perceived alternatives for pursuing goals, determine the investment that an individual will invest in any given situation. Maehr (1984) described action possibilities as "behavioral alternatives or options that a person perceives to be available to him or her in any given situation. One will act in terms of what is perceived as possible" (p. 124). Maehr stressed that in understanding why a person does or does not do something, it is important to determine whether or not that particular activity is a part of his or her world. He pointed out that research suggests that elite performers in the arts, science, or athletics, were "born into the right families" (Bloom, 1982, as cited by Maehr, 1984). The family in which these individuals were born into valued the particular activity in which they were involved, rewarded it, and facilitated it.

In review, Maehr (1984) proposed that: a) people invest themselves in certain activities, depending upon the meaning that the activities have for them, and b) meaning is composed of three interrelated cognitions: goals, self-concepts, and action possibilities. Maehr continued by proposing four antecedents, or determinants of meaning. These included: a) the teaching-learning situation, b) personal experiences, c) information, and d) the socio-cultural context. In other words, these four external factors may affect the various components of meaning (goals, self-concepts, and action possibilities) differently.

Maehr (1984) described the four determinants of meaning in the following ways. The teaching-learning situation focuses mainly on a student's present situation, including social expectations and task design, as well as how these affect the meanings of the person involved. Social expectations are the norms and roles that come into play, and these are frequently peer initiated and peer controlled. For example, many students do not place much value on the love of learning, thus those students who find learning "fun"

may be shunned by their peers. Task design refers to the task itself, and whether or not it elicits personal investment in and of itself. Maehr (1984) pointed out that some tasks are simply more attractive than others. For example, tasks that possess a certain level of uncertainty and unpredictability tend to be generally more attractive to learners. However, tasks that are accompanied by the stress of tests and teacher evaluations of performance are less attractive. Maehr (1984) also identified that a critical issue of evaluation of performance was the matter of volition or choice, that can accompany a performance task (also see section on self-determination theory and autonomy).

The second determinant of meaning suggested by Maehr included one's personal experiences. This emphasized that the personal experiences and backgrounds that individuals have influenced beliefs about the self, goal preferences, awareness, and acceptance of behavioral options that a person may have. The third antecedent of meaning is termed, "information." This refers to the information that one receives through formal or informal instruction, literature, or visible models about an individual's behavioral options. Finally, social-cultural factors were said to play a role in determining the meaning of a task. Maehr (1984) wrote that it was one's "cultural group that defines a task as desirable, repulsive, or irrelevant" (p. 139).

In sum, Maehr's model of Personal Investment might offer insight into the high drop out rate amidst American Indian and Alaska Native students by focusing on the meaning that individuals attach to any given situation, and how external forces might affect these meanings. However, it does not go into detail as to why individuals from various cultures may not find value in education. Another theory, proposed by Ogbu (1992), offers further insight into the socio-cultural influence on meaning.

Cultural Discontinuity

John Ogbu (1992) suggested that the crucial issue in cultural diversity and learning was the relationship between the minority cultures and the American mainstream culture. He contended that those minority groups whose cultural frames of reference are oppositional to the cultural frame of reference of American mainstream culture have greater difficulty crossing cultural boundaries at school to learn. Ogbu (1992) pointed out that past responses to cultural diversity in the learning environment have included the development of core curriculum education and multicultural education. He suggested that "the development of core curriculum had limited ability to increase school performance among minority children because it did not address the nature of minority cultural diversity. He wrote that "what children bring to school-their communities" cultural models or understanding of social realities and the educational strategies that they, their families, and their communities use, or do not use, in seeking education are as important as within school factors" (p. 138). He also stated that the competencies that minority children acquire or develop in the community are often different from the competencies the children are required to demonstrate at school. Furthermore, these differences and conflicts in competencies may cause adjustment and learning difficulties (Ogbu, 1998). In addition, Ogbu (1992) pointed out that the other response to cultural diversity, multicultural education, might improve school learning for some minority children, but it had its limitations.

