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FACILITATORS OF DINÉ (NAVAJO) STUDENT ACCESS, ENROLLMENT,
AND PERSISTENCE IN POSTSECONDARY EDUCATION:
AN ECOLOGICAL SYSTEMS PERSPECTIVE

by

Christina M. Hartman

A dissertation submitted in partial fulfillment
for the requirements for the degree

of

DOCTOR OF PHILOSOPHY

in

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2018

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ABSTRACT

Facilitators of Diné (Navajo) Student Access, Enrollment, and Persistence In
Postsecondary Education: An Ecological Systems Perspective

by

Christina M. Hartman, Doctor of Philosophy

Utah State University, 2018

Major Professor: Cindy D. Jones, Ph.D.
Department: Teacher Education and Leadership

The purpose of this study was to investigate how Diné (Navajo) students currently enrolled in college describe the factors that supported their pursuit of higher education. Bronfenbrenner's ecological systems theory was used as a framework and to identify and analyze factors that influence access, enrollment, and participation in higher education. The Diné participants in this study were six students enrolled in postsecondary education at the time of this research, recruited from two university campuses in the Southwestern U.S. Each student participated in a semistructured interview and completed a demographic questionnaire.

Open-coding was used to analyze the interviews, and it was observed that factors relating to each of Bronfenbrenner's five levels of ecological systems theory had an impact on the participants' access, enrollment, and persistence in postsecondary

education. A number of themes emerged that will be useful to stakeholders who work with this population of students.

(233 pages)

PUBLIC ABSTRACT

Facilitators of Diné (Navajo) Student Access, Enrollment, and Persistence In Postsecondary Education: An Ecological Systems Perspective

Christina M. Hartman

Diné (Navajo) students drop out of high school and postsecondary education at higher than average rates. The purpose of this study was to investigate how Diné students currently enrolled in college describe the factors that supported their pursuit of higher education. Bronfenbrenner's ecological systems theory was used as a framework and to identify and analyze factors that influence access, enrollment, and participation in higher education. The Diné participants in this study were six students enrolled in postsecondary education at the time of this research, recruited from two university campuses in the Southwestern U.S. Each student participated in a semistructured interview and completed a demographic questionnaire.

Open-coding was used to analyze the interviews, and it was observed that factors relating to each of Bronfenbrenner's five levels of ecological systems theory had an impact on the participants' access, enrollment, and persistence in postsecondary education. A number of themes emerged that will be useful to stakeholders who work with this population of students. Recommendations are provided that are intended to help these stakeholders retain Diné students at higher rates.

ACKNOWLEDGMENTS

This research is the product of many years of work that began when I was an undergraduate at Portland State University in 2008. The year I spent working with American Indian students as a part of my senior capstone project was hugely influential on my research trajectory. I am deeply grateful to many people for helping me to conceive of, develop, and complete this research.

First, I would like to thank the six students who participated in the study. Their candor, patience, and willingness to share their experiences and insights in such great detail was incredibly eye-opening for me, and I think that those who read this dissertation will be similarly affected.

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Christina M. Hartman

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CHAPTER I

INTRODUCTION

A persistent area of need in addressing inequalities in educational opportunities is to increase access of American Indian students to higher education. Many opportunities exist to help American Indian students succeed in college. Programs such as Pell Grants, Federal Supplemental Educational Opportunity Grants, and The American Indian College Fund have been put in place to help American Indian students pay for postsecondary education. Furthermore, many universities have taken steps to foster an atmosphere of inclusivity and diversity on their campuses by creating Native studies programs, funding powwows, organizing Native student groups, and more (Falk & Aitken, 1984; Jeanotte, 1982; K. M. Powers, 2006; Taylor, 2001). Perhaps advancements such as these have played a part in increasing enrollment among American Indian students. The National Center for Education Statistics (NCES) estimates that between 1976 and 2006, enrollment rates among American Indian students more than doubled, from 76,100 students in 1976, to 181,100 students in 2006 (NCES, n.d.). However, despite these advancements, many American Indian students drop out of college, others choose not to attend college at all, and still others never earn a high school diploma (Ebner, 2013; Executive Office of the President, 2014).

