2-1-2012

AN EXPLORATORY STUDY OF PERCEIVED FACULTY DISCRIMINATION AND NATIVE AMERICAN COLLEGE STUDENTS INTRINSIC MOTIVATION

Jamie Lynn Joe

Jamie Lynn Joe
Candidate

Individual, Family & Community Education (IFCE)
Department

This thesis is approved, and it is acceptable in quality and form for publication:

Approved by the Thesis Committee:

Pamela Olson ,Chairperson

Pamela Olson

David Atencio

Ziarat Hossain

AN EXPLORATORY STUDY OF PERCEIVED FACULTY DISCRIMINATION AND NATIVE AMERICAN COLLEGE STUDENTS' INTRINSIC MOTIVATION

BY

JAMIE LYNN JOE

B.A., Psychology, University of New Mexico, 2005

THESIS

Submitted in Partial Fulfillment of the
Requirements for the Degree of

Master of Arts
Family Studies

The University of New Mexico
Albuquerque, New Mexico

December, 2011

Dedication

This is for my wonderful parents, who have nurtured every aspect of my being and continue to encourage my endeavors. Mom and Dad, you have nurtured me with the utmost love and continue to guide me. Thank you for instilling me with a strong sense of determination and courage.

To my beloved brother, my guardian angel, thank you for being by my side.

Acknowledgements

To my mentors, Dr. Pamela Olson, Dr. David Atencio, and Dr. Ziarat Hossain, thank you for your guidance and enthusiasm to educate.

AN EXPLORATORY STUDY OF PERCEIVED FACULTY DISCRIMINATION AND NATIVE AMERICAN COLLEGE STUDENTS' INTRINSIC MOTIVATION

BY

JAMIE LYNN JOE

ABSTRACT OF THESIS

Submitted in Partial Fulfillment of the
Requirements for the Degree of

Master of Arts
Family Studies

The University of New Mexico
Albuquerque, New Mexico

December, 2011

AN EXPLORATORY STUDY OF PERCEIVED FACULTY DISCRIMINATION AND NATIVE AMERICAN COLLEGE STUDENTS' INTRINSIC MOTIVATION

BY

JAMIE LYNN JOE

B.A., Psychology, University of New Mexico, 2005
M.A., Family Studies, University of New Mexico, 2011

ABSTRACT

Perceived faculty discrimination and its affect on Native American college undergraduate students' intrinsic motivation was explored. The following variables were studied, perceived faculty discrimination, family support, and intrinsic motivation in an attempt to gain insight on the changing Native American enrollment rates. An interest was taken in examining perceived faculty discrimination to see if possible negative interactions, such as negative approaches and feedback, occurred during class between instructors and students. Students' perception or lack of perceived faculty discrimination was studied to observe its impact on Native American students' intrinsic motivation to learn and to see how that would impact their academic success. Lastly, family support was examined in relation to students' experiences of perceived faculty discrimination to get a sense of how the presence or absence of support influenced students' academic success.

The student sample consisted of 40 University of New Mexico Native American undergraduate students enrolled in one of five introductory NATV courses for the Fall 2008 semester. The students ranged in age from 19 years old to 55 years old (M = 27, *SD* = 9.68).

There were 65% females (N = 26) and 32.5% males (N = 13). Student classification was composed of four student groups: 5% sophomore (N = 2), 10% junior (N =4), 62.5% senior (N = 25), and 7.5% other (N =3). A Pearson Bivariate Correlation analysis was conducted and the study revealed that there was no significant relationship between perceived faculty discrimination and Native American students' intrinsic motivation to academically succeed.

Table of Contents

List of Tables

Chapter I

Introduction

When discussing possible reasons behind students' academic performance, there are many factors to consider. For the purpose of this study, the following variables were examined: students' self-determination, family support, and school context in regard to students' perception of faculty discrimination and classroom climate. School atmosphere and student behaviors are components that mutually affect each other and could possibly influence in the quality of interaction between students and faculty, which may affect the degree to which students feel intrinsically inclined to learn (Clifton, Perry, Stubbs, & Roberts, 2004; Pascarella, Terenzini, & Hibel, 1978). Being intrinsically motivated to learn is one of the key factors in succeeding to one's highest potential. It has been found students that hold mastery goals are more likely to succeed academically because the learning process is inherently rewarding as opposed to students who are motivated by extrinsic goals Vansteenkiste, Simons, Lens, Deci, & Sheldon, 2004). The purpose of this study was to examine how perceived faculty discrimination, of the quality of faculty-student interaction, affects Native American students' intrinsic motivation and as a result, their potential success in higher education. In addition, this study examined the important relationship between intrinsic motivation and family support.

One aspect of the quality of faculty-student interaction entails student perceptions of faculty discrimination which consists of overt discrimination, such as exclusion from class activities and treating or referring to ethnic minority students stereotypically (Suarez-Balcazar, Orellana-Damacela, Portillo, Rowan, & Andrews-Guillen, 2003). Specifically, the way perceived discrimination mediates the faculty-student relationship is of interest as

measured by an Intrinsic Motivation Inventory scale. Previous research suggests a link between discrimination and the faculty-student relationship in terms of student psychological disengagement and academic performance (Taylor, Casten, Flickinger, Roberts, & Fulmore, 1994; Osborne & Walker, 2006). All have been found to have a negative impact on students' academic success.

For instance, Clifton et al. (2004) examined the university faculty environment, psychological dispositions, and academic achievement of college students. The results of the study showed that the way college students approached their school work either positively or negatively, was influenced by faculty interaction (Clifton, et. al., 2004). In another study, Osbourne and Walker (2006) found that ethnic minority students, who were stigmatized by faculty, were more likely to drop-out of college.

In recent years, college attendance of ethnic minority status has become of interest in light of low enrollment rates, poor academic performance and retention rates (Gloria & Robinson Kurpius, 2001; Montgomery, Miville, Winterowd, Jeffries, & Baysden, 2000; Smedley, Myers, & Harrell, 1993). The research has consistently shown, when compared to non-ethnic minority students, college attendance and academic performance have decreased among ethnic minority students the past couple of decades (Smedley et al., 1993). This trend has compelled educators to examine factors that may be responsible for the association between ethnic minority students and college attendance. Native Americans account for 0.8% of college students nationwide (Guillory & Wolverton, 2008; Gloria & Robinson Kurpius, 2001). The reported high college drop-out rate decreases the likelihood that they will graduate from college (Gloria & Robinson Kurpius, 2001). Given the low retention rates of Native American students nationwide, it is imperative to better understand the impact of

faculty support and reasons behind ethnic minority student drop-out rates, specifically among Native American students (Loo & Rolison, 1986). Previous studies have reported a link between perceived faculty discrimination and intrinsic motivation (Steele & Aronson, 1995; McFarland, Lev-Arey, & Ziegert, 2003).

At the University of New Mexico, there should be cause for concern about the Native American student enrollment rate. The Office of Records and Registration provided the following numbers in regard to trends in Native American enrollment. The number of Native American students has steadily increased from Fall 2003 (1,140) to Fall 2007 (1,543), and Spring 2009 (1, 685). However, records also indicate there is a decreased number of students who return the following Spring semesters. For instance, in Fall 2002, 905 females and 466 males were enrolled compared to returning 845 females and 425 males in Spring 2003. Currently, the number of enrolled undergraduate students appears to have increased.

For example, the Native American population at UNM during the Spring 2009 semester was 1,685, which was a 5.71% increase within the past five years. For the Spring 2009 semester, 986 females and 529 males returned to school. While there appears to be progress in the increase of student enrollment among Native American students, there is still a difference between gender enrollment rates. This data was collected for this study during the Fall 2008 semester, which was current at the time.

Statement of the Problem

Even though socioeconomic factors may hinder college attendance, there are other underlying factors that make students disengage from school. It has been found that ethnic minority students are more likely to drop-out of school due to socio-cultural alienation as opposed to academic factors that has been identified with Caucasian students (Loo &

Rolison, 1986). A discriminatory context may affect a student's cognitive and affective development (Nora & Cabrera, 1996). Accordingly, a positive faculty-student relationship has been linked to college persistence, while negative faculty-student relationship has been linked to college non-persistence (Gloria & Robinson Kurpius, 2001). For instance, students who hold intrinsic goals identify themselves with school and this path becomes internalized with their sense of self. While these students strive to learn, it is ironic that intrinsically motivated ethnic minority students are put at as much academic risk as non-intrinsically motivated ethnic minority students for failure as a result of perceived discrimination (Osborne & Walker, 2006; Nora & Cabrera, 1996). Students who perceive prejudice due to their ethnic background and identify themselves with academic success, they are at risk for withdrawing from school because their educational goals are intrinsically tied to their identity (Osborne & Walker, 2006). Therefore, when they perceive negative feedback due to their ethnic background from faculty, it is perceived as a threat to their sense of self (Osborne & Walker, 2006). The literature on perceived discrimination suggests that perceived discrimination has deleterious effects on student sense of self and achievement. Based on this research, the problem that was examined includes the educational, familial, and individual context.

Rationale

The majority of research in this area has focused on African American college students in relation to Caucasians and other ethnic minorities. Although the research has been limited primarily to this ethnic minority group, it has contributed tremendously toward understanding the obstacles ethnic minority students encounter, such as the link between socioeconomic status and education, the quality of faculty-student interaction and its affect

on academic success (Santos, Ortiz, Morales, & Rosales, 2007; Steele & Aronson, 1995; Pascarella et al., 1978). The research available on Native American college students is very limited compared to research on other ethnic minority populations.

The few studies (Gloria & Robinson Kurpius, 2001; Montgomery et al., 2000; McNeil, Kee, & Zvolensky, 1999) that have examined Native American populations and educational success have focused on variables similar to this study. Studies have focused on culturally related anxiety along with ethnic identity, the influence of self-beliefs, social support, the context on academic non-persistence, and ethnic identity in relation to withdrawing from school. However, it appears there has not been a study that has linked the following four variables in regard to Native American college students in terms of context, academic persistence, motivation, and family support.

While recognizing the importance of other variables, this study examines perceived faculty discrimination, intrinsic motivation, and family support. This study may contribute toward understanding how perceived discrimination affects Native American students' intrinsic motivation and thus impact their success in higher education. Also, studying family support as an additional component, may aid in understanding the family's role in regard to students' success in higher education. These factors could potentially lend insight into retention rates and academic performance among Native American students.

Research Questions

The following research questions were explored:

1. Is there a relationship between Native American college students' perception of faculty discrimination and intrinsic motivation?

The following four intrinsic motivation inventory (IMI) subscales, interest/enjoyment, perceived competence, effort/importance, and value/usefulness, will be examined individually. Also, these IMI subscales will be examined in relation to perceived faculty discrimination.

1a. Is there a relationship between perceived faculty discrimination and Native American students' sense of interest/enjoyment toward academic success?

1b. Is there a relationship between perceived faculty discrimination and Native American students' sense of perceived competence toward academic success?

1c. Is there a relationship between perceived faculty discrimination and Native American students' sense of effort/importance toward academic success?

1d. Is there a relationship between perceived faculty discrimination and Native American students' sense of value/usefulness toward academic success?

2. Is there a relationship between perceived faculty discrimination and Native American college students' sense of classroom climate?
3. Is there a relationship between Native American students' sense of intrinsic motivation and family support toward academic success?

The following four intrinsic motivation inventory (IMI) subscales, interest/enjoyment, perceived competence, effort/importance, and value/usefulness, will be examined individually. Also, these IMI subscales will be examined in relation to family support.

3a. Is there a relationship between Native American students' sense of interest/enjoyment and family support toward academic success?

3b. Is there a relationship between Native American students' sense of perceived competence and family support toward academic success?

3c. Is there a relationship between Native American students' sense of effort/importance and family support toward academic success?

3d. Is there a relationship between Native American students' sense of value/usefulness and family support toward academic success?

4. Is there a relationship between Native American college students' sense of family support and classroom climate?

Conceptual Framework

Three frameworks, ecological theory, cultural-ecological theory, and self-determination theory, were chosen to guide the research questions in an attempt to explore how different aspects of a student's environment would affect their intrinsic motivation to succeed in higher education. First, ecological theory was chosen as the primary conceptual framework to guide the research questions. According to Bronfenbrenner (2005), there are four distinct but intertwined systems that make up one's ecology: the microsystem, mesosystem, exosystem, and macrosystem. These systems encompass one's immediate environment to the greater environment that mutually interact. This framework was chosen because it systematizes how events are linked between various levels of activity. Specifically, this framework helps in exploring students' various environments, such as the academic, family, and individual context, in an attempt to understand student success by examining intrinsic motivation.

Second, cultural-ecological theory was used to examine the context of perceived discrimination and its influence on student behavior. John Ogbu's Cultural-Ecology theory (CE) attempts to explain how ethnic minority students' academic performance is impacted by both societal and individual cultural responses (Foster, 2004; Ogbu, 1993). It is important to

understand the context in which perceived discrimination is occurring and how that context affects intrinsic motivation and academic performance, as well as exploring how the family may mediate the experience.

Third, self-determination theory (SDT) is a macro-theory of human motivation that addresses components of the human psyche that are essential to human growth and development (i.e., personality development, self-regulation, universal psychological needs, life goals and aspirations, energy and vitality, non-conscious processes, the relations of culture to motivation, and the impact of social environments on motivation, affect, behavior, and well-being) (Deci & Ryan, 2008). This framework was chosen to explore intrinsic motivation on a minute level to explore how intrinsic motivation affects academic success.

While the researcher recognizes that all possible variables cannot be measured or researched, ecological theory, cultural-ecological theory, and self-determination theory provide a lens for viewing discrimination in an academic environment. The role of perceived family support is important to understanding how this construct contributes to student success. Family support may act as a buffer to students' perception of faculty discrimination or the lack of may buffer the absence of perceived family support and both may contribute to students' persistence (i.e., intrinsic motivation) toward academic success.

These frameworks are essential because they are intricately linked within the ecological systems theory and provide an in-depth view of what could possibly be occurring within each domain. Ecological systems theory frames what is occurring from the innermost level to the broadest level of activities, while cultural-ecological theory frames what is occurring at an institutional and community level, and self-determination theory gives insight into students' sense of intrinsic motivation and that may contribute to academic success. In

addition, the researcher will address intrinsic motivation through self-determination theory and how it is linked to ecological theory.