Ogbu (1992) first pointed out that multi-cultural education was not an adequate strategy to enhance the academic performance of minority children who have traditionally performed poorly in school. He also pointed out that multicultural education

is rarely based upon actual studies of minority culture and languages. In addition, this approach fails to separate minority groups that are able to cross cultural and language boundaries and learn successfully in spite of cultural barriers (Ogbu, 1992).

Ogbu (1992) felt that it was necessary to identify types of minority status before one could understand how cultural diversity affects learning. Thus, he classified minority groups into three categories: autonomous, voluntary, and involuntary. The autonomous minorities were those who were minorities in a numerical sense, for example, Mormons and Amish in the United States. Voluntary minorities were those who have moved to the United States or any other society on a voluntary basis, for example the eastern European groups who immigrated here in the 1800's and 1900's. Involuntary minorities were those originally brought over by force-such as Africans who were brought over as slaves. Ogbu also included groups who have been conquered, such as Native Americans, in the involuntary minority status.

In addition to classification of minority status, Ogbu (1992) suggested that the different types of minorities are characterized by cultural differences and social identities. It was suggested that voluntary minorities were characterized by primary cultural differences and involuntary minorities by secondary cultural differences. Primary cultural differences are those that existed before the groups came into contact, for example religious differences. Secondary cultural differences were those that developed after the two populations came into contact with one another and were identified by Ogbu as being associated with ambivalent or oppositional social or collective identities. Furthermore, it was pointed out that these secondary cultural differences could be problematic for schooling. Several identified features of secondary cultural differences included cognitive

style, communication style, interaction style, learning style, and cultural inversion. This last feature, cultural inversion, was explained as a tendency for involuntary minorities to regard particular forms of behavior, events, symbols and meanings as inappropriate for them because these are characteristic of White Americans (p. 141). Ogbu (19998) suggested that involuntary minorities tend to equate school learning with learning a White American cultural frame of reference that they may also see as taboo. Therefore, school learning or the learning of the competencies that enhance school success may be perceived as a threat to the minorities' culture, language, and identity. Learning may b e censored by peers, but it also may be censored by the self (p. 24). Thus, involuntary minority students are often faced with the dilemma of "acting White, Black, Hispanic, Indian," etc.

Ogbu (1990, 1992) suggested several ways that teachers, interventionists, and the involuntary minority community could help children with secondary cultural differences. It was suggested that teachers and schools bear the responsibility of acquiring knowledge of the cultures and languages of minority and other non-mainstream students and using such knowledge to educate the students from these groups (Ogbu, 19909). For example, Ogbu (1992) felt it was necessary to help teachers to recognize that students come to school with cultural frames of references that might be oppositional to those of the mainstream school. Second, teachers and those wanting to intervene should attempt to understand the nature of children's cultural frames of reference by studying their histories of cultural adaptations. Third, counseling programs were suggested to help involuntary minority students learn to separate attitudes about school success from "acting White." Finally, Ogbu (1990, 1992) suggested that programs were needed to increase students'

adoption of the strategy of accommodation without assimilation. This was a strategy that would prompt students to recognize that they could participate in two cultural frames of reference without losing their own cultural identity.

Ogbu suggested that the involuntary minority community also played a potentially important role in the transformation of children with secondary cultural differences. Community effort was a major concern because it was felt that the academic failure of minority children was not solely based upon what the schools did or did not do. It was suggested that the community should teach the children to separate attitudes and behaviors that lead to academic success from those that lead to loss of cultural identity. One way this could be accomplished was by retaining their social membership in the community. In addition, the community should show children that it valued academic success as much as it valued entertainment, sports, etc.

Although theories such as cultural diversity and cultural discontinuity may offer partial solutions of high drop out rates for minority groups, they have shortcomings. First, some researchers argue that Cultural Discontinuity theory as an explanation for AI/AN dropout has little or not explicit research to prove the hypothesis (Ledlow, 1992). Second, an educational program based upon Ogbu's Cultural Diversity theory might pave the way towards segregation. The 1990 census estimated that at least 63% of all Native Americans live off of reservations, an increase from 50% in 1980. Furthermore, there is an increase in bi-ethnic youth. Mitchell-Kernan (1990, as cited by Herring, 1999) reported that inter-ethnic marriage of Native American women is practically the norm, with 53.7% of Native American females in inter-racial marriages. If culturally specific educational programs are developed, it might only add to the existing problem of cultural

discontinuity among students who attend public schools, where the general population is more heterogeneous than it is homogenous. If the population is homogenous, then designing a culturally specific educational program should not present a problem, except in the event students leave the community to attend schools with more heterogeneous populations. In this case, teaching styles and methods, as well as subject matter may differ considerably.