Statistics show that American Indian students graduate from high school at much lower rates than students in other racial/ethnic groups. In 2015, the high school graduation rate of American Indian students was 71.6%; the lowest in comparison to all other racial/ethnic groups, and markedly lower than the average of 83.2% (Common Core

of Data, 2016). In some states, as few as 24% of American Indian students graduate from high school (Ebner, 2013), positioning them as one of the most at-risk demographics when it comes to school accomplishment (Ali, McInerney, Craven, Yeung, & King, 2014). American Indian students also have a high dropout rate for higher education. Brown and Robinson Kurpius (1997) posit that between 75-93% of American Indian/Alaska Native students drop out of college before completing their degree. The National Center for Education Statistics reports that 36% of American Indian students graduate within five years of enrolling in college, compared to an average of 55% for all students (NCES, 2015).

Furthermore, research has shown that a myriad of social issues, largely stemming from poverty (such as substance abuse) plague reservations and influence the lives of many American Indian students (Fischer & Stoddard, 2013). These social issues have been linked to decreased accomplishment in school (Fischer & Stoddard, 2013). Thus, American Indian students are especially positioned to lack access to the opportunities afforded by higher education (Executive Office of the President, 2014).

Problem Statement

A host of benefits are associated with attaining a higher education, including greater civic engagement, a higher income, a stronger sense of job satisfaction, and more (Perna, 2005). Thus, a greater understanding of the factors that contribute to the gap in access, enrollment, and persistence is imperative to increase enrollment and successful completion of higher education, with the subsequent associated benefits, for American

Indian students. Despite the factors working against them, many American Indian students do graduate high school and go on to attend college or vocational/technical school (Pavel et al., 1999). While some research has been conducted to identify the factors leading to school accomplishment for American Indian students, limited research was located that has examined these factors from an ecological systems (Bronfenbrenner 1977, 1979, 1994, 2005) perspective. Using this framework may allow researchers to identify contributions of environment levels (e.g., home, culture, history) in regard to realm of influence on American Indian students' school persistence and performance. Identifying the factors which may lead NA students to enroll and persist in postsecondary education is necessary in order to develop a stronger understanding of how teachers, counselors, and administrators can better serve these students.

Currently, there is little research that examines how to increase access to higher education for American Indian students. Observing that many American Indian students develop feelings of cultural alienation which lead them to drop out of college, Huffman (2001) issued a call for further research that examines how the backgrounds of American Indian students ultimately influence their college persistence. Accordingly, this study investigates how American Indian students currently enrolled in college describe the factors in their backgrounds that supported their pursuit of higher education. This research focuses on the Diné (Navajo) population. We have chosen to use the term Diné rather than Navajo because this is the term that tribal members use to describe themselves. The research questions guiding this exploratory study are as follows.

1. What factors do Diné students identify as essential to their access, enrollment, and persistence in postsecondary education?

2. How do these factors align with ecological systems levels (Bronfenbrenner 1977, 1979, 1994, 2005)?

Assumptions, Delimitations, and Limitations of the Study

Assumptions

While the benefits of attaining a postsecondary degree are outlined in the Literature Review section, this research assumes that it is worthwhile for students to attend, participate in, and complete a postsecondary degree. As an education researcher with a strong interest in social justice, my positionality influences this research. I believe that education is a worthwhile pursuit and care should be taken to ensure that all students have every opportunity to pursue higher education. Furthermore, for some students, societal forces beyond their control may determine their degree of educational access and completion. Thus, this research is situated firmly within the cultural lens that education is a worthy pursuit.

It is also assumed that a qualitative approach using semi-structured interviews is best-suited to this study as it allows participants the freedom to consider a range of factors that influenced their school accomplishment. Furthermore, it is assumed that Bronfenbrenner's ecological systems theory (1977, 1979, 1994, 2005) will provide a useful means by which to analyze the data collected from interviews.

Delimitations

Participants. One area of concern in this line of research is the homogenizing of all Native students. Oftentimes these students are studied in samples that cross tribal

lines, and may recruit Alaska Native and Pacific Islander students alongside students from the contiguous 48 states. Reservations are sovereign nations that encapsulate unique cultural, linguistic, and educational norms. Thus, it may be difficult to make generalizations about American Indian students across tribal lines. Given that only 0.8% of the college population identifies as American Indian/Alaska Native (Fast Facts, n.d.), it can be difficult to recruit participants from a single tribe. Nevertheless, this study limited its participants to members of the Diné tribe. Due to the location of this study and the demographic makeup of the university, Diné students were sought out for participation in this research.

Research design. Although using the semi-structured interview format necessitated the recruitment of fewer participants, it is the best methodology for this research. As ecological systems theory (Bronfenbrenner, 1977, 1979, 1994, 2005) requires a comprehensive examination not only of one's own upbringing, but the ways in which various forces interact with each other, it was difficult to predict what themes may emerge in the early stages of the research. Using a semistructured interview methodology allowed participants to expand their responses when necessary, and gave researchers the freedom to ask follow-up questions.