Operational Definition of Terms

Classroom Climate

Classroom climate is defined as the quality of the learning environment between the instructor and students, which is also known as the autonomy supporting environment (Black & Deci, 2000). The classroom climate instrument is a 14-item construct in Likert format on a seven point scale (1-7) with scores ranging from 14-98. High scores reflect more autonomy support, while low scores reflect little autonomy support. (see Appendix A)

Family Support

Family support is defined as the degree to which a student perceives support from their family, such as emotional and economic support, encouragement, involvement, and inquiry. Students will self-define family, as it is not limited to one's family of origin. The family support instrument is a 4-item construct in Likert format on a seven point (1-7) scale with scores ranging from 11-28. High scores reflect more family support, while low scores reflect little family support. (See Appendix A)

Intrinsic Motivation

Intrinsic motivation is defined as the level to which a student holds goals that are internally rewarding. This domain, developed from a previous study is adapted for the purpose of this study (Grolnick, Deci, & Ryan, 1997). The intrinsic motivation instrument is a 25-item construct in Likert format on a seven point (1-7) scale with scores ranging from 25-175. High scores reflect more intrinsic motivation, while low scores reflect little intrinsic motivation. (See Appendix A)

The intrinsic motivation instrument is made up of four individual subscales. For the purpose of this study, four subscales were utilized. The four subscales are: interest/enjoyment, perceived competence, effort/importance, and value/usefulness.

Interest/Enjoyment

Interest/enjoyment is a self-report measure of intrinsic motivation to assess participants' subjective experience related to a target activity (Deci, Eghrari, Patrick, & Leone, 1994). This subscale is a seven item construct in Likert format on a seven (1-7) point scale with scores ranging from 7-49. High scores reflect more interest/enjoyment, while low scores reflect little interest/enjoyment.

Perceived Competence

Perceived competence is defined as how capable one feels of their ability to perform well. "The perceived choice and perceived competence concepts are theorized to be positive predictors of both self-report and behavioral measures of intrinsic motivation" (www.psych.rochester.edu). This subscale is a 6-item construct in Likert format on a seven point (1-7) scale with scores ranging from 0-42. High scores reflect more perceived competence, while low scores reflect little perceived competence.

Effort/Importance

Effort/importance is defined as the amount of work one applies toward a goal and the significance they place on attaining that goal. This subscale is a 5-item construct in Liker format on a seven point (1-7) scale with scores ranging from 0-35. High scores reflect more effort/importance, while low scores reflect little effort/importance.

Value/Usefulness

Value/usefulness is defined as the degree to which individuals internalize and become self-regulating with respect to activities they experience as useful or valuable for themselves (Deci, et. al., 1994). This subscale is a seven item construct in Likert format on a seven point (1-7) scale with scores ranging from 0-49. High scores reflect more value/usefulness, while low scores reflect little value/usefulness.

Native American

Native American is defined as any student who identifies himself/herself as Native American.

Perceived Faculty Discrimination

Perceived faculty discrimination is defined as attitudes exemplified by faculty experienced by Native American students. The behaviors demonstrated by faculty that are meant to exclude ethnic minority students from an optimal learning experience, such as ignoring a students' motivation to learn and/or treating them stereotypically based on their ethnic background. This domain will be measured using developed measures from two previous studies (Nora & Cabrera, 1996) that were adapted for the purpose of this study. The perceived faculty discrimination instrument is a 5-item construct in Likert format on a four point (1-4) scale with scores ranging from 0-20. High scores reflect more perceived faculty discrimination, while low scores reflect little perceived faculty discrimination. (See Appendix A)

Chapter II

Review of Literature

Introduction

Ethnic minority students' college attendance has become of interest in light of low enrollment rates, poor academic performance and retention rates (Gloria & Robinson Kurpius, 2001; Montgomery et al., 2000; Smedley et al., 1993). The data has consistently shown, when compared to non-ethnic minority students, college attendance and academic performance has decreased among minority students the past couple of decades (Smedley et al., 1993). This trend has compelled educators to examine factors that may be responsible for the association between ethnic minority status and college attendance.

Native Americans account for 0.8% of college students nationwide. The reported high college drop-out rates decreases the likelihood that they will graduate from college (Gloria & Robinson Kurpius, 2001). Given retention rates of Native American students nationwide, it is imperative to better understand the impact of faculty support and reasons behind minority student drop-out rates (Loo & Rolison, 1986). Earlier studies have attempted to examine the way students perceive themselves and how this effects their motivation to learn (Pascarella et al., 1978). Previous studies focused on faculty discrimination and its association with trends in low retention have reported a link between perceived faculty discrimination and intrinsic motivation.

The purpose of this study is to examine how the quality of faculty-student interaction affects Native American students' intrinsic motivation and as a result, their success in higher education. Faculty-student interaction is an important component to examine to see what role if any, it plays in a student's thrive to succeed academically. Based on previous research on

discrimination in an academic setting and trends in ethnic minority college attendance rates, this study examines this relationship among Native American students at the University of New Mexico. The role of family support was reviewed in regard to student academic success.

The format of the literature review consists of one general theory, ecological theory, and two sub-theories, self-determination and cultural-ecology theory, that are specific to examining the contextual, psychological, and cultural themes. Following a discussion of the frameworks, intrinsic motivation, perceived discrimination, and family support are discussed.

Theoretical Frameworks and Related Research

Ecological theory. Ecological theory uses a systems approach to acknowledge distinct structures that are specific to an individual's environment, and the events that occur within those structures mutually influence each other. Urie Bronfenbrenner (1993) also referred to ecological theory as ecology of human development, which is defined as follows:

> the scientific study of the progressive, mutual accommodation, throughout the life course, between an active, growing, highly complex biopsychological organism-characterized by a distinctive complex of evolving interrelated, dynamic capacities for thought, feeling and action-and the changing properties of the immediate settings in which the developing person lives, as this process is affected by the relations between these settings, and by the larger contexts in which the settings are embedded. (1993, p. 7)

Essentially, the span of an individual's development is impacted by various interactions and events that affect one's growth. These systems range from events that occur within an individual's immediate surroundings that directly affect them and with which they are able to interact with, to surroundings that indirectly affect them. According to Bronfenbrenner

(2005), there are four distinct but intertwined systems that make up one's ecology: the microsystem, mesosystem, exosystem, and macrosystem.

Bronfenbrenner (1979) defines the microsystem as a pattern of activities, roles, and interpersonal interaction patterns that experienced by the child within their immediate settings. Within this system, an individual is an active participant in their environment and has the ability to directly interact with their surroundings, as opposed to behaving as a passive participant. In a sense, there is reciprocation between the individual and the people present in their immediate surroundings. Mutual interaction occurs as a result of events and dialogue that is exchanged and to which the individual and those present in the environment react to. Brofenbrenner (2004) was aware of this active participation by the child and the response it evoked from their environment (i.e., parents and those in their immediate environment) and stated that all relationships are bidirectional. For instance, a student that demonstrates an enthusiastic attitude to learn by participating and seeking information in class will be met with positive interactions from their instructor who will provide a rich learning environment. The opposite may also occur with a student that does not pay attention in class, their instructor may not give them their attention or they may try to actively engage their attention to learn.

A mesosystem is the second system within the ecological model and is characterized by the connections between microsystems that include the home, school, and neighborhood (Berk, 2004, p. 28). Events that occur in one context can be transferred by the individual to another context. A pattern of interaction develops and follows from what occurs in one situation to another. For example, positive words of encouragement to a child in school from their parents may instill a sense of efficacy in the child, which could transfer to a positive

learning experience for the child, as well as positive interactions with peers in the neighborhood.

The exosystem is the third system within the ecological model and consists of social settings (i.e., parents' workplace, religious institutions, health and welfare services, parents' social networks, and extended family members) that do not directly involve the presence of children, but nonetheless, the events that occur within those social settings affect them indirectly (Berk, 2004, pg. 28). Even though children are absent in this subsystem, the interactions and information that occur pertain to or affect them in the way their parents interact and/or exchange information with them and issues that affect them at the social level. For instance, a change in parents' salary could alter the family's lifestyle level. In particular, this salary change could effect result in a decrease in resources, such as the amount of money the parents are able to contribute to their child's education in terms of fees and a college education fund.

The macrosystem is the fourth system in the ecological model is characterized by cultural values, laws, customs, and resources (Berk, 2004, pg. 28). This system encompasses the external organization of the ecological system by which the internal systems operate under and with. For example, cultural values are instilled by students' respective tribes and are internalized by students in forming their identity. Also, college students' education may be affected by changes in financial aid and health insurance due to changes in laws regarding educational policies.

Ecological Theory and Native American College Students

The relationship of ecological theory to Native American college students has been acknowledged in academic literature. The literature available on Native American students

has focused on college students' educational experience. In regard to ecological theory, college students constantly interact within various systems. In this instance, those interacting systems range from individual pursuits to the family context to the classroom atmosphere that influences those pursuits.

It has been suggested that minority students who do not have access to a quality education often embark on their college career academically ill-prepared. Students who enter college academically unprepared effects their academic performance, however, it does not directly sway their persistence (Nora & Cabrera, 1996). Academic preparedness is an important factor in discussing Native American students' academic success since they have been recognized as not being academically prepared according to standardized tests and other tools that measure their academic performance (House, 1997; Nora & Cabrera, 1996). This has become a concern in among Native American communities and educators in light of prior dropout statistics and low enrollment data (cited in Montgomery et al., 2000). Among Native American students, ACT scores were found to be predictive of their college admissions and female students' scores were predictive of their GPA, whereas, male students' scores were not predictive of their GPA (House, 1997).

While the notion of Native American students being poorly prepared to enter the higher education realm seems bleak, this only provides an initial snap-shot of Native American students. Research studies have examined factors related to student persistence, and it has been found that self beliefs, social support, and a supportive educational environment are key to Native American student success (Guillroy & Wolverton, 2008; Gloria & Robinson Kurpius, 2001). These are elements that are central to students' ecological system that encompasses the innermost structure of the self, to the family and

social system that support those self-beliefs, as well as the academic context that supports students' learning processes.

Native American students often attend colleges that are comprised of a predominantly Caucasian population. In the interest of exploring Navajo students' adjustment to this environment, one study examined the connection between anxiety and ethnic identity among college students (McNeil et al., 1999). The results of the study found no link between ethnic identity and cultural anxiety among Navajo college students, but found that Navajo students scored high on an ethnic identity construct compared to students of Asian, Caucasian, and mixed ethnicities (McNeil et al., 1999). This information highlights how the path to constructing a positive self-image lies within possessing a strong ethnic identity toward creating an overall positive identity. If students have a sense of their origins and who they are, they will be able to navigate their way toward their goals and remain focused on their intended path without becoming distracted by factors that may question their identity.

Even though the results indicated that Navajo college students scored high on an ethnic identity construct, one must consider the context in which that particular construct was measured (McNeil et al., 1999). For instance, the level of acculturation should be considered when evaluating ethnic identity and how that relates to cultural anxiety bearing in mind that some students may have been raised on solely on the reservation, in an urban area, or both (Gloria & Robinson Kurpius, 2001; McNeil et al., 1999). Native American students who were nurtured in different contexts could play a key role in how these distinct contexts contributed to their varying levels of ethnic identity and acculturation. Also, varying levels of acculturation may interact with and produce varying levels of cultural anxiety as well. These

are important components to consider because they may affect student persistence and academic outcomes in varying degrees.

Cultural-Ecological Theory

John Ogbu's Cultural-Ecology theory (CE) attempts to explain how ethnic minority students' academic performance is impacted by both societal and individual cultural responses (Foster, 2004; Ogbu, 1993). As Ogbu studied minority students' academic success, he ascertained that it is important to comprehend how ethnic minority students perform and function in predominantly Caucasian academic institutions, which he termed, system forces (Foster, 2004). This is a key component in regard to studying the affect of perceived discrimination from faculty. In addition, Ogbu maintained that it is equally important to consider how students' cultures impact their academic success, which he termed, community forces (Foster, 2004). In this sense, the level of support ethnic minority groups provided their students was taken into consideration in terms of how support facilitates or hinders student success because this support or lack of support stems from an ethnic minority group's history in the United States. According to CE theory, there is not just one context that influences student success, rather, the cultural context of students' has to be examined, such as mainstream society and students' specific cultural contexts in which they interact. Further, the degree of student success also depends on minority status within the mainstream context.

In Ogbu's studies of ethnic minority students, questions arose as to the distinct academic success between immigrant ethnic minority students and U.S. ethnic minority students (Ogbu, 1993). Ogbu found that the basis to understanding ethnic minority student success in mainstream society was to study the, "historical circumstances by which a group of people comes to their minority status is critical to understanding their approaches to

schooling" (Foster, 2004). Ogbu proposed that the distinct academic approach and performance between voluntary and involuntary minority students is due to each group's cultural history and ecology (Foster, 2004; Ogbu, 1993). It is inherent that all individuals recognize a degree of their cultural history which shapes their identity. However, the manner in which students approach their education is due in part to their cultural frame of reference (Ogbu, 1993). Ogbu (1993) categorized minority status as: 1) voluntary minority (i.e., immigrants who willingly migrated to the U.S. to seek a better life), 2) involuntary minority (i.e., those that were conquered or enslaved, such as Native Americans and African Americans in the U.S.), 3) and autonomous minority (i.e., who are subject to prejudice, "but are not subordinated groups in a system of rigid stratification"). CE theory takes into account how ethnic minorities and more specifically, how children perceive and function from either a voluntary or involuntary minority perspective.

Depending upon the minority status children fall into, their status will shape their attitude in terms of how they approach their education. Ogbu was concerned about students who were of voluntary and involuntary ethnic minority statuses. According to Ogbu's studies (1993) on academic performance and minority status, he found that voluntary ethnic minority students performed better than involuntary ethnic minorities. In regard to students' historical background, Ogbu suggested that academic success stemmed from differences in how students viewed their education within the confines of their context. Ogbu (1993) contended that the differences in school performance between minority and non-minority students were attributed to two factors: 1) the treatment of minority groups in society and within the educational system, which is system forces, and 2) the perceptions of the minorities and their

responses to school due to this sort of treatment, also known as community forces (Ogbu & Simons, 1998).

For example, voluntary ethnic minority students, who immigrated from other countries did significantly well academically because they viewed the U.S. as the country of opportunity where one can succeed if one puts forward their effort, and also because their immigration was a choice they made (Foster, 2004; Ogbu, 1993). Although voluntary ethnic minority students are confronted with prejudice, they continue to strive toward their academic goals and assimilate to mainstream society's linguistic and behavioral norms in order to achieve success (Foster, 2004; Ogbu, 1993). It has been suggested that voluntary ethnic minorities succeed academically because they reside in a different country and context that does not immediately connect with their history as ethnic minorities (Foster, 2004).

They may encounter prejudice in their host country, but it does not resonate similar visceral experiences of prejudice they have confronted in their country of origin. Instead, they adapt to the host country's customs, behaviors, and language because it is a tool to achieving their goals (Foster, 2004). This adaptation to a different country that is disconnected to an ethnic minority group's history, facilitates the motivation to succeed in a country that is associated with opportunity and the possibility of attaining the American dream. Most often, this is the goal voluntary ethnic minority families focus on and encourage their children to put forward their effort in obtaining an education, for this is the way toward a fulfilling life.