Another problem that I see with Ogbu's theory is that I don't believe that it is enough to merely recognize that cultural differences and values influence the academic motivation of children belonging to minority groups. I believe that it is important to try to identify what causes the variations in academic motivation among AI/AN students, as well as ways to intervene. Although Ogbu offered suggestions for intervention (ex: counseling, cultural awareness), he did not offer specific insight into how to promote intrinsic motivation among minority students. I would also argue that one cannot really figure out how to effectively intervene without first understanding what the needs of the students are. Thus, I believe that it is vital to examine the psychological needs of Ai/AN students, how these needs are expressed, and whether or not their needs are being satisfied within their learning environment. This may provide further insight into the problem of high dropout rates among AI/AN secondary students. It is hoped that by examining some of the cultural values that may be generalized across AI/AN tribes, as well as any identified psychological needs, further revelation may be found. I feel that it is necessary to point out that I am not overlooking individual tribal differences. However, there are some cultural values that may be generalized across the tribes, and it may prove beneficial to explore these while examining the psychological needs housed without self

determination theory.

In conclusion, the existing literature indicates that Native students experience a high dropout rate (Falk & Aitkens, 1984; Edwards & Smith, 1981), and achieve grades consistently lower than other ethnic groups (Lunneborg & Lunneborg, 1986). One of the short-comings of applying Ogbu's or Maehr's theory to the problem of poor academic success among American Indian and Alaska Native students is that they tend to focus only on the differences between groups, and may pave the way to segregation. The problem with theories such as these, is that realistically, students who attend public schools are usually immersed in fairly heterogeneous populations, thus instruction should be designed that is appropriate for all groups.

Appendix C

Basic Need Satisfaction at High School
When I Am At School

The following questions concern your feelings about your school experiences during the last year of your high school. Please indicate how true each of the following statement is for you given your experiences on this school. Please use the following scale in responding to the items.