Limitations

The most significant limitation of this research is its transferability (Lincoln & Guba, 1985). In the Delimitations section, the rationale behind participant selection and research design was discussed. It cannot be assumed that all American Indian students enrolled in college would identify the same factors as being contributors to their

academic access, enrollment, and persistence as the Diné participants in this study. However, by investigating the perspectives of the Diné participants of this study, it is hoped that insights will be gained for improving postsecondary access, enrollment, and persistence for American Indian students who come from similar backgrounds and for designing further research on other tribal groups.

Significance of the Study

The results of this study may increase understanding of how stakeholders such as teachers, counselors, and administrators can better meet the needs of this underserved population. Although research exists that examines the characteristics of American Indian students in higher education, there is a gap in the research when it comes to understanding how these characteristics are affected by the levels of ecological systems. For instance, the ways in which parents interact with teachers may help to foster skills that lead to student accomplishment. Understanding the ways in which Bronfenbrenner's (1977, 1979, 1994, 2005) levels of environment interact with each other may produce meaningful results that are relevant not only to the stakeholders who are directly invested in the accomplishment of American Indian students (for example, parents and teachers); but, may also provide information on the ways in which more distant constructs (such as parent's employers, historical events, and cultural factors) impact enrollment and achievement in school. These findings have the potential to reveal new ways of thinking about American Indian students and how to increase their access, enrollment, and persistence in postsecondary education. Thus, the ultimate goal of this research is to

positively impact the lives of American Indian students in relation to higher education.

Definitions of Terms

Access: A student's ability to enroll in college due to factors such as high school graduation status, preparedness, socioeconomic status, and other facilitators.

Achievement: A student's success in school as indicated by measurements such as GPA, or performance on standardized tests (Beck, Joshi, Nsiah, & Ryerson, 2014; S. Powers & Rossman, 1983).

American Indian: A student with Native heritage from a tribe within the 48 contiguous states of the USA (Walbert, n.d.).

College: A postsecondary institution that is authorized to confer associates, bachelors, masters, or Ph.D. degrees.

Diné: A member of the principal tribe governed by the Navajo Nation, also referred to as "Navajo" (Navajo Nation Chapters, n.d.).

Enrollment: A student's participation in education through formal induction into an academic program.

Persistence: A student's motivation to work towards the completion of their academic program (Huffman, 1990, 2001)

School or student accomplishment: In this research, school or student accomplishment refers to a combination of student access, enrollment, and persistence.

Vocational School: A postsecondary institution that teaches a trade or technical skills required to perform a specific job.

CHAPTER II

REVIEW OF THE LITERATURE

Introduction

The purpose of this review is to evaluate and synthesize research that has been conducted on potential factors that access, enrollment, and persistence of American Indian students in postsecondary education. Furthermore, this section positions that research within Bronfenbrenner's (1977, 1979, 1994, 2005) ecological systems theory (EST) by first defining the different levels of environment, and then delineating where each selected study falls within this model. This organizational structure reveals what is already known about American Indian students' access, enrollment, and persistence in postsecondary education in relation to EST.

Locating Studies

This review of the literature included a search of the following search databases: Google Scholar, Academic Search Premiere, APA PsychNet, JSTOR, and ERIC. For the searches conducted, the search terms listed in Table 1 were used in combination. Each of the three population descriptors were used in combination with the five outcome descriptors. If more than 1,000 results were returned, an educational level was added as a third search term to narrow the results. If less than 1,000 results were returned, articles were reviewed to ensure that they studied secondary or postsecondary students, and a third descriptor was not added.

Table 1

Search Terms

Population descriptor	Outcome descriptor	Educational level descriptor
Native American	School success	Higher education
American Indian	Academic/school/educational achievement	College
Indigenous American	Good grades	University
	Academic/educational attainment	Postsecondary/ Postsecondary
		Vocational
	Academic/educational/student persistence	
	Academic/educational/student motivation	

As articles were retrieved, the reference and literature review sections were reviewed to identify additional sources. In addition, information was collected from the following reports: State Strategies to Facilitate Adult Learners Transitions to Postsecondary Opportunities (A. H. Mason, Narlock, Muhisani, & Bhatt, 2017), Barriers and Strategies for Success for American Indian College Students: A Review (Keith, Stastny, & Brunt, 2016), and Improving Academic Performance among Native American Students: A Review of the Research Literature (Demmert, 2001).

Inclusion Criteria

Studies included in the review of the literature on potential factors that support American Indian student access, subsequent enrollment, and persistence in higher

education meet the following criteria.