Involuntary ethnic minorities that reside in the U.S. are individuals who were forced to become a part of the U.S. against their by being conquered, colonized, or enslaved (Ogbu & Simons, 1998). Unlike voluntary ethnic minority students, involuntary ethnic minority

students do not perform well academically in comparison to voluntary ethnic minority (Foster, 2004). The rationale behind this academic difference is best explained by a history of discrimination and unjust issues afflicted upon numerous ethnic minority groups in the U.S. that initiated a sense of distrust toward the education system as well as other institutions (Ogbu, 1993). Distinct from the voluntary ethnic minority community, the involuntary ethnic minority group discuss their history and issues pertinent to their ethnic group in a wary tone (Foster, 2004). Involuntary ethnic minority students internalize the messages they receive from those within their ethnic group in addition to their personal experiences with prejudice in school and their daily interactions beyond the classroom. Unfortunately, this combination of interactions poses the possibility for involuntary ethnic minority students to react in an oppositional manner toward their education and their status in the U.S. (Foster, 2004). Students who take an oppositional stance toward institutions that are deemed as White institutions, become consumed with their group's issues that it disrupts and destroys their intentions to succeed to the best of their ability.

Ogbu mentions survival strategies for involuntary ethnic minority students who wish to excel academically in the midst of negativity from both their community and experiences of prejudice by camouflaging, acting white, and behaving as a class clown (Foster, 2004; Ogbu & Simons, 1998). Involuntary ethnic minority students desire to succeed academically, however, they have to conceal their true intentions and ability by seemingly disassociating themselves from their ethnic group or behave in ways that would otherwise identify them as being academically oriented for fear of being perceived as a disloyal member of their ethnic group (Foster, 2004; Ogbu, 1993).

Self-Determination Theory

Self-determination theory (SDT) is a macro-theory of human motivation that addresses components of the human psyche that are essential to human growth and development (i.e., personality development, self-regulation, universal psychological needs, life goals and aspirations, energy and vitality, non-conscious processes, the relations of culture to motivation, and the impact of social environments on motivation, affect, behavior, and well-being) (Deci & Ryan, 2008). SDT is rooted in need theory, which suggests that there are basic psychological needs that humans must address in order to attain a sense of healthy psychological well-being and development (Deci & Ryan, 2000; Deci & Ryan, 2008). Typically, those needs are addressed by formulating goals in order to attain a reward that is central to one's personal fulfillment and/or a means to an end within the external realm.

The focus of SDT is to understand "innate psychological needs" in order to understand behaviors associated with the intentions of goal pursuits and expected outcomes (Deci & Ryan, 2000). Essentially, self-determination is an inner drive that compels one to find ways that will satisfy goals. There are two distinct spectrums upon which goals pursuits and expected outcomes occur. The intentions of goal pursuits must be understood within the context in which those goals are formulated.

For instance, goal pursuits are either initiated by an innate need to accomplish a task that is self-satisfying, which is also known as intrinsic motivation, or is initiated by an external force, also known as extrinsic motivation, in which an individual is forced to accomplish a task that is not personally fulfilling, but is an important task in their external

environment (Ryan & Deci, 2000). Again, expected outcomes vary in regard to goal pursuits and will be discussed in detail under the intrinsic motivation section.

Intrinsic Motivation

"Perhaps no single phenomenon reflects the positive potential of human nature as much as intrinsic motivation, the inherent tendency to seek out novelty and challenges, to extend and exercise one's capacities, to explore, and learn" (Ryan & Deci, 2000). Intrinsic motivation is an essential function of human development that stimulates human cognition and propels action toward growth.

Psychosocial variables are elements of the social context that affect an individual's sense of self. For example, school atmosphere and student behaviors are mutually reinforcing in the quality of interaction between students and faculty, which may affect the degree to which students feel intrinsically inclined to learn (Clifton et al., 2004; Pascarella et al., 1978). Being intrinsically motivated to learn is one of the key factors in succeeding to one's highest potential. It has been found students who hold mastery goals are more likely to succeed academically because the learning process is inherently rewarding as opposed to students who are motivated by extrinsic goals (Vansteenkiste et al., 2004).

Intrinsic motivation has been associated with positive expected outcomes both on one's performance and behavior, such as interest, excitement, confidence, which all lead to enhanced performance, persistence, and creativity (Ryan & Deci, 2000). Intrinsic motivation demonstrates an advantageous approach to goal pursuits in which one succeeds in fulfilling their innate psychological needs as well as excelling in their external environment (Deci & Ryan, 2000; Ryan & Deci, 2000). Pursuing goals with an intrinsically motivated frame of mind results in overall positive outcomes as opposed to extrinsic motivation.

Extrinsic motivation occurs when there is an external goal pursuit to be achieved in order to attain an external reward, such as good grades or money, and is simply pursued for the reward, not because it is internally valued or fulfilling (Deci, & Ryan, 2000; Ryan & Deci, 2000). The intentions associated with extrinsic motivation varies and can lead to different outcomes. Extrinsic goal pursuits are influenced by environmental expectations, such as rewards, threats, deadlines, directives, and pressured evaluations (Ryan & Deci, 2000). The expectations to fulfill goals varies upon how an individual perceives goal pursuits, as either instrumental to their long-term goals or something that has to be accomplished immediately (Deci & Ryan, 2000; Ryan & Deci, 2000). The outcome of these goals vary because there is no guarantee of either personal fulfillment nor external gain. There is no guarantee of either internal satisfaction or an external reward as a result of the type of motivation behind the goal. Further, the type of motivation one undertakes toward a goal is linked to locus of causality.

"Causality orientations are general motivations that refer to (a) the way people orient to the environment concerning information related to the initiation and regulation of behavior, and thus (b) the extent to which they are self-determined in general across situations and domains (Deci & Ryan, 2008). A feature of human development is for one to develop autonomy so that they become self-directing individuals.

The nature in which these goals are pursued are also known as regulatory processes, such as external and internal forces, that guide behavior (Deci & Ryan, 2000). A regulatory process can be thought of as a mechanism that drives a behavior toward a goal and assists in maintaining a specific behavior in which the individual remains focused on the task. Whether this regulatory process stems from an internal or external desire to achieve, this regulatory

process shapes the type of motivation that propels an individual's actions. The types of motivation that are linked to distinct regulatory processes and performance outcomes are intrinsic motivation, extrinsic motivation, and amotivation (Deci & Ryan, 2000; Deci & Ryan, 2008). Intrinsic motivation is elaborated upon in its relation to students' learning experiences and academic outcome along with perceived discrimination from faculty.

Students who hold intrinsic goals identify themselves with school and this path becomes internalized with their sense of self. While these students strive to learn, it is ironic that intrinsically motivated ethnic minority students are put at as much risk as non-intrinsically motivated ethnic minority students for failure as a result of perceived discrimination (Osborne & Walker, 2006; Nora & Cabrera, 1996). When students perceive prejudice due to their ethnic background and identify themselves with academic success, they are at risk for withdrawing from school because their goals are intrinsically tied to their identity (Osborne & Walker, 2006). Therefore, when they perceive negative feedback because of their ethnic background from faculty, it is perceived as a threat to their sense of self (Osborne & Walker, 2006). Based on the literature, it appears perceived discrimination has deleterious effects on student sense of self and achievement.

Perceived Faculty Discrimination

Within an academic context, perceived discrimination is defined as overt discrimination exhibited by faculty to their students, such as exclusion from class activities and treating or referring to ethnic minority students stereotypically (Suarez-Balcazar et al., 2003). Perceived discrimination is pertinent to studying the quality of interaction between faculty and students. Specifically, the manner in which an instructor may approach or

respond to a student during class in regard to the course work and/or is a critical feature in exploring student success.

Academic institutions provide an environment that facilitates cognitive and socio-emotional development. Faculty-student interaction is a vital component of this environment. The quality of interpersonal interaction between instructors and students is key to developing an optimal learning environment. For instance, instructors that expect their students to succeed academically and encourage them, foster students to have a positive perception of their academic control and a positive sense of self (Clifton et al., 2004). Structuring an academic environment with expectations and support is also known as an autonomy-supporting environment (Deci & Ryan, 2000). This means that instructors challenge and encourage their students to succeed because they have confidence in their students' potential to excel. The goal of providing an autonomy-supportive environment is that instructors provide guidance so that eventually students take initiative in guiding their behavior in terms of their learning process (Deci & Ryan, 2000).

When studying issues pertinent to ethnic minority students in an educational context, it is also imperative to take into account students' cultural backgrounds. Specifically, this would include the instructors having an idea of a culture's psychology. It cannot be assumed that cultures operate primarily from a Western point of view. For instance, Brian Lam (2007) found that Vietnamese-American students who perceived high levels of discrimination on campus were more likely to develop anxiety, depression, and exhibited a low locus of control. On the other hand, students who exhibited a high locus of control were not as vulnerable to developing anxiety and depression. The term, collective self-esteem, was introduced as, "an individual's appraisal of one's self-esteem derived from interaction with

others" (Lam, 2007). Collective self-esteem recognizes an Eastern psychological point of view, which is characterized by an interdependent approach, wherein, collective self-esteem is derived from others and not by one's individual accomplishments (Lam, 2007). According to this study, students' sense of high locus of control and interdependent connections with family deter adverse consequences as a result of perceived discrimination.

Nora and Cabrera (1996) explored the role of prejudice and discrimination on the adjustment of minority college students. They hypothesized that perceptions of prejudice and discrimination would affect students' academic persistence. The researchers acknowledged that the social interactions that occur within the academic context do not occur independently and the events that occur in one context carry over to another context (Nora & Cabrera, 1996). In other words, positive or negative experiences that occur in one domain beget positive experiences in another domain.

Minority students' adjustment to an institution of higher learning is affected by the "academic domain", which is the interactions that take place between students and the faculty and/or academic staff (Nora & Cabrera, 1996). In examining the variables relevant to students' adjustment, they proposed that as students experience higher education, they instill the value of an education and become committed to completing their degree at their given institution (Nora & Cabrera, 1996). The academic domain plays a part in students' inclination toward academic value and commitment insofar as in the way faculty approach and interact with their students, leaves an impression on students about how to proceed in that environment.

The quality of the academic domain affects the degree of value and commitment students feel toward their education, while enhancing their affective and cognitive

development (Nora & Cabrera, 1996). The outcome for students who excel academically are more likely to demonstrate good grades, commitment to their institution, commitment toward college completion (Nora & Cabrera, 1996). Further, the academic domain emits positive interactions, there may be a tendency for students to become involved and dedicated to their studies and therefore, succeed academically and complete their college degree.

This study explored the following themes that may affect student persistence: 1) the influential nature of academic preparedness within the persistence process, 2) the extent to which separation from family and community facilitates a successful transition to college, 3) and the role of perceptions of prejudice on the adjustment to college environments and on college-related outcomes (Nora & Cabrera, 1996).

The results indicated that pre-college academic preparedness had an indirect effect on student persistence for minority and non-minority students (Nora & Cabrera, 1996). Parental encouragement was shown to be a positive influence on student persistence, as opposed to students' families separating from their children's academic lives. The third category concerning the role of perceptions of prejudice on college adjustment found that perceptions of prejudice affects student adjustment in terms of cognitive and affective outcomes. Although perceptions of prejudice was found to negatively influence student adjustment, there was no evidence of it impacting student persistence.

Verkuyten and Thijs (2004) conducted a study among ethnic minority adolescents in the Netherlands examining the affect of perceived discrimination within the school context. The results of the study indicated that when ethnic minority students experience perceived discrimination, they tend to disidentify with their academic domain. They disidentify in an effort to protect their self-esteem from further negative messages (Verkuyten & Thijs, 2004).

On the other hand, it was found that perceived discrimination did not have a significant affect on students' global self-worth nor their academic performance (Verkuyten & Thijs, 2004). The act of students disidentifying or disengaging from their academic domain has to do with the quality of interaction between students and their instructors as well as the quality of feedback given by instructors (Verkuyten & Brug, 2003). It was also found that students who generally disengaged from the academic domain were excellent students who performed well academically (Verkuyten & Thijs, 2004; Verkuyten & Brug, 2003).

Classroom Climate

The focal point surrounding the discussion of the quality of faculty-student interaction has led to exploring the context of origin of this frequently occurring interaction, the classroom. Exploring faculty-student interaction within the classroom using the classroom climate construct is a way to gauge students' perception of support they receive from their instructors.

Self-determination theory provides a lens in examining the innate developmental process and the interaction in conjunction with one's environment (Ryan & Deci, 2000). The environment is studied in reference to one's innate psychological needs that provides a foundation for self-motivation and personality integration and how environmental variables (i.e., interaction, atmosphere) hinder or propel self-determination (Ryan & Deci, 2000).While the emphasis lies in understanding the innate psychological needs and motives behind goal pursuits, it is also important to address how individuals' goals are supported and accomplished. In this sense, it is essential to understand how the social environment facilitates motivation, hinders motivation, or does not support motivation. "Human beings can be proactive and engaged or, alternatively, passive and alienated, largely as a function of

the social conditions in which they develop and function" (Ryan & Deci, 2000). An individuals' inclination towards either a proactive or passive course of action is partly due to the structure of the environment. The type of support or lack thereof students receive from others in the social environment lies on a spectrum of support to non-support to inattention (Deci & Ryan, 2008; Ryan & Deci, 2000).

"Self-determination theory suggests that motivated behaviors vary in the degree to which they are autonomous vs. controlled" (Black & Deci, 2000). Motivated behaviors occur as a function of the environment in guiding which approach a student takes and also how that motivation is guided by the instructor. Accordingly, there are three types of support: 1) autonomy support, 2) controlled support, and 3) impersonal support (Williams, Saizow, Ross, & Deci, 1997). These types of support are distinct in how they are carried out by an instructor and its affect on student performance. The support type that is utilized to guide students depends on how instructors inform students of classroom information and how they support students with that information.

These support types coincide with motivation type and specific outcomes. Autonomy support occurs when students are genuinely interested in learning and have a sense of control and choice in their environment while being mentored by their instructor (Black & Deci, 2000). In this context, an instructor is willing to help facilitate the learning process by instilling and supporting student autonomy by engaging their interest to learn by presenting material that could further evoke their interest while challenging their cognition and encouraging persistence to learn. The way autonomy unfolds is both a mutual process where instructors have to be able to reach students' interests and the students have to also be willing to take part in that process by giving their attention and building on that process. Thereafter,

when students learn how to become effective learners on their own and seek out information, they have developed autonomous behavior while the instructor is there to guide and give feedback when necessary and not to control the students' learning (Black & Deci, 2000; Deci & Ryan, 2000).

Another important aspect of autonomy support is that an instructor is concerned about students' ability to grasp the classroom material and does not constantly put an emphasis on deadlines (Black & Deci, 2000; Deci & Ryan, 2000). Autonomy support is effective in this context since students who are intrinsically motivated are autonomous in their learning because their intentions are internalized and become a part of their identity (Black & Deci, 2000). As a result, they feel fully responsible for their successes and failures which is also known as internal locus of causality (Deci & Ryan, 2000).