1= not true at all
2
3
4= somewhat true
5
6
7= very true

1. I felt that I could make a lot of inputs about how my schoolwork got done.

1	2	3	4	5	6	7
□	□	□	□	□	□	□

2. I really liked the people that I attended school with.

1	2	3	4	5	6	7
□	□	□	□	□	□	□

3. I did not feel very competent when I was at school.

1	2	3	4	5	6	7
□	□	□	□	□	□	□

4. People at school told me that I was good at what I did.

1	2	3	4	5	6	7
□	□	□	□	□	□	□

5. I felt pressured at school.

1	2	3	4	5	6	7
□	□	□	□	□	□	□

6. I got along with the people at school.

1	2	3	4	5	6	7
□	□	□	□	□	□	□

7. I pretty much kept to myself when I was at school.

1	2	3	4	5	6	7
□	□	□	□	□	□	□

8. I was free to express my ideas and opinions at school.

1	2	3	4	5	6	7
□	□	□	□	□	□	□

9. I considered the people that I went to school with to be my friends.

1	2	3	4	5	6	7
□	□	□	□	□	□	□

10. I was able to learn interesting new skills at my school.

1	2	3	4	5	6	7
□	□	□	□	□	□	□

11. When I was at school, I had to do what I was told.

1	2	3	4	5	6	7
□	□	□	□	□	□	□

12. Most days I felt sense of accomplishment from doing my school work.

1	2	3	4	5	6	7
□	□	□	□	□	□	□

13. My feelings were taken into consideration at school.

1	2	3	4	5	6	7
□	□	□	□	□	□	□

14. At school I did not get a chance to show how capable I was.

1	2	3	4	5	6	7
□	□	□	□	□	□	□

15. People at school cared about me.

1	2	3	4	5	6	7
□	□	□	□	□	□	□

16. There were not many people at school that I was close to.

1	2	3	4	5	6	7
□	□	□	□	□	□	□

17. I felt like I could pretty much be myself at school.

1	2	3	4	5	6	7
□	□	□	□	□	□	□

18. The people I went to school with did not seem to like me much.

1	2	3	4	5	6	7
□	□	□	□	□	□	□

19. When I was doing my school work I often did not feel very capable.

1	2	3	4	5	6	7
□	□	□	□	□	□	□

20. There was not much of an opportunity for me to decide myself about my school work.

1	2	3	4	5	6	7
□	□	□	□	□	□	□

21. People at school were pretty friendly towards me.

1	2	3	4	5	6	7
□	□	□	□	□	□	□

Scoring Information for Basic Need Satisfaction at School.
Form three subscale scores by averaging item responses for each subscale after reverse scoring the items that were worded in the negative direction. Specifically, any item that has (R) after it in the code below should be reverse scored by subtracting the person's response from 8. The subscales are:

Autonomy: 1, 5(R), 8, 11(R), 13, 17, 20(R)

Competence: 3(R), 4, 10, 12, 14(R), 19(R)

Relatedness: 2, 6, 7(R), 9, 15, 16(R), 18(R), 21

Appendix D

Basic Need Satisfaction at College
When I Am At School

The following questions concern your feelings about your school during your last year in college. (If you have been attending this college for less than a year, this concerns the entire time you have been at this college.) Please indicate how true each of the following statement is for you given your experiences on this school. Please use the following scale in responding to the items.

1= not true at all
2
3
4= somewhat true
5
6
7= very true

1. I felt that I could make a lot of inputs about how my schoolwork got done.

1	2	3	4	5	6	7
□	□	□	□	□	□	□

2. I really liked the people that I attended school with.

1	2	3	4	5	6	7
□	□	□	□	□	□	□

3. I did not feel very competent when I was at school.

1	2	3	4	5	6	7
□	□	□	□	□	□	□

4. People at school told me that I was good at what I did.

1	2	3	4	5	6	7
□	□	□	□	□	□	□

5. I felt pressured at school.

1	2	3	4	5	6	7
□	□	□	□	□	□	□

6. I got along with the people at school.

1	2	3	4	5	6	7
□	□	□	□	□	□	□

7. I pretty much kept to myself when I was at school.

1	2	3	4	5	6	7
□	□	□	□	□	□	□

8. I was free to express my ideas and opinions at school.

1	2	3	4	5	6	7
□	□	□	□	□	□	□

9. I considered the people that I went to school with to be my friends.

1	2	3	4	5	6	7
□	□	□	□	□	□	□

10. I was able to learn interesting new skills at my school.

1	2	3	4	5	6	7
□	□	□	□	□	□	□

11. When I was at school, I had to do what I was told.

1	2	3	4	5	6	7
□	□	□	□	□	□	□

12. Most days I felt sense of accomplishment from doing my school work.

1	2	3	4	5	6	7
□	□	□	□	□	□	□

13. My feelings were taken into consideration at school.

1	2	3	4	5	6	7
□	□	□	□	□	□	□

14. At school I did not get a chance to show how capable I was.

1	2	3	4	5	6	7
□	□	□	□	□	□	□

15. People at school cared about me.

1	2	3	4	5	6	7
□	□	□	□	□	□	□

16. There were not many people at school that I was close to.

1	2	3	4	5	6	7
□	□	□	□	□	□	□

17. I felt like I could pretty much be myself at school.

1	2	3	4	5	6	7
□	□	□	□	□	□	□

18. The people I went to school with did not seem to like me much.

1	2	3	4	5	6	7
□	□	□	□	□	□	□

19. When I was doing my school work I often did not feel very capable.

1	2	3	4	5	6	7
□	□	□	□	□	□	□

20. There was not much of an opportunity for me to decide myself about my school work.

1	2	3	4	5	6	7
□	□	□	□	□	□	□

21. People at school were pretty friendly towards me.

1	2	3	4	5	6	7
□	□	□	□	□	□	□

Scoring Information. Form three subscale scores by averaging item responses for each subscale after reverse scoring the items that were worded in the negative direction. Specifically, any item that has (R) after it in the code below should be reverse scored by subtracting the person's response from 8. The subscales are:

Autonomy: 1, 5(R), 8, 11(R), 13, 17, 20(R)

Competence: 3(R), 4, 10, 12, 14(R), 19(R)

Relatedness: 2, 6, 7(R), 9, 15, 16(R), 18(R), 21

Appendix E

Breakdown of Items used on Basic Need Satisfaction at School Inventory

Autonomy

17. I felt that I could make a lot of inputs about how my schoolwork got done.
18. I felt pressured at school.
19. I was free to express my ideas and opinions at school.
20. When I was at school, I had to do what I was told.
21. My feelings were taken into consideration at school.
22. I felt like I could pretty much be myself at school.
23. There was not much of an opportunity for me to decide myself about my school work.

Competence

24. I did not feel very competent when I was at school.
25. People at school told me that I was good at what I did.
26. I was able to learn interesting new skills at my school.
27. Most days I felt sense of accomplishment from doing my school work.
28. At school I did not get a chance to show how capable I was.
29. When I was at school I often do not feel very capable.

Relatedness

1. I really liked the people that I attended school with.
2. I got along with the people at school.
3. I pretty much kept to myself when I was at school.
4. I considered the people that I went to school with to be my friends.
5. People at school cared about me.
6. There were not many people at school that I was close to.
7. The people I went to school with did not seem to like me much.
8. People at school were pretty friendly towards me.

Appendix F

Psychological Well Being Inventory
The following set of questions deals with how you feel about yourself and your life. Please remember that there are no right or wrong answers.

Please answer the following questions by checking the box beneath the number that corresponds the best with your feelings.

1= strongly disagree
2= disagree somewhat
3= disagree slightly
4= agree slightly
5= agree somewhat
6= strongly agree

Code Name:
Fill in your code name here. _____

1. I tend to be influenced by people with strong opinions.

1	2	3	4	5	6
□	□	□	□	□	□

2. I have confidence in my opinions, even if they are contrary to the general consensus.

1	2	3	4	5	6
□	□	□	□	□	□

3. I judge myself by what I think is important, not by the values of what others think is important.

1	2	3	4	5	6
□	□	□	□	□	□

4. In general, I feel I am in charge of the situation in which I live.

1	2	3	4	5	6
□	□	□	□	□	□

5. The demands of everyday life often get me down.

1	2	3	4	5	6
□	□	□	□	□	□

6. I am quite good at managing the many responsibilities of my daily life.

1	2	3	4	5	6
□	□	□	□	□	□

7. I think it is important to have new experiences that challenge how you think about yourself and the world.

1	2	3	4	5	6
□	□	□	□	□	□

8. For me, life has been a continuous process of learning, changing, and growth.

1	2	3	4	5	6
□	□	□	□	□	□

9. I gave up trying to make big improvements or changes in my life a long time ago.

1	2	3	4	5	6
□	□	□	□	□	□

10. Maintaining close relationships has been difficult and frustrating for me.

1	2	3	4	5	6
□	□	□	□	□	□

11. People would describe me as a giving person, willing to share my time with others.

1	2	3	4	5	6
□	□	□	□	□	□

12. I have not experienced many warm and trusting relationships with others.

1	2	3	4	5	6
□	□	□	□	□	□

13. I live life one day at a time and don't really think about the future.

1	2	3	4	5	6
□	□	□	□	□	□

14. Some people wander aimlessly through life, but I am not one of them.

1	2	3	4	5	6
□	□	□	□	□	□

15. Sometimes I feel as if I've done all there is to do in life.

1	2	3	4	5	6
□	□	□	□	□	□

16. When I look at the story of my life, I am please with how things have turned out.

1	2	3	4	5	6
□	□	□	□	□	□

17. I like most aspects of my personality.

1	2	3	4	5	6
□	□	□	□	□	□

18. In many ways, I feel disappointed about my achievements in life.

1	2	3	4	5	6
□	□	□	□	□	□

Appendix F

Subscales of Psychological Well Being Inventory

The version of the Psychological Well Being inventory that was used in this study, was the 3-item scale version. It is currently in use in various large-scale national and international surveys. The specific items for the 3-item scales include Autonomy 1,2,3; Environmental Mastery 4,5,6; Personal Growth 7,8,9; Positive Relations With Others 10,11,12; Purpose In Life 13,14,15; Self-Acceptance 16,17,18.