1. Research published in a peer-reviewed journal, a peer-reviewed paper presented at a conference, an official stakeholder report, or a completed doctoral dissertation.
2. Research published after 1970. In the years leading up to the passage of the Indian Self-Determination and Education Act of 1975 and the Indian Child Welfare Act in 1978, an abundance of research was being published on Indian education. Although many Indian boarding schools remained, ultimately, the passage of these laws ended what is commonly thought of as the “boarding school era” since they gave tribes greater control over their own school systems and disallowed the forcible removal of Indian children from their families (George, 1997; Hirst, 1987). Thus, research from this era is relevant to this study.
3. Research that involved American Indian participants in relation to higher education, post-secondary education, and vocational or technical education. Since this study focuses on adult students, studies that worked with secondary students were included. “Secondary” students often includes middle and high school students. Research that studied younger participants exclusively was excluded, however, if the younger students were included in a mix of K-12 students, the research was included. Studies that interviewed college graduates regarding the facilitators of their school success were also included.

Theoretical Framework

Introduction to Ecological Systems Theory

As this study is intended to provide an insight about how to bring culturally responsive instructional practices and to enhance the educational of underrepresented minorities whose social and cultural practices have been traditionally undervalued in schools, EST (Bronfenbrenner, 1977, 1979, 1994, 2005) helps to provide a strong conceptual and operational framework for the current study. EST is predicated upon the study of “the progressive, mutual accommodation *throughout the life course*, between an active, growing human being and the changing properties of the immediate settings in

which the developing person lives” (Bronfenbrenner 2005, p. 107). Thus, interactions between an individual and their environment work to shape the individual.

Bronfenbrenner observed that as children mature, they are influenced by five nested levels of environment (Figure 1), which Bronfenbrenner (1979) likens to a Russian stacking doll. These five levels include the microsystem, mesosystem, exosystem, macrosystem, and chronosystem, which will be described in this section. To study a child’s development, it is important to consider the child’s immediate environment and the interactions of the larger environment (such as the ways in which a child’s home and