However, it is not a requirement that students go into a learning environment with intrinsically, autonomous intentions in order to derive the benefits of autonomy support from their instructor. A study was conducted on the effects of instructors' autonomy support and students' autonomous learning organic chemistry (Black & Deci, 2000). The results found that instructors who provided an autonomy supportive environment to students low in autonomy initially, successfully performed well in the class. Due to the supportive learning environment the instructor created, students who began the class as autonomous learners perceived a sense of high competence and interest/enjoyment and lower anxiety levels (Black & Deci, 2000). Also, a supportive learning environment predicted continued autonomous self-regulation, perceived competence, and interest/enjoyment, as well as decreases in anxiety over time (Black & Deci, 2000). Conversely, there was not a big difference in the results for students who already exhibited highly autonomous behaviors. This study

demonstrates the effective nature of an autonomy supportive environment, especially for students who do not exhibit an initial interest in the class material.

Controlled support occurs when students do not have a deep-seated interest in the class content while the instructor emphasizes what has to be learned in a rigid curriculum followed by mandatory deadlines (Black & Deci, 2000). This environment is characterized as controlling due to its controlling context in that students do not feel they have a choice and instead, are present because it is a means to fulfilling an end. On the other hand, an instructor may inform students of the classroom material but may not engage students' interest in the learning process. Within this realm, students' perception is that their fate is in the hands of the instructor, which is considered an external force (Deci & Ryan, 2000). Students have to behave in a manner that is going to bring a favorable outcome, such as good grades, not because they internalize and enjoy the learning process. As opposed to an autonomy supportive environment, a controlled supportive environment fosters extrinsically motivated students

Impersonal support occurs when instructors do not actively engage or encourage students' interest toward classroom content and may result in students not displaying any inclination toward motivation (Black & Deci, 2000). This impersonal context is described as uninspiring in the sense that instructors do not direct students' attention in the least to pique students' curiosity toward the classroom content. It is essential to draw students' attention toward myriads of information and inform them of the countless ways they can study a particular subject that appeals to their interest. First, it has to begin with instructors' initial interaction with students in order to learn what subjects students are interested in and how

they learn effectively. The building blocks of reaching students and engaging them in the learning process begins with establishing a rapport.

Family Support

The concept of family provides students a basic foundation of support. The structure of Native American families include nuclear and extended family members, as well as tribal clans (Guillory & Wolverton, 2008). The ties that Native American college students have to their families is unique in that while students are encouraged and supported by their family, there is a deeper connection as a whole. Students are provided basic needs by their family, however, their connection lies within their ethnic identity simultaneously, such as spiritual connectivity and assist their tribal community (Guillory & Wolverton, 2008; Jackson, Smith, & Hill, 2003). Students have an innate connection with both their family and their tribe which is inclusive of their sense of self and purpose.

Native American college students were assessed on their perceived persistence factors. The results of the study revealed that students reported that their family ranked as their top persistence factor which were followed by "giving back to tribal community" and "on-campus social support" (Guillory & Wolverton, 2008). Other studies echoed similar findings which found that family encouragement were key in student persistence, especially when students were met with obstacles while in college (Jackson, et al., 2003; Nora & Cabrera, 1996). These research results imply that family plays a pivotal role in students' academic paths. Their academic success is tied to their innate connection to their family, their ethnic identity, and how they can contribute to their tribe.

In striking contrast, results that yielded favorable responses to family as the top persistence factor also found that students reported family as their top barrier to academic

persistence (Guillory & Wolverton, 2008). Students received support from their families initially, but as their education progressed, they were urged to come home to help support their families financially and emotionally (Guillory & Wolverton, 2008). Single parents in college also face difficulties in pursuing their academic careers as they have to worry about college expenses as well as childcare (Guillory & Wolverton, 2008). In some instances, students have to choose between staying in college and completing their studies or finding work to support their families. While families desire for their children to obtain the best education and livelihood, those wishes often conflict with survival conditions and the means to finance an education.

Summary

Ecological theory, cultural-ecological theory, self-determination theory were utilized to provide a lens in exploring students' perception of faculty discrimination and how it affects their intrinsic motivation to succeed academically. Ecological theory was key to examining how Native American students function within a complex set of systems where distinct events are constantly interacting. This complex set of systems includes students' intrinsic motivation, that was further detailed using self-determination theory, their familial context, and the academic context, which was explored using cultural-ecological theory. Ecological theory was helpful in sorting and linking distinct systems and how those systems affect students' intrinsic motivation. Within the microsystem of ecological theory, self-determination theory shed light on the potential intrinsic motivation has for students who are driven by an inner desire to succeed academically. Also, the role of Native American students' families were explored along with how their support or lack of support may affect their intrinsic motivation and academic success. From a broader ecological system, the

academic context was examined, which includes the classroom climate and the institutional and community context that applies to cultural-ecological theory as well.

Exploring the academic context was essential to consider in regard to students' intrinsic motivation because according to the information on classroom climate, an optimal learning environment is an autonomy supportive context that promotes and supports students' intrinsic motivation to learn and succeed.

In addition, cultural-ecological theory posits that students' approach to education should be understood in reference to societal and students' cultural messages. Cultural-ecological theory articulates the implications historical events may have on ethnic minority students who attend academic institutions where the majority of students are Caucasian. Cultural messages, which include those from their family and tribe, that Native American students receive, play a role in how students perceive their education and how they pursue academic success. This cultural-ecological model is key in comprehending how students perceive the academic institution they attend and how possible perceptions of faculty discrimination may come into play. This process is fundamental to understanding intrinsic motivation and its path to academic success because perceptions of faculty discrimination can have a dire affect on academic success. Conversely, it is possible that perceptions of faculty discrimination or lack of, may not affect students' intrinsic motivation to succeed, and instead, their motivation may stem from their determination and/or family support.

Chapter III

Methodology

This study is descriptive in nature, and utilizes ecological theory as well as two sub-theories, cultural-ecological theory and self-determination theory, to examine the affect of perceived faculty discrimination among Native American college students. This study examines the affect of perceived faculty discrimination on students' intrinsic motivation in regard to academic success. In addition, family support was also examined along with perceived faculty discrimination and students' intrinsic motivation toward academic success.

Sample

The sample consisted of 40 University of New Mexico Native American undergraduate female and male students enrolled in Native American Studies (NATV) undergraduate courses for the Fall 2008 semester. The NATV courses were decided in consultation with the Director of NATV. Permission from instructors was sought beforehand. (See Appendix G) The intention was to get a primarily self-identified Native American sample. In order to participate, students had to be Native American and of adult age.

Measures

The survey instrument utilized in the study consists of five parts: 1) a demographics questionnaire, for both participant and faculty, 2) family support questionnaire, developed by the researcher, 3) a developed perceived faculty discrimination measure (Nora & Cabrera, 1996), 4) a developed classroom climate scale and, 5) a developed intrinsic motivation inventory scale (Ryan, Koestner, & Deci, 1991). All questionnaires were pilot tested for time and clarity on a small group of UNM Native American students.

Demographics

The first part of the survey construct consists of a demographics questionnaire that includes both a student and instructor demographics section for descriptive purposes that was developed by the researcher. The student demographics section includes seven pieces of data from students in which six are fill-in-the blank and one multiple choice. The seven areas of inquiry are: 1) age, 2) gender, 3) school classification, 4) distance one lives from campus, 5) first semester GPA, 6) current semester GPA, and 7) tribe. (See Appendix A).

Students were asked to think of one UNM instructor with whom they have had a negative interaction with and fill out the instructor demographic section accordingly. The instructor demographics section inquires about six areas of information in a fill-in-the blank format. The six areas of interest are: 1) approximate age, 2) gender, 3) perceived ethnic/non-ethic minority status, 4) class size, 5) nature of negative interaction, and 6) frequency of negative interaction.

The family support (FM) scale was designed by the researcher to measure the level of family support, specifically in the area of academics. This measure is a 4-item construct in Likert format on a seven point scale (1-7) from "not at all true" to "very true". The score could range from 11-28. The higher the score, the more family support students report. On the other hand, the lower the score, the less family support students receive. The FS scale includes the following questions: 1) Is your family supportive of your attendance at the University of New Mexico?, 2) Do you share school experiences with your family?, 3) Does your family inquire about your progress in school?, and 4) Do they encourage your academic progress?

Perceptions of Faculty Discrimination Scale

The perception of faculty discrimination measure was developed by Amaury Nora and Alberto F. Cabrera (1996). The perceptions of faculty discrimination scale was originally termed perceptions of prejudice-discrimination (PPD) from a study conducted by Nora and Cabrera (1996), which examined the role of perceptions of prejudice and discrimination on the adjustment of minority students to college. The PPD scale initially included the following constructs: 1) campus climate, 2) faculty discriminatory attitudes, and 3) in-class experiences.

Five items were taken from the subscale, faculty discriminatory attitudes and in-class experiences, developed by Nora and Cabrera and adapted for the purpose of this study. (See Appendix C) Permission was sought and granted from Nora to use this instrument for this study. (See Appendix D) The items were drawn and adapted from a number of studies that have researched the link between college ethnic minority students, psychosocial, and academic achievement. Nora and Cabrera (1996) stated that these five items were selected on the basis of research documenting their validity and reliability.

This scale measured a student's perception of faculty discrimination at UNM. This is a 5-item scale in Likert format on a four point scale (1-4) from "strongly agree" to "strongly disagree". The score will range from 0-20. The lower the scores, the higher the perception of discrimination from faculty and the higher the scores, the lower perception of discrimination. For the purpose of this study, the perceptions of prejudice-discrimination (PPD) measure is referred to as the perceptions of faculty discrimination (PFD) scale throughout the study. The PFD scale includes the following items: 1) During class, the professor ignores students of different backgrounds, 2) The professor treats students of particular ethnicities/groups

stereotypically, 3) The professor has a tendency to call on a minority student expert in terms of gaining information on a specific ethnicity, 4) The professor ignores minority student participation in class, and 5) During class, the professor has made racially offensive statements.

Classroom Climate Scale

The classroom climate (CC) measure was developed by Edward L. Deci (Black & Deci, 2000). This scale was originally termed the learning climate questionnaire (LCQ) from studies conducted by Deci (1994) which were used to study autonomy supporting environments in "learning settings"(Deci, Eghrari, Patrick, & Leone, 1994). This scale is available to view and utilize from a website, www.psych.rochester.edu, on self-determination theory and states developed questionnaires may be used for research projects without explicit permission and may be adapted to fit the topic of the study.

The long version of this scale contains 15 items. The present study utilized 14 of the 15 items from the original scale and utilized it in its original form with the addition of text at the end of each statement. This was done to specify the subject of this particular survey. One question was omitted from inclusion in the measurement for this study due to the ambiguity of the question.

The CC scale consists of 14 items in Likert format on a seven point scale (1-7) from "strongly disagree" to "strongly agree". Scores could range from 14-98. The CC scales includes the following statements: 1) I feel that my instructor provides me choices and options in terms of the course work, 2) I feel understood by my instructor, 3) I am able to be open with my instructor during class, 4) My instructor conveys confidence in my ability to do well in the course, 5) I feel that my instructor strongly accepts me, 6) My instructor makes

sure I really understand the goals of the course and what I need to do, 7) My instructor encourages me to ask questions, 8) I feel a lot of trust in my instructor, 9) My instructor answers my questions fully and carefully, 10) My instructor handles people's emotions very well, 11) I feel that my instructor cares about me as a person, 12) I don't feel very good about the way my instructor talk to me when class is in session, 13) My instructor tries to understand how I approach my course work before suggesting a new way to approach and understand the course work, and 14) I feel able to share my concerns about the course work with my instructor.

Intrinsic Motivation Inventory (IMI) Scale

The intrinsic motivation inventory (IMI) scale was developed by Edward L. Deci and Richard M. Ryan (Ryan, R. M., Koestner, R., & Deci, E. L., 1991). (See Appendix B) This scale is available to view and utilize from a website, www.psych.rochester.edu, on self-determination theory and states developed questionnaires maybe be used for research projects without explicit permission and may be adapted to fit the topic of the study.

The IMI scale consists of seven subscales that measures the following constructs: 1) interest/enjoyment, 2) perceived competence, 3) effort/importance, 4) pressure/tension, 5) perceived choice, 6) value/usefulness, and 7) relatedness. Only four subscales are included in the study to measure student intrinsic motivation. The following subscales are used: 1) interest/enjoyment, 2) perceived competency, 3) effort/importance, and 4) value/usefulness.

The scale consists of a total of 25 items in Likert format on a seven point scale (1-7) from"not at all true" to "very true". However, the four subscales selected for the IMI scale differs in the number of items used. The interest/enjoyment subscale consists of seven items. This score could range from 7-49. The perceived competence subscale consists of six items.

This score could range from 0-42. The effort/importance subscale consists of five items. This score could range from 0-35. The value/usefulness consists of seven items. This score could range from 0-49. The overall IMI score could range from 25-175. The higher the scores, the higher intrinsic motivation and lower scores indicate the opposite.

The interest/enjoyment subscale consists of the following items: 1) I enjoy my course work very much, 2) My course work is fun to do, 3) I think my course work is boring, 4) My course work does not hold my attention at all, 5) I would describe my course work as very Interesting, 6) I think my course work is quite enjoyable, and 7) While engaging in my course work, I think about how much I enjoy learning.

The perceived competence subscale consists of the following items: 1) I think I do well in my course work, 2) I think I do pretty well in my course work compared to other students, 3) After working on my course work for a while, I feel pretty competent, 4) I am satisfied with my performance in my course work, 5) I am pretty skilled when it comes to my course work, and 6) There are some areas of my course work I cannot do very well in.

The effort/importance subscale consists of the following statements: 1) I put a lot of effort into my course work, 2) I don't try very hard to do well in my course work, 3) I try very hard to succeed in my course work, 4) It is important to me to do well in my course work, and 5) I don't put much energy into my course work.

The value/usefulness subscale includes the following statements: 1) I believe my course work has been some value to me, 2) I think that my course work assignments are useful, 3) I think my course work assignments are important to do because it will be useful, 4) I would be willing to do these course work assignments again because it has some value to

me, 5) I think doing these course work assignments could be beneficial to me, and 6) I think the course work assignments are important.

The IMI scale has been used in previous studies that have measured internalization of goals in relation to school task involvement and sports (Deci, Eghrari, Patrick, & Leone, 1994; Ryan, Koestner, & Deci, 1991; Ryan, Connell, & Plant, 1990; McAuley, Duncan, & Tammen, 1989). These studies adapted the IMI scale to measure specific activities for their intended research questions. The reliability and validity of this scale have been tested and have yielded strong support for validity and reliability (Tsigilis & Theodosiou, 2003; McAuley, Duncan, & Tammen, 1989).

Data Collection Procedures

Following University of New Mexico Institutional Review Board (IRB) approval, Native American Studies (NATV) courses were decided in consultation with the Director of NATV. Permission from instructors was sought beforehand. NATV instructors were contacted for permission to use their class as part of the sample for the study. The intention was to get a primarily self-identified Native American student sample. Instructors were asked to set aside approximately 20 minutes at the end of one class meeting for students to participate if they chose. In order to participate, students had to identify themselves as Native American and of adult age.