AUTONOMY

Definition: High Scorer: Is self-determining and independent; able to resist social pressures to think and act in certain ways; regulates behavior from within; evaluates self by personal standards.
Low Scorer: Is concerned about the expectations and evaluations of others; relies on judgments of others to make important decisions; conforms to social pressures to think and act in certain ways.

(-) [6.] *I tend to be influenced by people with strong opinions.*

(+) [9.] *I have confidence in my opinions, even if they are contrary to the general consensus.*

(+) [14.] *I judge myself by what I think is important, not by the values of what others think is important.*

ENVIRONMENTAL MASTERY

Definition: High Scorer: Has a sense of mastery and competence in managing the environment; controls complex array of external activities; makes effective use of surrounding opportunities; able to choose or create contexts suitable to personal needs and values.
Low Scorer: Has difficulty managing everyday affairs; feels unable to change or improve surrounding context; is unaware of surrounding opportunities; lacks sense of control over external world.

(+) [1.] *In general, I feel I am in charge of the situation in which I live.*

(-) [2.] *The demands of everyday life often get me down.*

(+) [4.] *I am quite good at managing the many responsibilities of my daily life.*

PERSONAL GROWTH

Definition: High Scorer: Has a feeling of continued development; sees self as growing and expanding; is open to new experiences; has sense of realizing his or her potential; sees improvement in self and behavior over time; is changing in ways that reflect more self knowledge and effectiveness.
Low Scorer: Has a sense of personal stagnation; lacks sense of improvement or expansion over time; feels bored and uninterested with life; feels unable to develop new attitudes or behaviors.

(+) [5.] *I think it is important to have new experiences that challenge how you think about yourself and the world.*

(+) [11.] *For me, life has been a continuous process of learning, changing, and growth.*

(-) [13.] *I gave up trying to make big improvements or changes in my life a long time ago.*

POSITIVE RELATIONS WITH OTHERS

Definition: High Scorer: Has warm satisfying, trusting relationships with others; is concerned about the welfare of others; capable of strong empathy, affection, and intimacy; understands give and take of human relationships.
Low Scorer: Has few close, trusting relationships with others; finds it difficult to be warm, open, and concerned about others; is isolated and frustrated in interpersonal relationships; not willing to make compromises to sustain important ties with others.

(-) [2.] *Maintaining close relationships has been difficult and frustrating for me*

(+) [9.] *People would describe me as a giving person, willing to share my time with others.*

(-) [10.] I h*ave not experienced many warm and trusting relationships with others.*

PURPOSE IN LIFE

Definition: High Scorer: Has goals in life and a sense of directedness; feels there is meaning to present and past life; holds beliefs that give life purpose; has aims and objectives for living.
Low Scorer: Lacks a sense of meaning in life; has few goals or aims, lacks sense of direction; does not see purpose of past life; has no outlook or beliefs that give life meaning.

(-) [2.] *I live life one day at a time and don't really think about the future.*

(+) [10.] *Some people wander aimlessly through life, but I am not one of them.*

(-) [11.] *I sometimes feel as if I've done all there is to do in life.*

SELF-ACCEPTANCE

Definition: High Scorer: Possesses a positive attitude toward the self; acknowledges and accepts multiple aspects of self including good and bad qualities; feels positive about past life.
Low Scorer: Feels dissatisfied with self; is disappointed with what has occurred in past life; is troubled about certain personal qualities; wishes to be different than what he or she is.