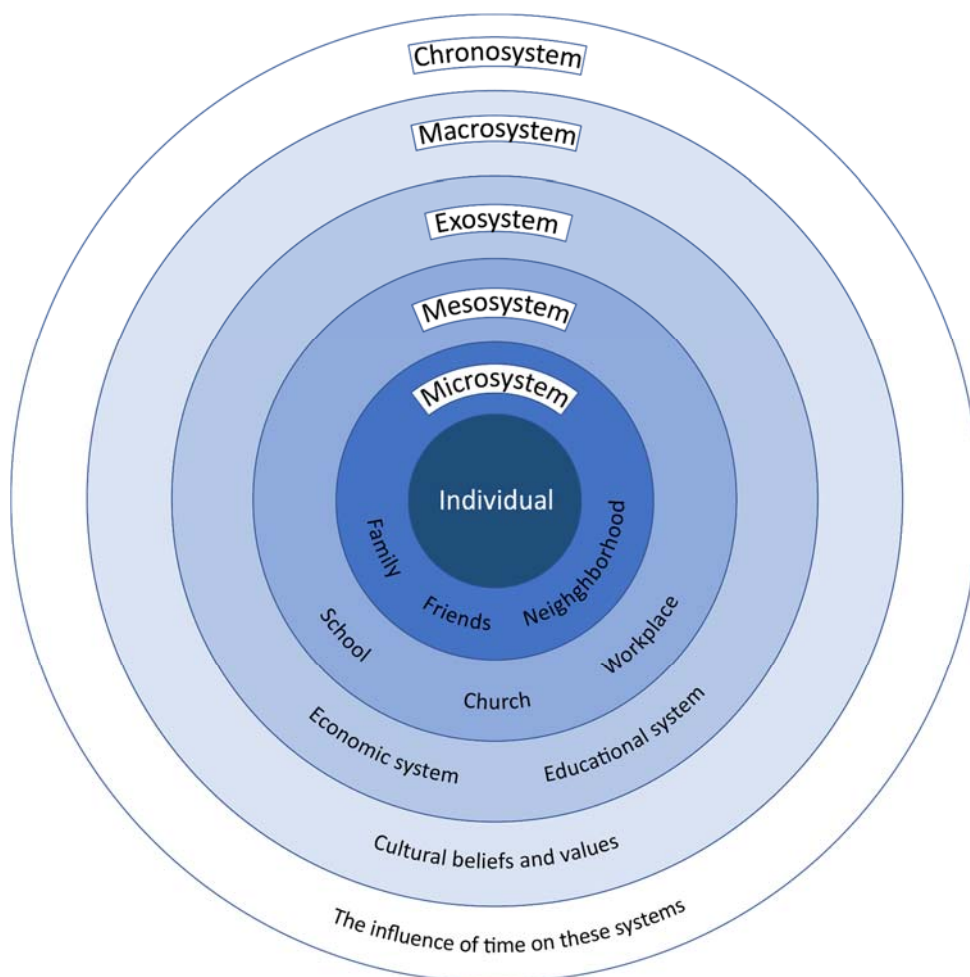


Figure 1. Bronfenbrenner’s nested levels of environment.

school life may intersect or the way a parent's employment influence's the child's home environment). EST provides a framework by which to analyze these relationships.

Additionally, the circular nature of the EST framework mirrors the importance of circles in American Indian Culture. The American Indian Culture Center and Museum (American Indian Cultural Center and Museum, n.d.) summarizes:

“Cycles” and “Circularity of life” are abundant in nature, seen in the earth, moon and sun. The cyclical aspect of the seasons, planets in orbit, and life itself are represented in the circle. Circular formations are often found in American Indian social and ceremonial activities that take place in circular arenas.

Therefore, the use of a framework that is organized through the use of circles is especially appropriate for this research.

Oré and Chico-Jarillo (2016), in discussing methods by which resilience is developed, pointed out that “Resilience research has shifted away from an individualistic, deficit orientation toward the study of individual and collective processes, strengths, and assets within a complex adaptive system” (p. 135). The focus of this research is to examine ways in which American Indian students, who have traditionally struggled to succeed in school, manage to overcome barriers to achieve postsecondary access. Thus, resilience is a fitting term for our participants. EST is just the sort of complex adaptive system identified by Oré and Chico-Jarillo, making it particularly well suited for this line of research.

Microsystem. The microsystem encompasses the relationships and interactions a person has in the environment closest to the participant (Bronfenbrenner, 1979; Johnson, 2008). Structures in the microsystem include family, school, neighborhood, workplace, and relationships with the person's family, friends, classmates, teachers, religious leaders,

and others with whom the person has direct contact. Direct interactions with these figures constitute the significant relationships that make up the microsystem (Ben-David & Nel, 2013; Bronfenbrenner, 1979; Johnson, 2008). These relationships are significant because they most directly impact a person's development and subsequent interactions with people and institutions at other levels. Indeed, Bronfenbrenner (1979) points out that "An analysis of the microsystem must take into account the full interpersonal system operating in a given setting" (p. 66), demonstrating the importance of each relationship to the microsystem. Bi-directional influences (characterized as "dyads" by Bronfenbrenner) are strongest at the microsystem level (Johnson, 2008). "[The dyad] serves as the basic building block of the microsystem, making possible the formation of larger intrapersonal structures" (p. 56).

Mesosystem. The mesosystem is made up of the linkages and processes taking place between two or more settings of the microsystem (as opposed to direct relationships), such as interactions between home and school (Johnson, 2008). The linkages can impact a person's attitudes; for instance, a family that stresses academic success may lead to students who are more motivated to achieve in school. On the other hand, this pressure could simultaneously lead to "attempt[s] by school personnel to shield students from such parental pressures by restricting the amount of information that is communicated regarding student achievement" (e.g., purposefully withholding information from families; Johnson, 2008, p. 3). Thus, Johnson argued that mesosystem relationships are also bi-directional. Bronfenbrenner (1979) argued that "such interconnections can be as decisive for development as events taking place within a given

setting” (p. 3). Falk and Aitken (1984) sought to determine the factors that lead to retention among American Indian college students through interviews and observed that parent supportiveness towards education is strongly correlated with student retention. In their study of college aspirations among American Indian high school students, Fore and Chaney (1998) also noted that students who did not move on to college reported significantly less parental support than students who did. K. M. Powers (2006) examined the factors that lead to scholastic achievement among urban American Indian students and observed that family involvement in their students’ school may lead to higher levels of school success among American Indian students. It has been well-documented that among American Indian students, family has a strong influence on their academic performance. Falk and Aitken (1984) demonstrated that parents’ level of support is strongly correlated with American Indian student retention (47% of American Indian respondents indicated that parental support promoted their retention). Similarly, Willetto (1999) sought to determine the influences of Diné family and culture on students. She observed that both parental education ($r = .03, p > .1$) and socioeconomic status ($r = .25, p > .1$) were predictors of higher grades among American Indian high school students. Based on the data she collected, Willetto also concluded that parents’ higher level of education was associated with increased college aspirations among American Indian students.