Packets with instructions, the survey, and two consent forms were distributed to volunteer participants. (See Appendix A & B) After completing the survey, each participant placed it in one envelope and one signed consent form in another envelope. Students were instructed to keep a copy consent form for their reference. All data will be kept until completion of the research and then destroyed. Confidentiality was ensured. The

questionnaires did not request names or personal information and no data is reported in a way that would identify individual participants.

Chapter IV

Results

This chapter describes the demographic information of the sample. The mean, standard deviation, range, and summary scores are reported for each construct. Hypotheses were tested using a Pearson Bivariate correlation set at a level of .05, and results of the hypotheses are reported.

Sample

Student demographics. The student sample consisted of 40 University of New Mexico Native American undergraduate students enrolled in one of five introductory NATV courses for the Fall 2008 semester. The students ranged in age from 19 years old to 55 years old (M = 27, *SD* = 9.68). There were 65% females (N = 26) and 32.5% males (N = 13). Student classification was composed of four student groups: 5% sophomore (N = 2), 10% junior (N =4), 62.5% senior (N = 25), and 7.5% other (N =3).

The student sample consisted of the following tribes: 1) 32.6% Pueblo (N = 17), 2) 30% Navajo (N = 12), and 3) 27.5% Inter-tribal/Other (N = 11).

The following information describes the proximity students resided from campus: 1) 70% lived within city limits, 2) 17.5% lived 20 to 40 miles outside of Albuquerque, 3) 7.5% lived 50 miles outside of Albuquerque, 4) 2.5% lived 100 miles or more outside of Albuquerque, or 5) 2.5% lived in another state.

Measures

Intrinsic Motivation Inventory (IMI) Scale

Interest/enjoyment. The interest/enjoyment subscale was used to assess participants' subjective experience related to their course work. This is a 7-item subscale in Likert format

on a seven point scale (1-7) ranging from "strongly disagree" to "strongly agree". The summary score ranged from 7-49 with a low score indicating students have low interest/enjoyment in relation to their course work, while a high score indicates a high interest/enjoyment to their course work.

The results revealed that most students selected "somewhat true" responses in regard to their interest/enjoyment toward their course work. These responses did not necessarily lean toward a low or high score, but instead toward a neutral score (see Table 1 and Table 2).

Table 1. ***Mean, SD, and Actual Score Ranges for Interest/Enjoyment.***

Interest/Enjoyment Statements:	M	SD	Range
1. I enjoy my course work very much.	4.49	1.73	1-7
2. My course work is fun to do.	4.21	1.70	1-7
*3. I think my course work is boring.	4.08	1.71	1-7
*4. My course work does not hold my attention at all.	4.28	1.83	0-7
5. I would describe my course work as very interesting.	4.59	1.82	0-7
6. I think my course work is quite enjoyable.	4.36	1.71	1-7
7. While engaging in my course work, I think about how much I enjoy learning.	4.41	1.77	1-7
Total Interest/Enjoyment Score:	30.41	10.08	7-49

*Reverse scored item.

Table 2. ***Frequencies and Percentages for Interest/Enjoyment.***

Interest/Enjoyment Statements:	0 N %	1	2	3	4	5	6	7
1. I enjoy my course work very much.		4 10%	1 2.5%	4 10%	9 22.5 %	10 25%	6 15%	5 12.5 %
2. My course work is fun to do.		3 7.5%	3 7.5%	7 17.5 %	10 25%	6 15%	6 15%	4 10%
*3. I think my coursework is boring.		3 7.5%	5 12.5 %	8 20%	4 10%	10 25%	7 17.5 %	2 5%
*4. My course work does not hold my attention at all.	1 2.5 %	3 7.5%	3 7.5%	4 10%	9 22.5 %	8 20%	7 17.5 %	4 10%
5. I would describe my course work as very interesting.	1 2.5 %	2 5%	2 5%	5 12.5 %	7 17.5 %	7 17.5 %	10 25%	5 12.5 %
6. I think my course work is quite enjoyable.		2 5%	4 10%	6 15%	10 25%	4 10%	9 22.5 %	4 10%
7. While engaging in my course work, I think about how much I enjoy learning.		3 7.5%	4 10%	3 7.5%	11 27.5 %	4 10%	10 25%	4 10%

*Reverse scored item.

Perceived competence. The perceived competence subscale assessed how capable students felt about their ability to perform in regard to their studies. This is a 6-item subscale in Likert format on a seven point scale (1-7) ranging from “not at all true” to “very true”. The summary score ranged from 0-42 with a low score indicating students possess a low perceived competence in regard to their ability to perform well in their course work. On the other hand, a high score indicates students possess a high perceived competence to perform well in their course work.

The results revealed that most students selected both “very true” responses and responses close to “very true”, which is a high score, in regard to their sense of perceived competence to do well in their course work. (See Table 3 and Table 4)

Table 3. ***Mean, SD, and Actual Score Ranges for Perceived Competence.***

Perceived Competence Statements:	M	SD	Range
1. I think I do well in my course work.	5.36	1.65	1-7
2. I think I do pretty well in my course work compared to other students.	4.92	1.71	1-7
3. After working on my course work for a while,	5.00	1.78	1-7
4. I am satisfied with my performance in my course work. I feel pretty competent.	4.92	1.97	1-7
5. I am pretty skilled when it comes to my course work.	5.39	1.55	1-7
*6. There are some areas of my course work I cannot do very well in.	3.67	1.77	1-7
***Total Perceived Competence Score:**	29.26	9.07	0-42

*Reverse scored item.

Table 4. ***Frequencies and Percentages for Perceived Competence.***

Perceived Competence Statements:	0 N %	1	2	3	4	5	6	7
1. I think I do well in my course work.	1 2.5%	1 2.5%	1 2.5%		6 15%	8 20%	12 30%	10 25%
2. I think I do pretty well in my course work compared to other students.	1 2.5%	2 5%	1 2.5%	1 2.5%	8 20%	8 20%	13 32.5%	5 12.5%
3. After working on my course work for a while, I feel pretty competent.	1 2.5%	1 2.5%	2 5%	4 10%	4 10%	7 17.5 %	13 32.5%	7 17.5%
4. I am satisfied with my performance in my course work.	1 2.5%	2 5%	3 7.5%	3 7.5%	5 12.5%	3 7.5%	14 35%	8 20%
5. I am pretty skilled when it comes to my course work	1 2.5%		2 5%		6 15%	6 15%	16 40%	8 20%

*Reverse scored item.

Effort/importance. The effort/importance subscale assessed how much work students devoted to their course work and how important they regarded their course work. This is a 5-item subscale in Likert format on a seven-point scale (1-7) ranging from "not at all true" to "very true". The summary score ranged from 0-35 with a low score indicating that students do not put much effort nor possess an importance toward their course work. However, a high score indicates students put forth much effort and regard their course work as important.

The results revealed that most students selected both "very true" responses and responses close to "very true", which is a high score, in regard to the effort/importance of their course work (See Table 5 and Table 6)

Table 5. ***Mean, SD, and Actual Score Ranges for Effort/Importance.***

Effort/Importance Statements:	M	SD	Range
1. I put a lot of effort into my course work.	5.59	1.48	0-7
*2. I don't try very hard to do well in my course	5.13	1.88	0-7
3. I try very hard to succeed in my course work.	5.74	1.53	0-7
4. It is important to me to do well in my course work.	6.49	1.21	0-7
*5. I don't put much energy into my course work.	4.67	2.30	0-7
***Total Effort/Importance Score:**	27.62	6.49	0-35

*Reverse scored item.

Table 6. ***Frequencies and Percentages for Effort/Importance.***

Effort/Importance Statements:	0 N %	1	2	3	4	5	6	7
1. I put a lot of effort into my course work.	1 2.5%			1 2.5%	6 15%	8 20%	10 25%	13 32.5%
*2. I don't try very hard to do well in my course work.	1 2.5%	2 5%	1 2.5%	2 5%	6 15%	8 20%	7 17.5%	12 30%
3. I try very hard to succeed in my course work.	1 2.5%			1 2.5%	6 15%	6 15%	8 20%	17 42.5%
4. It is important to me to do well in my course work	1 2.5%					2 5%	9 22.5%	27 67.5%
*5. I don't put much energy into my course work	1 2.5%	5 12.5%	2 5%	4 10%	6 15%	3 7.5%	4 10%	14 35%

*Reverse scored item.

Value/usefulness. The value/usefulness subscale assessed how students felt about the value and usefulness of their course work. This is a 7-item subscale in Likert format on a seven-point scale (1-7) ranging from "not at all true" to "very true". The summary score ranged from 0-49 with a low score indicating students' evaluation of their course work as valuable and useful. On the other spectrum, a high score indicates students' evaluation of their course work as valuable and useful.

The results revealed that most students selected both "very true" responses and responses close to "very true", which is a high score, in regard to the value/usefulness of their course work. (See Table 7 and Table 8)

Table 7. ***Mean, SD, and Actual Score Ranges for Value/Usefulness.***

Value/Usefulness Statements:	M	SD	Range
1. I believe my course work has been some value to me.	6.03	1.46	0-7
2. I think that my course work assignments are useful.	5.57	1.43	0-7
3. I think my course work assignments are important to do because it will be useful.	5.56	1.55	0-7
4. I would be willing to do these course work assignments because it will be useful to me.	5.10	1.79	0-7
5. I think doing these course work assignments could help me.	5.38	1.57	0-7
6. I believe doing these course work assignments could be beneficial to me.	5.74	1.37	0-7
7. I think the course work assignments are important.	5.70	1.47	0-7
***Total Value/Usefulness Score:**	39.24	9.57	0-49

Table 8. ***Frequencies and Percentages for Value/Usefulness.***

Value/Usefulness Statements:	0 N %	1	2	3	4	5	6	7
1. I believe my course work has been some value to me.	1 2.5%			1 2.5%	2 5%	7 17.5%	7 17.5%	21 52.5%
2. I think that my course work assignments are useful.	1 2.5%			1 2.5%	5 12.5%	9 22.5%	12 30%	11 27.5%
3. I think my course work assignments are important to do because it will be useful.	1 2.5%			2 5%	5 12.5%	9 22.5%	7 17.5%	14 35%
4. I would be willing to do these course work assignments again because it has some value to me.	1 2.5%	1 2.5%	2 5%	1 2.5%	8 20%	8 20%	7 17.5%	11 27.5%
5. I think doing these course work assignments could help me.	1 2.5%			3 7.5%	5 12.5%	12 30%	5 12.5%	13 32.5%
6. I believe doing these course work assignments could be beneficial to me.	1 2.5%			1 2.5%	1 2.5%	12 30%	11 27.5%	13 32.5%
7. I think the course work assignments are important.	1 2.5%			2 5%	2 5%	10 25%	10 25%	14 35%

Perception of faculty discrimination. The PFD scale was used to evaluate students' perception of faculty discrimination that inquires about the degree if any, of exclusion from class activities, referring to students' ethnicity in an offensive manner, and treating students stereotypically (Suarez-Balcazar, Orellana-Damacela, Portillo, Rowan, & Andrews-Guillen, 2003; Nora & Cabrera, 1996). This was a 5-item construct in Likert format on a four point scale (1-4) ranging from "strongly agree" to "strongly disagree". The summary score ranged

from 0-20 with a low score indicating perceived faculty discrimination and a high score indicating little to no perceived faculty discrimination.

The results revealed that most students reported that they both perceived faculty discrimination and also reported that they did not perceived faculty discrimination. (See Table 9 and Table 10)

Table 9. ***Mean, SD, and Actual Score Ranges for Perception of Faculty Discrimination.***

Perception of Faculty Discrimination Statements:	M	SD	Range
1. During class, the professor ignores student of different backgrounds.	2.43	1.15	0-4
2. The professor treats students of particular ethnicities/groups stereotypically.	2.23	1.07	0-4
3. The professor has a tendency to call on a minority student expert in terms of gaining information on a specific ethnicity.	2.15	1.21	0-4
4. The professor ignores minority student participation in class.	2.40	1.06	0-4
5. During class, the professor has made racially offensive statements.	2.63	1.10	0-4
Total Perception of Faculty Discrimination Score:	11.83	4.98	0-20

Table 10. ***Frequencies and Percentages for Perceived Faculty Discrimination.***

Perceived Faculty Discrimination Statements:	**0** **N** **%**	**1**	**2**	**3**	**4**
1. During class, the professor ignores students of different backgrounds.	3 7.5%	4 10%	14 35%	11 27.5%	8 20%
2. The professor treats students of particular ethnicities/groups stereotypically	3 7.5%	4 10%	20 50%	7 17.5%	6 15%
3. The professor has a tendency to call on a minority student expert in terms of gaining information on a specific ethnicity.	4 10%	8 20%	12 30%	10 25%	6 15%
4. The professor ignores minority student participation in class.	3 7.5%	3 7.5%	14 35%	15 37.5%	5 12.5%
5. During class, the professor has made racially offensive statements.	3 7.5%	3 7.5%	7 17.5%	20 50%	7 17.5%

Classroom climate. The CC scale was used to assess classroom atmosphere. This is a 14-item construct in Likert format on a seven point scale (1-7) ranging from "strongly disagree" to "strongly agree". The summary score ranged from 14-98 with a low score indicating students have a poor rapport with their instructor and a high score indicating positive interaction and feedback from their instructor.

The results revealed that most students selected "neutral" responses in regard to their perception of the classroom climate. (See Table 11)

Table 11. ***Mean, SD, and Actual Score Ranges for Classroom Climate.***

Classroom Climate Statements:	M	SD	Range
1. I feel that my instructor provides me choices and options in terms of the course work.	4.10	1.69	1-7
2. I feel understood by my instructor.	3.80	1.79	1-7
3. I am able to be open with my instructor during class.	3.93	1.91	1-7
4. My instructor conveys confidence in my ability to do well in the course.	4.08	1.88	1-7
5. I feel that my instructor accepts me.	3.93	1.76	1-7
6. My instructor makes sure I really understand the goals of the course and what I need to do.	4.00	1.62	1-7
7. My instructor encourages me to ask questions.	4.53	1.50	1-7
8. I feel a lot of trust in my instructor.	3.83	1.82	1-7
9. My instructor answers my questions fully and carefully.	4.53	1.58	1-7
10. My instructor handles people's emotions very well.	4.03	1.75	1-7
11. I feel that my instructor cares about me as a person.	4.05	1.70	1-7
12. I don't feel very good about the way my instructor talks to me when class is in session.	3.95	1.89	0-7
13. My instructor tries to understand how I approach my course work before suggesting a new way to approach and understand the course work.	3.85	1.51	1-7
14. I feel able to share my concerns about the course work with my instructor.	3.88	1.73	1-7
***Total Classroom Climate Score:**	56.69	18.73	14-98

*Reverse scored item.