(+) [1.] *When I look at the story of my life, I am pleased with how things have turned out.*

(+) [5.] *I like most aspects of my personality.*

(-) [7.] *In many ways, I feel disappointed about my achievements in life.*

Appendix G

Satisfaction With Life Scale

Below are five statements with which you may agree or disagree. Using the 1 -7 scale below, indicate your agreement with each item by placing theappropriate number on the line preceding that item. Please be open and honest in your responding. The 7-point scale is as follows:

1 = strongly disagree
2 = disagree
3 = slightly disagree
4 = neither agree nor disagree
5 = slightly agree
6 = agree
7 = strongly agree

1. In most ways my life is close to my ideal.

2. The conditions of my life are excellent.

3. I am satisfied with my life.

4. So far I have gotten the important things I want in life.

5. If I could live my life over, 1 would change almost nothing.

Use of the SWLS
The Satisfaction With Life Scale is in the public domain. Permission is not needed to use it.

Pavot, W., & Diener, E. (1993). Review of the Satisfaction With Life Scale. *Psychological Assessment, 5(2),*164-172.

Appendix H

Demographic Data

Code Name: _____

1. Grade Level: Freshman Sophomore Junior

Senior Graduate

2. University you are currently attending: _____

3. Estimated High School Grade Point Average: _____

4. Estimated College Grade Point Average: _____

5. Sex: Male Female

6. Age: _____

7. Percent of American Indian/Alaska Native ancestry _____

8. Tribal Affiliation: _____

Directions: *In the following questions, please indicate your answers by circling the appropriate answers.*

9. Are you fluent in your tribal language? (Please circle the appropriate answer)

1	2	3	4	5	6
not					very
Fluent					fluent
At all					

10. Are either of your parents fluent in your tribal language?

Yes No

11. Do you participate in any traditional Native American/Alaska Native activities?

Yes No

12. If so, which ones (circle all that apply)?

a. Native language courses
b. Pow-wows/tribal dancing
c. Potlatches
d. Sweat lodge
e. Native arts (eg. Carving, basket weaving, blanket weaving)
f. Religious activities
g. Other

Directions: *In the question below, please indicate your answer by placing a check mark to the left of the type of high school(s) you attended, and fill in the number of years that you attended each in the space provided to the right.*

13. In high school did you attend:

_____ Indian Boarding School _____

_____ Tribal High School _____

_____ Public High School _____

_____ Private High School _____

_____ Alternative High School _____

_____ Home School _____

Directions: In the space provided below, please answer the following questions.

1. What factors do you feel contributed the most to your decision to stay in high school and put forth effort?

2. What factors do you feel contributed the most to your decision to stay in college and put forth effort?

3. Did you feel that you had any barriers to your success in school? If so, please explain what they were and how you overcame them.

Appendix I

IRB Permission

University of Oklahoma

The University of Oklahoma

OFFICE FOR HUMAN RESEARCH PARTICIPANT PROTECTION

IRB Number: 10578
Approval Date: June 05, 2006

June 05, 2006

Elaine Smith-Bontempi
Educational Instructional Psychology and Technology
820 Van Fleet Oval, ECH 320A
Norman, OK 73019

RE: Protocol No. FY2004-40: The School Experience for Native American and Alaska Native Students

Dear Ms. Smith-Bontempi:

Thank you for completing and returning the IRB Application for Continuing Review (Progress Report) for the above-referenced study. You have indicated that the study is still active. I have reviewed and approved the Progress Report and determined that this study was appropriate for continuation.

This letter documents approval to conduct the research as described in:
Cont Review Form Dated: May 26, 2006
Other Dated: May 26, 2006 Summary of study activities
Consent form - Subject Dated: May 26, 2006

Please remember that any change in the protocol, consent document or other recruitment materials (adverstisements, etc.) must be approved by the IRB prior to its incorporation into the study procedures. Submit a completed Protocol Modification form to the IRB office.

Approximately two months prior to the expiration date of this approval, you will be contacted by the IRB staff about procedures necessary to maintain this approval in an active status. Although every attempt will be made to notify you when a study is due for review, it is the responsibility of the investigator to assure that their studies receive review prior to expiration.

The approval of this study expires on June 04, 2007 and must be reviewed by the convened IRB prior to this time if you wish to remain in an active status. Federal regulations do not allow for extensions to be given on the expiration date.

If we can be of further assistance, please call the IRB office at (405) 325-8110 or send an email to irb@ou.edu.

Cordially,

Grayson Noley, Ph.D.
Vice Chair, Institutional Review Board

Ltr_Prog_Appv_Active