Transculturation. Transculturation is a mesosystem-level phenomenon that takes place when students bridge the gap between their own culture and the dominant culture. In this case, transculturation is considered as it applies to students bridging the gap

between home and school. As both home and school are within the microsystem, this research situates transculturation within the mesosystem. Huffman (1990, 2001) studied the college persistence of American Indian students with varying degrees of comfort in their campus communities. These students, who largely came from traditional backgrounds, were divided into the categories of “Assimilated, marginal, estranged, [and] transculturated” (2001, p. 6). Assimilated students identified with the mainstream culture on their college campus, and “encountered few cultural difficulties while in college” (2001, p. 7). Marginal students attempted to walk in two worlds simultaneously. They “held some assimilationist orientation, yet, desired some identification and affiliation with more traditional American Indian culture” (2001, p. 7). Sadly, Huffman reported that the marginal students in his study often felt pressure from both the dominant campus culture and the traditional American Indian culture which complicated their studies. Estranged students strongly identified with their traditional American Indian culture, and were characterized by their “aggressive rejection” of assimilation, and their mistrust of their campus community (2001, p. 7). Huffman reported that all of the estranged students in his sample “encountered extremely difficult college experiences” (2001, p. 7). Finally, transculturated students also identified strongly with their American Indian identity. In contrast to estranged students, transculturated students were able to derive strength and confidence from this identity that allowed them to thrive within their campus community.

Huffman is not the only researcher to note levels of assimilation as an important component of American Indian identity. Garrett and Pichette (2000) also observed that assimilation is an important consideration for counselors working with American Indian

clients. Therefore, “counselors must assess an [American Indian] client’s level of acculturation rather than making assumptions based on the limited information offered by appearance or other personal characteristics” (p. 3). Arguably, the same holds true for education professionals working with this population.

Students identified as assimilated, marginal or estranged were less likely to complete their program of study, while students identified as transculturated showed greater persistence towards graduating. Huffman observed that students who fit into the transculturated category showed the most persistence, and had the greatest likelihood of successfully completing their programs. Unlike assimilated students, transculturated students do not aspire towards success in white culture or according to white values. To the contrary, they “used their ethnic identity as a firm social-psychological anchor and derived strength and confidence from that cultural mask” (Huffman 2001, p. 7). Observing that transculturated students showed strong persistence, Huffman noted that little is understood about the factors that lead students to fall into any of the four categories.

Exosystem. The exosystem is made up of linkages and processes taking place between two or more settings, one of which does not contain the participant, but in which events occur that indirectly influence processes within the immediate setting of the person (Johnson, 2008). For instance, the linkage between home and a parent’s workplace (Berk, 1991). Although a child may not regularly go to work with their parents, the parent’s workplace impacts the parent in many ways, which could in turn impact the child. Thomas and Ganster (1995) sought to learn how institutional

organizational practices that are supportive to family responsibilities influenced stress and strain and work/family conflict among employees. They drew their sample ($n = 398$) from health care professionals from 45 facilities. Thomas and Ganster observed that employees who received flexible scheduling (e.g., flextime) and support (e.g., day-care services, after-school programs) from their employers experienced less family conflict and stress. Similarly, Wilensky (1961) observed that among men, “erratic worklife” may be correlated with an ill-temper, another way in which parents’ career may influence children’s home lives (as cited in Elder, Caspi, and Downey, 1986).

Research on the ways in which employer support influences American Indian families is limited. Along these lines, Clark (2002) studied the sense of work community and control as mediators between personal/work and work/family conflict among American Indian ($n = 77$) and white ($n = 74$) employees in two tribally operated facilities. Clark observed that American Indian parents were less likely than their non- American Indian coworkers to report experiencing scheduling flexibility and support. These studies demonstrate that linkages between a student’s home and their parent’s workplace may have an influence on family conflict and stress, thus directly impacting student development and subsequent school success. Clark has demonstrated that this may be particularly true within the American Indian community.