Family support. Students were asked four questions to measure family support in Likert format (1-4) ranging from "not at all" to "very true". The summary scores ranged from 11-28 with low scores indicating low family support and high scores indicating a lot of family support. Seventy percent of participants reported that it is "very true" their family is supportive of them attending UNM (M = 6.53, *SD* = .93336). Forty percent of participants reported it is "very true" they share their school experiences with their family (M = 6. 03, *SD* = 1.09749). Forty-seven point five percent of participants reported it is "very true" their family is interested in their progress (M = 5.83, *SD* = 1.40), and sixty-seven point five percent of participants reported it is "very true" their family encourages them (M = 6.48, *SD* = 1.04).

The results revealed that most students selected "very true" responses, which is a high score, in regard to their perception of family support. (See Table 12)

Table 12. ***Mean, SD, and Actual Score Ranges for Family Support.***

Family Support Questions:	**M**	**SD**	**Range**
1. How supportive is your family of you attending the University of New Mexico?	6.53	.93	3-7
2. Do you share school experiences with your family?	6.03	1.10	3-7
3. Does your family inquire about your progress in school?	5.83	1.39	2-7
4. Do they encourage you?	6.4	1.04	3-7
***Total Family Support Score:**	24.85	3.63	11-28

Hypothesis Testing

Research Question 1:

Ho: There is no relationship between Native American college students' perception of faculty discrimination and intrinsic motivation toward academic success.

Hypothesis 1 could not be rejected at the .05 level of significance. There is no relationship between perceived faculty discrimination and Native American students' intrinsic motivation toward academic success, $r(40) = .101$, $p > .547$ (see Table 13). Students' responses indicated that they perceived little faculty discrimination from their instructors ($M = 11.83$, $SD = 4.98$). Students' responses to the IMI items revealed high scores ($M = 126.45$, $SD = 27.31$).

*The following four sub-hypotheses stem from four sub-constructs of the IMI scale.

Research Question 1a:

Ho: There is no relationship between perceived faculty discrimination and Native American students' sense of interest/enjoyment toward academic success.

Hypothesis 1a could not be rejected at the .05 level of significance. There was no relationship between perceived faculty discrimination and Native American students' sense of interest/enjoyment toward academic success, $r(40) = -.067$, $p > .686$ (see Table 13). The results of the PFD scale showed that most students both agreed and disagreed that they perceived faculty discrimination ($M = 11.83$, $SD = 18.73$). Students responses to the interest/enjoyment subscale showed that they were interested and enjoyed their course work ($M = 30.41$, $SD = 10.08$).

Research Question 1b:

Ho: There is no relationship between perceived faculty discrimination and Native American students' sense of perceived competence toward academic success.

Hypothesis 1b could not be rejected at the .05 level of significance. There was no relationship between perceived faculty discrimination and Native American students' sense of perceived competence toward academic success, $r(40) = .037$, $p > .823$ (see Table 13). The results of the PFD scale showed that most students both agreed and disagreed that they perceived faculty discrimination ($M = 11.83$, $SD = 18.73$). Also, students scored high on the perceived competence items in regard to their ability to perform well in their course work ($M = 29.26$, $SD = 9.07$).

Research Question 1c:

Ho: There is no relationship between perceived faculty discrimination and Native American students' sense of effort/importance toward their academic success.

Hypothesis 1c was not rejected at a .05 level of significance. There was no relationship between perceived faculty discrimination and Native American students' sense of effort/importance toward their academic success r (40) = .235, $p > .151$ (see Table 13). The results of the PFD scale showed that most students both agreed and disagreed that they perceived faculty discrimination ($M = 11.83$, $SD = 18.73$). Students' responses to the effort/importance subscale revealed high scores in regard to their hard work and importance of their course work toward their academic success ($M = 27.62$, $SD = 6.49$).

Research Question 1d:

Ho: There is no relationship between perceived faculty discrimination and Native American students' sense of value/usefulness toward academic success.

Hypothesis 1d could not be rejected at the .05 level of significance. There was no relationship between perceived faculty discrimination and Native American students' sense of value/usefulness toward academic success, r (40) = .161, $p > .334$ (see Table 13). The results of the PFD scale showed that most students both agreed and disagreed that they perceived faculty discrimination (M = 11.83, SD = 18.73). Students' responses to the value/usefulness subscale showed high scores in terms of how they view their course work (M = 39.24, SD = 9.57).

Table 13. ***Correlation Matrix for Perceived Faculty Discrimination, Intrinsic Motivation, Classroom Climate, and Family Support.***

Predictor Variables	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
1. Perceived Faculty Discrimination	__	.101	-.067	.037	.235	.161	.023	.189
2. Intrinsic Motivation		__	.699	.871	.671	.825	.222	.254
3. Interest/Enjoyment			__	.425	.164	.385	.406*	.042
4. Perceived Competence				__	.599	.656	.063	.173
5. Effort/Importance					__	.470	-.037	.292
6. Value/Usefulness						__	.169	.317
7. Classroom Climate							__	.238
8. Family Support								__

Research Question 2:

Ho: There is no relationship between perceived faculty discrimination and Native American students' sense of classroom climate.

Hypothesis 2 could not be rejected at the .05 level of significance. There was no relationship between perceived faculty discrimination and Native American students' sense of classroom climate $r(40) = .023$, $p > .892$ (see Table 13). The results of the PFD scale showed that most students both agreed and disagreed that they perceived faculty discrimination ($M = 11.83$, $SD = 18.73$). Most students' responses were "neutral" to the classroom climate construct in how they perceived the class atmosphere ($M = 56.69$, $SD = 18.73$).

Research Question 3:

Ho: There is no relationship between Native American students' sense of intrinsic motivation and family support toward academic success.

Hypothesis 3 could not be rejected at the .05 level of significance. There is no relationship between Native American students' sense of intrinsic motivation and family support toward academic success, $r\ (40) = .254$, $p > .123$ (see Table 13). Students' responses to the IMI items showed high scores ($M = 126.45$, $SD = 27.31$). Students' responses to the family support items were high scores and students perceived family support ($M = 24.85$, $SD = 3.63$).

*The following four sub-hypotheses stem from four sub-constructs of the IMI scale.

Research Question 3a:

Ho: There is no relationship between Native American students' sense of interest/enjoyment and family support toward academic success.

Hypothesis 3a could not be rejected at the .05 level of significance. There is no relationship between Native American students' sense of interest/enjoyment and family support toward academic success, $r(40) = .042$, $p > .800$ (see Table 13). Students' responses

to the interest/enjoyment subscale showed that they were interested and enjoyed their course work (M = 30.41, SD = 10.08). Students' responses to the family support items were high scores and students perceived family support (M = 24.85, SD = 3.63).

Research Question 3b:

Ho: There is no relationship between Native American students' sense of perceived competence and family support toward academic success.

Hypothesis 3b could not be rejected at the .05 level of significance. There is no relationship between Native American students' sense of perceived competence and family support toward academic success, $r(40) = .173$, $p > .293$ (see Table 13). Students scored high on the perceived competence items in regard to their ability to perform well in their course work (M = 29.26, SD = 9.07). Students' responses to the family support items were high scores and students perceived family support (M = 24.85, SD = 3.63).

Research Question 3c:

Ho: There is no relationship between Native American students' sense of effort/importance and family support toward academic success.

Hypothesis 3c could not be rejected at the .05 level of significance. There is no relationship between Native American students' sense of effort/importance and family support toward academic success, $r(40) = .292$, $p > .071$ (see Table 13). Students' responses to the effort/importance subscale revealed high scores in regard to their hard work and importance of their course work toward their academic success (M = 27.62, SD = 6.49). Students' responses to the family support items were high scores and students perceived family support (M = 24.85, SD = 3.63).

Research Question 3d:

Ho: There is no relationship between Native American students' sense of value/usefulness and family support toward academic success.

Hypothesis 3d was rejected at the .05 level of significance. There is a relationship between Native American students' sense of value/usefulness and family support toward academic success, $r(40) = .317$, $p < .052$ (see Table 13).Students' responses to the value/usefulness subscale showed high scores in terms of how they view their course work ($M = 39.24$, $SD = 9.57$). Students' responses to the family support items were high scores and students perceived family support ($M = 24.85$, $SD = 3.63$).

Research Question 4:

Ho: There is no relationship between Native American students' sense of family support and classroom climate.

Hypothesis 4 could not be rejected at the .05 level of significance. There is no relationship between Native American students' sense of family support and classroom climate, $r\ (40) = .238$, $p > .144$ (see Table 13). The results revealed that most students selected "neutral" responses in regard to their perception of the classroom climate ($M = 56.69$, $SD = 18.73$). Students' responses to the family support items were high scores and students perceived family support ($M = 24.85$, $SD = 3.63$).

Chapter V

Discussion

This study examined variables that are central to students' educational realm, such as perceived faculty discrimination, intrinsic motivation, classroom climate, and family support. This study explored how perceived faculty discrimination affected the quality of interaction between Native American college students and their instructors. The presence of perceived faculty discrimination was examined in regard to students' intrinsic motivation to learn and its impact on their academic success. Moreover, family support was also taken into consideration in regard to what role it would play if students were experiencing any negative faculty interactions. Family support or an absence of family support could either buffer the negative affect and encourage students' persistence of potential negative faculty-student interaction or increase the negative affect students were currently experiencing. The absence of family support along with negative faculty-student interaction could potentially interfere with students' persistence and in effect could hamper students' academic success.

The following research questions were explored: 1) Is there a relationship between Native American college students' perception of faculty discrimination and intrinsic motivation?, 2) Is there a relationship between perceived faculty discrimination and Native American college students' sense of classroom climate?, 3) Is there a relationship between Native American students' sense of intrinsic motivation and family support toward academic success?, and 4) Is there a relationship between Native American college students' sense of family support and classroom climate?

The purpose of the study was to explore the quality of the faculty-student relationship and intrinsic motivation for Native American college students at the University of New

Mexico. The researcher sought to examine how the quality of faculty-student relationship affected Native American students' intrinsic motivation and thereby, their academic success. An interest in this topic stemmed from the fluctuating enrollment rates among Native American undergraduate students at the University of New Mexico. At the time, the enrollment rates appeared to be low and currently, it has increased from Fall 2003 (1,140) to Fall 2009 (1,685). In considering possible variables for this fluctuation in enrollment status, an interest was taken in examining the faculty-student relationship. Although university campuses are often culturally diverse, it piques one's curiosity as to how small minority populations of students are supported (Gloria & Robinson Kurpius, 2001; Smedley et al., 1993).

With that in mind, an examination of the quality of interaction between faculty and students was ensued since instructors act as mentors in the learning process Black & Deci, 2000; Deci & Ryan, 2000). The quality of interaction, either positive or negative, can possibly affect student's academic success (Deci & Ryan, 2000). For the purpose of this study and prior research, a construct measuring students' perception of discrimination from faculty was undertaken as a major part of this study to observe how it affected students' eagerness to learn and how that may impact students' view of their academic success.

Finally, family support was included in the design of the study to see how that domain either supported or did not support students that were potentially experiencing perceived discrimination from their instructors. If students were experiencing perceived discrimination from their instructors, family support would buffer that affect by encouraging their students to persist academically despite the negative occurrences (Guillory & Wolverton, 2008; Jackson et al., 2003). On the other hand, if students were experience

perceived discrimination and they were not being supported by their family in the form of encouragement, it was expected that students would not do well academically.

Discussion of the Results

Overall, the results of the study demonstrated that perceived faculty discrimination did not have an affect on Native American students' intrinsic motivation and their academic success. Similar to Nora and Cabrera's study (1996) on perceived faculty discrimination and ethnic minority college students' persistence, there was no connection. Based on the results, the idea of perceived faculty discrimination had no bearing on students' academic success.

Although there were no statistically significant correlations between perceived faulty discrimination and students' intrinsic motivation to succeed, there was one significant correlation between students' sense of value/usefulness from the intrinsic motivation construct and family support. The relationship between these two variables speaks of the role of family support and its link to students' academic persistence and success.

Perception of Faculty Discrimination and Intrinsic Motivation

The first research question inquired about the relationship between Native American college students' perception of faculty discrimination and intrinsic motivation. The results indicated that there was no relationship between students' perception of faculty discrimination and intrinsic motivation, r (40) = .101, p > .547. Students' scores revealed that they perceived some faculty discrimination (M = 11.83, SD = 4.98) from their instructors, while their intrinsic motivation scores were high (M = 126.48, SD = 27.31).

From an ecological theory standpoint, it could be suggested that within Native American students' microsystem, their families communicated the importance of an education while providing a base of encouragement. Native American students who

academically succeeded were found to have had a supportive family context (Guillroy & Wolverton, 2008; Gloria & Robinson Kurpius, 2001). In line with previous research, Native American students regarded their family as a top persistence factor, which also includes their tribal community (Gilroy & Wolverton, 2008; Jackson, Smith, & Hill, 2003). High intrinsic motivation scores could be attributed to family support and the family instilling a strong sense of their ethnic identity.

Cultural-ecological theory suggests that it is important to understand students' cultural context (i.e., community forces) and the context of the academic institution i.e., system forces). to comprehend how ethnic minority students approach and regard their education (Foster, 2004; Ogbu, 1998). Native American students are categorized as involuntary ethnic minorities and it was suggested that ethnic minority students do not perform well academically due to the treatment of ethnic minority students (i.e., system forces) and messages of distrust toward system forces from both their tribe and family (Ogbu, 1998). However, in regard to the results, students were observed to score high on the intrinsic motivation construct and did not seem to have a negative evaluation of their classroom climate (M = 56.69, SD = 18.73), but instead a "neutral" evaluation. A number of factors could be attributed to high intrinsic motivation scores and a neutral classroom climate, such as family support, support from instructors, and/or students' intrinsic motivation.

According to self-determination theory, intrinsic motivation is an inner drive that guides behavior and attempts to accomplish goals that are inherently valuable to one's well-being (Deci & Ryan, 2008). It is possible that students' intrinsic motivation to succeed may be one variable among many that influences their academic success. Students' inner drive to

succeed is fueled by an interest to master their intended goal, such as education. Intrinsic motivation has been found to be advantageous within students' educational realm, meaning that they fulfill their internal need to learn and accomplish their goals, as well as being evaluated favorably by the external environment (through grades) as a result of their interest. Also, students who are intrinsically inclined to learn have been observed to regulate their behavior, which enables them to focus on their intended task. Students' ability to regulate their behavior within the academic domain may be attributed to students' neutral classroom climate scores.

Other studies have found conflicting results in reference to perceived faculty discrimination and its affect on ethnic minority students. For instance, it was found that ethnic minority students disengaged from the academic domain when they perceived discrimination from their instructors (Verkuyten & Thijs, 2004; Verkuyten & Brug, 2003). In both studies, students' identities were tied to the academic domain. The results from these studies suggested that perceived faculty discrimination had an affect on students' motivation to succeed. However, the results from this study suggest that perceived faculty discrimination had no affect on students' intrinsic motivation to succeed. Instead, it appears that some other variables are responsible for students' academic success.