Macrosystem. The macrosystem represents the over-arching pattern of the linkages and processes between micro, meso, and exosystems with particular attention to cultural values, customs, and laws (Berk, 1991). Berk characterized the macrosystem as “The outermost level, the one that encompasses and affects all others” (p. 654). “It is not

a specific environmental context. Instead, it refers to the overarching ideology, values, laws, regulations, and customs of a particular culture” (p. 19). Thus, the macrosystem influences the direct interactions children have with their parents and can also influence the types of institutional relationships represented at each level. For instance, a student could be exposed to many different cultures between their home and school lives, which are compounded when the different cultures their family members navigate are also taken into account. Prior research has demonstrated that cultural considerations may have an impact on American Indian student success, demonstrating the particular relevance of macrosystems among American Indian students. Huffman, Sill, and Brokenleg (1986) examined how a myriad of factors influence GPA among American Indian undergraduates ($n = 38$) and found that Native traditionalism (e.g., knowledge of Native language and ceremonies, identification of reservation as “home”) was positively correlated to scholastic achievement among American Indian college students ($r = .33, p < .05$). Similarly, Falk and Aitken (1984) observed that participation in “Indian student organizations” and “American Indian Studies programs” are important to the retention of American Indian college students (p. 28). Willetto (1999) noted that observing Diné traditionalism (ritual behavior, cultural conventions, and language use) led to increased school commitment among American Indian high school students. Finally, K. M. Powers (2006) observed that American Indian students who attend culture-based school programs (programs that offer American Indian culture-based curricula) are more likely to be successful in school.

Chronosystem. The chronosystem represents the environment a participant is

situated in with particular attention to changes over time or historical events (Bronfenbrenner, 2005). Thus, in the context of a student, the chronosystem can influence multiple environments from their home to their school (Johnson, 2008). Bronfenbrenner observes that not only are human beings producers of culture, they are also shaped by the cultures they are a part of. The cultural norms of the time period in which one lives can influence an individual's conceptions of success and mastery. Johnson noted that schools and school systems are engaged in bi-directional relationships with the communities they serve, along with broader national systems and cultural norms. Johnson argued that "...schools and school systems, in the end, are also structure-determined as they adapt to changes within social, economic, and political contexts while internalizing, learning from, and evolving from systemic memory inherent in the system" (p. 6). Thus, public schools as a whole are particularly impacted by the chronosystem. American Indian education in particular has been subject to many political and cultural shifts. While the impact of this history will have had an influence on each of our participants, Indian boarding schools have had a particular lasting impact on the relationship between American Indian students and education.

Richard Pratt (1892) declared that "... all the Indian there is in the race should be dead. Kill the Indian in him, and save the man," establishing the perceived need for, and the underlying ethos of, Indian boarding schools (Pratt, 1892; Prucha, 1979; Wright, 1991). It has been well-established that although Indian Boarding Schools may have had positive influences on the lives of some students (Barnhardt, 1994), many American Indian students found their experiences in these schools to be traumatic (Challenges and

Limitations of Assimilation: Indian Boarding Schools, 2001; Churchill, 2004; Feir, 2016; Fixico, 2013; Garcia, 1999; Trafzer, Keller, & Sisquoc, 2006; Wexler, 2014). Feir noted that although some students in Indian boarding schools may have experienced greater employment opportunities or a higher graduation rate, “Economic assimilation came at the cost of traditional cultural connection.” Similarly, Trafzer, Keller, and Sisquoc (2006) painted a complicated portrait of a system that benefitted some students, while thrusting others into abusive environments. Feir issued a call for further research on how Indian boarding schools may have impacted other aspects of the human experience.

When it comes to historical trauma, it is difficult to discern their impact on future generations. However, Elder, Caspi, and Downey’s research on intergenerational relations notes that “Numerous studies are beginning to document the extent to which events in one generation directly influence the well-being of another generation” (1986, p. 298). One of the findings of the 1928 Berkley Guidance Study, which examined attitudes among four generations of family members, was that attitudes on parenting and marriage may be passed down through the generations. This aligns with Wexler’s (2014) observation that among three generations, adult children of Native elders indicated that their parents’ negative experiences with colonialism had a direct influence on their own attitudes and experiences. This influence manifested itself through values (for instance, not being taught to speak a native language due to elders being discouraged from speaking it) to home environment (alcohol abuse and neglect as a result of the trauma experienced by the elders). Regarding Indian boarding schools, one participant related;

...that’s why my parents never taught me [to speak Inupiaq] because they didn’t want me to get slapped in school.... And my mom...she’s real mad at the school

system. [She says,] ‘After they never tell us to [speak] Inupiaq and now they’re trying to teach it back.’ So my mom was angry and what we’re trying to deal with right now is healing. (Wexler, 2014, p. 82)

Thus, it is possible that attitudes towards school and educational persistence could similarly be passed down through generations due to elders’ own school experiences

It was not until the passage of the Indian Child Welfare Act of 1978 that American Indian families gained legal protection from having their children forcibly enrolled in Indian boarding schools (Indian Child Welfare Act, n.d.). Thus, there may be participants in this study whose parents or other relatives had attended such a boarding school. Learning about the impact of these schools on their family members may yield information that addresses Feir’s (2016) call for further research on the broader impact of Indian boarding schools.