Perceived Faculty Discrimination and Classroom Climate

The second research question examined the relationship between perceived faculty discrimination and Native American college students' sense of classroom climate. The results revealed that there is no relationship between perceived faculty discrimination and students' sense of classroom climate toward academic success, $r(40) = .023$, $p > .892$. Students' responses indicated they perceived little to no faculty discrimination ($M = 11.83$, $SD = 4.98$),

while they also responded to the classroom climate scale with mostly "neutral" responses (*M* = 56.69, *SD* = 18.73).

Students reported that they perceived little to no faculty discrimination occurring in the classroom and also reported that the classroom climate was neutral. These results beg the question of what is taking place in the classroom if students reported mostly "neutral" responses to the classroom climate.

The purpose of utilizing the classroom climate construct was to gauge students' perception of support given by their instructors, which would also designate the classroom atmosphere. When discussing students' motivation to learn and succeed, it is important to take into consideration the classroom climate. An optimal learning environment for students is structured by a supportive instructor that teaches and encourages students, but also gives the student to take control of their learning experience and direct their interest (Deci & Ryan, 2000). This is otherwise known as providing an autonomy supportive environment. This type of classroom support has been touted as a useful method of facilitating the learning process for students (Black & Deci, 2000). The majority of neutral responses may be due to students' lack of interest in the classroom content or other students' behavior. It is also possible that instructors do not necessarily lean toward one way in terms of autonomy support.

A part of autonomy support in the classroom is the collaborative nature between the instructor and students. The way the instructor engages students' interest to learn, provide support and encouragement, and instills a quest to learn gives way to the classroom climate (Deci & Ryan, 2000). Prior results from studies on the affect of perceived faculty discrimination on ethnic minority students has found mixed results that has had either negative implications and or no considerable influence (cite references). The current scores

on students' perception of faculty discrimination and classroom climate show that some instructors may not be providing an autonomy supportive environment to students that may have contributed to their neutral responses in regard to the classroom climate. However, it is best to keep in mind that other factors may be mediating these variables.

Intrinsic Motivation and Family Support

The third research question that was explored was the relationship between Native American students' sense of intrinsic motivation and family support toward academic success. The results revealed that there was no relationship between intrinsic motivation and family support, r (40) = .254, p > .123. The scores derived from both the intrinsic motivation (M = 126.45, SD = 27.31) and family support (M = 24.85, SD = 3.63) constructs were high. Although intrinsic motivation and family support did not yield any significant correlations, there are fascinating links to discuss based on students' responses to the intrinsic motivation and family support constructs. For example, the high scores derived from these variables could possibly be connected to family support in terms of how intrinsic motivation is rooted within students' sense of self, and is perhaps fostered by their families or other variables.

Based on ecological theory and research on family support, there appears to be a link between intrinsic motivation and family support. The current scores demonstrate students' sense of intrinsic motivation and the supportive aspect of family for students. According to ecological theory's microsystem, family is the cornerstone of nurturing a child's overall well-being (Bronfenbrenner, 2005). Throughout a child's development, their caregivers play a major role in planting seeds of efficacy, motivation, and resiliency. It is hoped that the manner in which the caregivers have nurtured their child have been ingrained within the

child's behavior so that they may become self-directing individuals with the help of autonomy support from their caregivers (Berk, 2004; Ryan & Deci, 2000).

Although students responded in a neutral manner to the statements assessing classroom atmosphere, it appears that other factors influence students' academic success. An ideal classroom climate would consist of an instructor providing an autonomy supportive environment that has been suggested to support students' autonomy and intrinsic motivation (Deci & Ryan, 2000).

Studies on academic persistence among Native American college students have found that family ranked as their top persistence factor (Guillroy & Wolverton, 2008; Jackson, Smith & Hill, 2003). These findings highlight the importance of proximal processes that occurs within a family and are central to instilling particular lessons and behaviors for students. More importantly, this demonstrates how events in one system transition to another system. In this case, family support is cultivated for their students and that process unfolds as students interact within their learning environment. Perhaps family support instills a strong sense of competence that gives students the feeling that they are able to accomplish their goals and overlook negative occurrences that may occur in college.

Overall, the results indicate there is no statistically significant relationship between intrinsic motivation and family support. However, upon closer analysis of the four different sub-variables of the intrinsic motivation variable along with the family support variable, the value/usefulness sub-variable emerged as a statically significant relationship, $r(40) = .317$, $p < .052$. Students' responses to both the value/usefulness ($M = 39.24$, $SD = 9.57$) and family support ($M = 24.85$, $SD = 3.63$) constructs revealed high scores. The results derived from

both variables lend interesting insight into what is occurring from an ecological and self-determination theory standpoint.

Following ecological theory, it appears that there is a relationship between students' sense of value/usefulness toward their academic course work and their perception of family support. This finding suggests students are internally motivated to persist academically because they consider their course work to be valuable and useful toward their academic success. This also suggests that family support plays a role in students' sense of value/usefulness. However, this finding is not to be confused with the idea that family support is a direct result of students' approach toward their studies. Instead, family support is one variable among a myriad of other variables that may have contributed to students' sense of value/usefulness toward their studies, but is a variable that was given consideration in particular and has yielded a significant finding.

Family Support and Classroom Climate

The fourth research question examined the relationship between Native American students' sense of family support and classroom climate toward academic success. The results revealed that there was no statistical significant relationship between family support and classroom climate, $r(40) = .238$, $p = .052$. Students' family support scores were quite high ($M = 24.85$, $SD = 3.63$), while classroom climate scores were mostly "neutral" ($M = 56.69$, $SD = 18.73$).

What occurs within the family context is a set of important interactions because it sets the foundation for further interaction within other systems, such as the mesosytem, which includes the school (Bronfenbrenner, 2005). The transition from the child's immediate surroundings to more public surroundings, such as school, gives the child the opportunity to

interact in their environment with others of various dispositions and occurrences. Also, while the family instills a sense of potential within the child as well as providing basic tools that will contribute toward their interaction with others and learning, the child who becomes the student also has a keen sense of their determination. Just as well, the family continues to be act as a foundation and the child tends to reflect upon their family support and continue to draw from that support base. The interactions between family and the well-being of a child are mutually interactive.

Limitations

Similar to many research studies, there were some limitations in designing and carrying out this study. First of all, the sample of students that were surveyed for this study were from the University of New Mexico, which is located in the southwest region of the United States. Although the state of New Mexico is considered a diverse state, the tribal diversity at the University of New Mexico is minute. With the majority of students coming from the Navajo reservation that include 30% of Navajo students, 30.1% of students from various Pueblo tribes, and 7.5% of students from other tribes in other states. To get an ideal generalization of Native American students' responses of their perception of the quality of faculty-student interaction, it would have been best to get an equal amount of students from all tribes in the United States. However, resources and time were limited and made this impossible. In any case, the UNM Native American sufficed the research questions responses and the best possible results under the circumstances.

A second limitation of the study was that some constructs were not included due to time, resource and design of the study. It would have been ideal to include constructs on ethnic identity and acculturation. The information gained from these constructs could have

given insight about students' perspectives in reference to their level of ethnic identity and how that contributes to their academic persistence. Also, acculturation level could have shed light on the diverse contexts Native American students have been exposed to and how that contributes to their college experiences and affects their academic persistence. This would have been an interesting factor since there are reservations nearby, where some students may commute to school from frequently, visit their reservations occasionally, or reside in the city.

Summary

The results of this study shed light on Native American college students' experiences with faculty, their persistence, and the role their families play in their academic success. The findings of this study demonstrates how the strength and belief in one's capabilities can overcome obstacles with the support of their families.

References

Bandura, A. (2000). Exercise of human agency through collective efficacy. *Current Directions in Psychological Science, 9*, 75-78.

Berk, L. E. (2004). Infants and children. Portland, OR: Book News Inc. Black, A. E., & Deci, E. L. (2000). The effects of instructors' autonomy support and students' autonomous motivation on learning organic chemistry: A self-determination theory perspective. *Science Education, 84,* 740-756.

Bronfenbrenner, U. (1979). The ecology of human development. Cambridge, MA: Harvard University Press.

Bronfenbrenner, U. (2004). Making human beings human: Bioecological perspectives on human development. London: Sage Publications.

Bronfenbrenner, U. (1993). The ecology of cognitive development: Research models and fugitive findings. In R. H. Wozniak & K. W. Fischer (Eds.), *Development in context: Acting and thinking in specific environments.* Hillsdale, NJ: Erlbaum.

Bronfenbrenner, U. (2005). Comparing theories of child development. In R. M. Thomas (Sixth Edition), *Bronfenbrenner's ecological theory.* Belmont, CA: Thomson Wadsworth.

Clifton, R. A., Perry, R. P., Stubbs, C. A., & Roberts, L. W. (2004). Faculty environments, psychosocial dispositions, and the academic achievement of college students. *Research in Higher Education, 45,* 801-828.

Deci, E. L., Eghrari, H., Patrick, B. C., & Leone, D. (1994). Facilitating internalization: The self-determination theory perspective. *Journal of Personality, 62,* 119-142.

Deci, E. L. & Ryan, R. M. (2000). The "what" and "why" of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry, 11,* 227-268.

Deci, E. L. & Ryan, R. M. (2008). Self-determination theory: A macrotheory of human motivation, development, and health. *Canadian Psychology, 49,* 182-185.

Foster, K. M. (2004). Coming to terms: A discussion of John Ogbu's cultural-ecological theory of minority academic achievement. *Intercultural Education, 15,* 369-384.

Gecas, V. (1989). The social psychology of self-efficacy. *Annual Review of Sociology, 15,* 291-316.

Gloria, A. M. & Kurpius, S. E. R. (2001). Influences of self-beliefs, social support, and comfort in the university environment on the academic nonpersistence decisions of

American Indian undergraduates. *Cultural Diversity and Ethnic Minority Psychology, 7*, 88-102.

Greene, M. L., Way, N., & Pahl, K. (2006). Trajectories of perceived adult and peer discrimination among Black, Latino, and Asian American Adolescents: Patterns and psychological correlates. *Developmental Psychology, 42*, 218-238.

Guillroy & Wolverton (2008). Native American student persistence. *The Journal of Higher Education, ?*, ?-87.

House, J. D. (1997). Predictive validity of college admissions test scores for American Indian students. *The Journal of Psychology, 131*, 572-574.

Jackson, A. P., Smith, S. A., & Hill, C. L. (2003). Academic persistence among Native American college students. *Journal of College Student Development, 44*, 548-565.

Lam, B. T. (2007). Impact of perceived racial discrimination and collective self-esteem on psychological distress among Vietnamese-American college students: Sense of coherence as mediator. *American Journal of Orthopsychiatry, 77*, 370-376.

Loo, C. M. & Rolison, G. (1986). Alienation of ethnic minority students at a predominantly white university. *The Journal of Higher Education, 57*, 58-77.

Markus, H. R. & Kitayama, S. (1991). Culture and the self: Implications for cognition, emotion, and motivation. *Psychological Review, 98*, 224-253.

McAuley, E., Duncan, T., & Tammen, V. V. (1989). Psychometric properties of the Intrinsic Motivation Inventory in a competitive sport setting: A confirmatory factor analysis. *Research Quarterly for Exercise and Sport, 60*, 48-58

McFarland, L. A., Lev-Arey, D. M., Ziegert, J. C. (2003). An examination of stereotype threat in a motivational context. *Human Performance, 16*, 181-205.

McNeil, D. W., Kee, M., & Zvolensky, M. J. (1999). Culturally related anxiety and ethnic identity in Navajo college students. *Cultural Diversity and Ethnic Minority Psychology, 5*, 56-64.

Montgomery, D., Miville, M. L., Winterowd, C., Jeffries, B., & Baydsen, M. F. (2000). American Indian college students: An exploration into resiliency factors revealed through personal stories. *Cultural Diversity and Ethnic Minority Psychology, 6*, 87-398.

Nora, A. & Cabrera, A. F. (1996). The role of perceptions of prejudice and discrimination adjustment of minority students to college. *The Journal of Higher Education, 67*, 119-148.

Ogbu, J. U. (1993). Differences in cultural frame of reference. *International Journal of Behavioral Development, 16,* 483-506.

Ogbu, J. U. & Simons, H. D. (1998). Voluntary and involuntary minorities: A cultural-ecological theory of school performance with some implications for education. *Anthropology & Education Quarterly, 29, 155-188.*

Osborne, J. W. & Walker, C. (2006). Stereotype threat, identification with academics, and withdrawal from school: Why the most successful students of colour might be most likely to withdraw. *Educational Psychology, 26,* 563-577.

Pascarella, E. T., Terenzini, P. T., & Hibel, J. (1978). Student-faculty interactional settings and their relationship to predicted academic performance. *The Journal of Higher Education, 49,* 450-463.

Ryan, R. M., Connell, J. P., & Plant, R. W. (1990). Emotions in non-directed text learning. *Learning and Individual Differences, 2,* 1-17.

Ryan, R. M. & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist, 55,* 68-78.

Ryan, R. M., Koestner, R., & Deci, E. L. (1991). Varied forms of persistence: When free-choice behavior is not intrinsically motivated. *Motivation and Emotion, 15,* 185-205.

Santos, S. J., Ortiz, A. M., Morales, A., & Rosales, M. (2007). The relationship between campus diversity, students' ethnic identity and college adjustment: A qualitative study. *Cultural Diversity and Ethnic Minority Psychology, 13,* 104-114.

Schmader, T., Major, B., & Gramzow, R. H. (2001). Coping with ethnic stereotypes in the academic domain: Perceived injustice and psychological disengagement. *Journal of Social Issues, 57,* 93-111.

Schneider, M. E. & Ward, D. J. (2003). The role of ethnic identification and perceived social support in Latinos' adjustment to college. *Hispanic Journal of Behavioral Sciences, 25,* 539-554.

Seifert, T. L. (1995). Academic goals and emotions: A test of two models. *The Journal of Psychology, 129,* 543-552.

Simons, J., Dewitte, S., & Lens, W. (2004). The role of different types of instrumentality in motivation, study strategies, and performance: Know why you learn, so you'll know what you learn! *British Journal of Educational Psychology, 74,* 343-360.

Smedley, B. D., Myers, H. F., & Harrell, S. P. (1993). Minority-status stresses and the college adjustment of ethnic minority freshmen. *The Journal of Higher Education, 64,* 434-452.

Smith, C. E. & Hopkins, R. (2004). Mitigating the impact of stereotypes on academic performance: The effects of cultural identity and attributions for success among African American college students. *The Western Journal of Black Studies, 28*, 312-321.

Steele, C. M. (1997). A threat in the air. *American Psychologist, 52*, 613-629.

Steele, C. M. & Aronson, J. (1995). Stereotype threat and the intellectual test performance of African Americans. *Journal of Personality and Social Psychology, 69*, 797-811.

Suarez-Balcazar, Y., Orellana-Damacela, L., Portillo, N., Rowan, J. M., & Andrews-Guillen, C. (2003). Experiences of differential treatment among college students of color. *The Journal of Higher Education, 74*, 428-4444.

Taylor, R. D., Casten, R., Flickinger, S. M., Roberts, D., & Fulmore, C. D. (1994). Explaining the school performance of African-American adolescents. *Journal of Research on Adolescence, 4*, 21-44.

Tsigilis, N. & Theodosiou, A. (2003). Temporal stability of the Intrinsic Motivation Inventory. *Perceptual and Motor Skills, 97*, 271-280.

Williams, G. C., Saizow, R., Ross, L., & Deci, E. L. (1997). Motivation underlying career choice for internal medicine and surgery. *Social Science and Medicine, 45,* 1705-1713.

Williams, G. C., & Deci, E. L. (1996). Internalization of biopsychosocial values by medical students: A test of self-determination theory. *Journal of Personality and Social Psychology, 70*, 767-779.

Williams, G. C., Wiener, M. W., Markakis, K. M., Reeve, J., & Deci, E. L. (1994). Medical Student motivation for internal medicine. *Journal of General Internal Medicine, 9,* 327-333.

Vansteenkiste, Simons, Lens, Deci, & Sheldon (2004). Motivating learning, performance, and persistence: The synergistic role of intrinsic goals and autonomy-support. *Journal of Personality and Social Psychology, 87*, 246-260.

Verkuyten, M. & Brug, P. (2003). Educational performance and psychological disengagement among ethnic-minority and Dutch adolescents. *The Journal of Genetic Psychology, 164*, 189-200.

Verkuyten, M. & Thijs, J. (2004). Psychological disidentification with the academic domain among ethnic minority adolescents in the Netherlands. *British Journal of Educational Psychology, 74*, 109-125.

Appendices

Appendix A

Student Demographics

Age: _____ Gender: _____

Classification: (Circle one)
1 = Freshman
2 = Sophomore
3 = Junior
4 = Senior
5 = Other

1st Semester G.P.A.: _____

Current Semester G.P.A.: _____

Tribe: _____

How far from campus do you live? (Circle one)
1 = Within the city limits of Albuquerque
2 = 20-40 miles outside the city of Albuquerque
3 = 50 miles outside of Albuquerque
4 = 100 miles or more outside of Albuquerque
5 = In another state. (Specify state) _____

Family Support

1. Is your family supportive of your attendance at the University of New Mexico?

Not at all true			Somewhat True			Very True
1	2	3	4	5	6	7

2. Do you share school experiences with your family?

Not at all true			Somewhat True			Very True
1	2	3	4	5	6	7

3. Does your family inquire about your progress in school?

Not at all true			Somewhat True			Very True
1	2	3	4	5	6	7

4. Do they encourage your academic progress?

Not at all true			Somewhat True			Very True
1	2	3	4	5	6	7

Instructor Demographics

For the following items, think of an instructor whom you have had negative interactions with and fill in the blanks.

Age: (estimate) _____ Gender: _____

1. Is the instructor of ethnic minority status or non-ethnic status? _____

2. What is the estimated class size in which you have encountered interactions with this particular instructor? _____

3. Are these negative interactions based on something the instructor has said or has indicated with non-verbally? _____

4. Has a negative interaction with the instructor occurred once or more than once? _____

Perception of Discrimination

1. During class, the professor ignores students of different backgrounds.

Strongly Agree	Agree	Disagree	Strongly Disagree
1	2	3	4

2. The professor treats students of particular ethnicities/groups stereotypically.

Strongly Agree	Agree	Disagree	Strongly Disagree
1	2	3	4

3. The professor has a tendency to call on a minority student expert in terms of gaining information on a specific ethnicity.

Strongly Agree	Agree	Disagree	Strongly Disagree
1	2	3	4

4. The professor ignores minority student participation in class.

Strongly Agree	Agree	Disagree	Strongly Disagree
1	2	3	4

5. During class, the professor has made racially offensive statements.

Strongly Agree	Agree	Disagree	Strongly Disagree
1	2	3	4

Classroom Climate

This questionnaire contains items that are related to your experience with your instructor in this class. Instructors have different styles in dealing with students, and we would like to know more about how you have felt about your encounters with your instructor compared to other students. Your responses are confidential. Please be honest and candid.

1. I feel that my instructor provides me choices and options in terms of the course work.

Strongly Disagree			Neutral			Strongly Agree
1	2	3	4	5	6	7

2. I feel understood by my instructor.

Strongly Disagree			Neutral			Strongly Agree
1	2	3	4	5	6	7

3. I am able to be open with my instructor during class.

Strongly Disagree			Neutral			Strongly Agree
1	2	3	4	5	6	7

4. My instructor conveys confidence in my ability to do well in the course.

Strongly Disagree			Neutral			Strongly Agree
1	2	3	4	5	6	7

5. I feel that my instructor accepts me.

Strongly Disagree			Neutral			Strongly Agree
1	2	3	4	5	6	7

6. My instructor makes sure I really understand the goals of the course and what I need to do.

Strongly Disagree			Neutral			Strongly Agree
1	2	3	4	5	6	7

7. My instructor encourages me to ask questions.

Strongly Disagree			Neutral			Strongly Agree
1	2	3	4	5	6	7

8. I feel a lot of trust in my instructor.

Strongly Disagree			Neutral			Strongly Agree
1	2	3	4	5	6	7

9. My instructor answers my questions fully and carefully.

Strongly Disagree			Neutral			Strongly Agree
1	2	3	4	5	6	7

10. My instructor handles people's emotions very well.

Strongly Disagree			Neutral			Strongly Agree
1	2	3	4	5	6	7

11. I feel that my instructor cares about me as a person.

Strongly Disagree			Neutral			Strongly Agree
1	2	3	4	5	6	7

12. I don't feel very good about the way my instructor talks to me when class is in session.

Strongly Disagree			Neutral			Strongly Agree
1	2	3	4	5	6	7

13. My instructor tries to understand how I approach my course work before suggesting a new way to approach and understand the course work.

Strongly Disagree			Neutral			Strongly Agree
1	2	3	4	5	6	7

14. I feel able to share my concerns about the course work with my instructor.

Strongly Disagree			Neutral			Strongly Agree
1	2	3	4	5	6	7

Intrinsic Motivation Scale

Interest/Enjoyment

1. I enjoy my course work very much.

Not at all true			Somewhat True			Very True
1	2	3	4	5	6	7

2. My course work is fun to do.

Not at all true			Somewhat True			Very True
1	2	3	4	5	6	7

3. I think my course work is boring. (R)

Not at all true			Somewhat True			Very True
1	2	3	4	5	6	7

4. My course work does not hold my attention at all. (R)

Not at all true			Somewhat True			Very True
1	2	3	4	5	6	7

5. I would describe my course work as very interesting.

Not at all true			Somewhat True			Very True
1	2	3	4	5	6	7

6. I think my course work is quite enjoyable.

Not at all true			Somewhat True			Very True
1	2	3	4	5	6	7

7. While engaging in my course work, I think about how much I enjoy learning.

Not at all true			Somewhat True			Very True
1	2	3	4	5	6	7

Perceived Competence

8. I think I do well in my course work.

Not at all true			Somewhat True			Very True
1	2	3	4	5	6	7

9. I think I do pretty well in my course work compared to other students.

Not at all true			Somewhat True			Very True
1	2	3	4	5	6	7

10. After working on my course work for awhile, I feel pretty competent.

Not at all true			Somewhat True			Very True
1	2	3	4	5	6	7

11. I am satisfied with my performance in my course work. .

Not at all true			Somewhat True			Very True
1	2	3	4	5	6	7

12. I am pretty skilled when it comes to my course work.

Not at all true			Somewhat True			Very True
1	2	3	4	5	6	7

13. There are some areas of my course work I cannot do very well in. (R)

Not at all true			Somewhat True			Very True
1	2	3	4	5	6	7

Effort/Importance

14. I put a lot of effort into my course work.

Not at all true			Somewhat True			Very True
1	2	3	4	5	6	7

15. I don't try very hard to do well in my course work. (R)

Not at all true			Somewhat True			Very True
1	2	3	4	5	6	7

16. I try very hard to succeed in my course work.

Not at all true			Somewhat True			Very True
1	2	3	4	5	6	7

17. It is important to me to do well in my course work.

Not at all true			Somewhat True			Very True
1	2	3	4	5	6	7

18. I don't put much energy into my course work. (R)

Not at all true			Somewhat True			Very True
1	2	3	4	5	6	7

Value/Usefulness

19. I believe my course work has been some value to me.

Not at all true			Somewhat True			Very True
1	2	3	4	5	6	7

20. I think that my course work assignments are useful.

Not at all true			Somewhat True			Very True
1	2	3	4	5	6	7

21. I think my course work assignments are important to do because it will be useful.

Not at all true			Somewhat True			Very True
1	2	3	4	5	6	7

22. I would be willing to do these course work assignments again because it has some value to me.

Not at all true			Somewhat True			Very True
1	2	3	4	5	6	7

23. I think doing these course work assignments could help me.

Not at all true			Somewhat True			Very True
1	2	3	4	5	6	7

24. I believe doing these course work assignments could be beneficial to me.

Not at all true			Somewhat True			Very True
1	2	3	4	5	6	7

25. I think the course work assignments are important.

Not at all true			Somewhat True			Very True
1	2	3	4	5	6	7

Appendix B

Consent to Participate in Research

The Relationship Between the Quality of Faculty-Student Interaction and Students'

Intrinsic Motivation for Native American College Students

You are invited to participate in a research study conducted by Jamie L. Joe, Family Studies graduate student, from the Individual, Family & Community Education Department at the University of New Mexico. You were identified as a possible volunteer in the study because the population being sampled are Native American students enrolled in Native American Studies (NAS) undergraduate courses. This study is looking at the quality of faculty-student interaction and its affect on student motivation. Your participation in this study will be very helpful by informing the parents, educators, and society of the importance of the quality of faculty-student interaction and how it influences a student's motivation to become active learners and may contribute to a better insight in retention of Native American college students.

The purpose of this study is to examine how the quality of faculty-student interaction affects Native American students' intrinsic motivation and influences their success in higher education. In addition, the role of perceived family support will be studied to better understand how this contributes to student success.

You are being asked to complete a questionnaire. It should take approximately 10 minutes to complete. The last 20 minutes of class will be set aside for the announcement and explanation of the study. During the announcement of the study, Native American students will be requested to take part in the study since this population is the focus of the study. All questionnaires along with consent forms will be given out in anticipation of collecting data the same day. Your Participation in this study is voluntary and have the option to participate or decline without incentive or penalty to your course grade. Packets contain one questionnaire and two consent forms. Please sign one consent form and return it with the completed questionnaire to the two separate envelopes that are provided on the desk. Keep the second consent form; this will be your copy to reference your participation in the study.

There are no major potential dangers in taking part in this study. If you experience any discomfort you may contact the UNM Agora Crisis Center at (505) 277-3013.

The potential benefits are that society in general will be informed of one aspect, the quality of interaction between faculty and students and how that may contribute to student academic success. Another benefit will give insight into how a student's perception of familial support influences student perseverance and academic success.

Any information obtained in connection with this study and that can be identified with you will remain confidential and will only be disclosed with your permission or as required by law. You will be ensured absolute confidentiality. Packets of the questionnaire and consent forms will be kept in sealed envelopes and will not be accessible to anyone other than the principal investigator. As soon as the thesis is completed or by December 2009, whichever comes first, consent forms and questionnaires will be destroyed so that no record of your identity will be indicative of your participation in the study.

Your participation in this study is strictly voluntary. If you volunteer to participate, you many discontinue at any time without your character or grade penalized in the course.

If you have any questions about the research, please feel free to contact: Jamie L. Joe, principal investigator, at (505) 277-4318 or email jjoe@unm.edu or contact Pam Olson, faculty advisor, at (505) 277-5550 or email pamo@unm.edu. Both can be reached at the University of New Mexico, in Simpson Hall, Albuquerque, New Mexico, 87131. If you have other concerns or complaints, contact the Institutional Review Board at the University of New Mexico, 1717 Roma NE, Room 205, Albuquerque, New Mexico, 87131, (505) 277-2257 or toll free at 1-866-844-9018.

I understand the procedure described above. My questions have been answered to my satisfaction, and I agree to participate in the study. I have been provided a copy of this form.

_____
Name of Participant (Please Print)

_____ _____
Signature of Participant Date

In my judgment the participant is voluntarily and knowingly providing informed consent and possesses the legal capacity to provide informed consent to participate in this research study.

_____ _____
Signature of Investigator or Designee Date

Appendix C

Code Sheet

Demographics

Student Demographics

ID: 01-40

Age: Actual age recorded

Gender: 1 = Female
2 = Male

Classification/Student Group: 1= Freshman
2 = Sophomore
3 = Junior
4 = Senior
5 = Other

Distance student lives from campus: 1 = Within the city limits of Albuquerque
2 = 20-40 miles outside of the city of Albuquerque
3 = 50 miles outside of Albuquerque
4 = 100 miles or more outside of Albuquerque
5 = In another state. (Specify state.)

Instructor Demographics

Age: Estimate of age recorded.

Gender: 1 = Female
2 = Male

Question 1:

Is the instructor of ethnic minority status or non-ethnic status?

1 = Ethnic minority status
2 = Non-ethnic minority status

Question 2:

What is the estimated class size in which you have encountered interactions with this particular instructor?

Class size: Actual class size recorded.

Question 3:

Are these negative interactions based on something the instructor has said or has indicated with non-verbally?

1 = Yes
2 = No
3 = Both

Question 4:

Has a negative interaction with the instructor occurred once or more than once?

Frequency of interaction: 1 = Once
2 = More than once
3 = More than twice

Survey Constructs

Intrinsic Motivation: Questions 1-25. Possible range is 25-175 on a seven point Likert scale with 1 being "not at all true" to 7 being "very true".

*The following four subscales make up the intrinsic motivation construct.

Interest/Enjoyment: Questions 1-7. Possible range is 7-49 on a seven point Likert scale with 1 being "not at all true" to 7 being "very true".

Perceived Competence: Questions 1-6. Possible range is 6-42 on a seven point Likert scale with 1 being "not at all true" to 7 being "very true".

Effort/Importance: Questions 1-5. Possible range is 5-35 on a seven point Likert scale with 1 being "not at all true" to 7 being "very true".

Value/Usefulness: Questions 1-7. Possible range is 7-49 on a seven point Likert scale with 1 being "not at all true" to 7 being "very true".

Perception of Faculty Discrimination: Questions 1-5. Possible range is 5-20 on a four point Likert scale with 1 being "strongly agree" to 4 being "strongly disagree".

Classroom Climate: Questions 1-14. Possible range is 14-98 on a seven point Likert scale with 1 being "strongly disagree" to 7 being "strongly agree".

Family Support: Questions 1-4. Possible range is 4-28 on a seven point Likert scale with 1 being "not at all true" to 7 being "very true".