Ecological Systems Theory in Culture Studies

The delineation of multiple levels of influence allows researchers to better identify how the ecological subsystems work independently and collectively to influence participants’ experiences and outlooks (Neal & Neal, 2013). “Understanding that all human behavior happens within systems helps us think about cross-cultural situations and individuals in a systematic way, examining the unique contexts of human life all the way from the broad contexts of life all the way to the individual microsystem” (Leong & Tang, 2016, p. 261). Additionally, EST is a useful framework for examining interactions between minority cultures and the dominant culture (Ben-David & Nel, 2013; Dalla & Kennedy, 2014; Leong & Tang, 2016; Neal & Neal, 2013).

In fact, there is a clear need for research that systematically examines how background experiences represented by these multiple levels influence the educational experiences of American Indian students (Huffman, 2001). Understanding the ways in which the sublevels of environment influence American Indian students may help to generate funds of knowledge to enhance the educational experiences of these students whose social and cultural practices have been traditionally undervalued in schools. Huffman laid the groundwork for this study by calling for further research on the ways in which background and environment influence students' school success. Thus, EST is a natural framework to implement in order to address this gap in the research. Examination of students' personal history and delineation of that history according to Bronfenbrenner's five levels of ecological systems may reveal factors that compel students toward successful completion of their programs.

Factors That Support American Indian Access and Subsequent Enrollment in Higher Education

The search for previous research about factors that support American Indian student access, subsequent enrollment, and persistence in higher education were evaluated in relation to the five levels of the theoretical framework. This section is organized by level so that the relationships between each level of environment of a student's development and subsequent educational outcomes are clearly delineated.

Microsystem-level factors. The microsystem is the closest level of environment to the individual self. Student motivation, development, and self-efficacy are identified as microsystem-level factors. Bronfenbrenner (2005) argued that microsystem level

relationships, such as mother-infant interaction, can have significant impact on the development of character traits and temperament in developing children. Therefore, the microsystem also includes family related factors. Family related factors have to do with emotional support, positive relationships, and living environment; and thus, constitute the “direct interactions that make up the microsystem” and “most directly impact the child’s development.” Thus, microsystem level relationships have the potential to shape a student’s perceptions of and attitudes towards education.

Student motivation and self-efficacy. In order for students to succeed, it follows that they must be motivated. Research has identified important relationships between student success and student motivation (see B1, Appendix B). In their review of research, Linnenbrink and Pintrich (2002) concluded that adaptive self-efficacy, adaptive attributions (understanding why events occur), intrinsic motivation, and adaptive goal orientations are critical motivators that lead to student success. Students must have identified some reason that makes completing their assignments, maintaining good grades, and pursuing college worthwhile goals. Furthermore, students’ beliefs about themselves play an important part in their motivation to succeed. This is why Linnenbrink and Pintrich classified self-efficacy as a component of motivation. Student’s belief in their own ability to succeed likely influences their attitude towards school in general, and plays a part in how motivated they are to succeed. McInerney, Roche, McInerney, and Marsh (1997) noted that self-esteem is significantly correlated to GPA and attendance for Diné students. Reyhner and Dodd (1995) reported that 21 of the 24 American Indian college students they interviewed considered themselves to be

academically successful, indicating that there may be a relationship between self-esteem and retention. Interestingly, in their study of 1,611 American Indian students from a range of tribes, Whitesell, Mitchell, and Spicer (2009) reported that self-esteem correlates with household income, demonstrating a bi-directional relationship between the microsystem and exosystem. Wood and Clay (1996) noted that for 352 American Indian high school students they surveyed self-esteem is significantly correlated with GPA.

Factors related to student attitudes demonstrate significant relationships to student achievement. Beck et al. (2014) observed a modest relationship between motivation and student achievement success in their examination of American Indian students attending a predominantly white college. Gloria and Robinson Kurpius (2001) and Thompson, Johnson-Jennings, and Nitzarim (2013) each observed that self-efficacy and self-esteem were both significant predictors of American Indian college student persistence intentions. House also determined that student attitude is an important factor in the school success of American Indian students attending college when he observed correlations between both self-efficacy and drive to achieve and student expectations of college completion for American Indian college students. S. Powers and Rossman (1983) reported that American Indian students enrolled in remedial college reading classes attributed their school achievements to effort more frequently than did Anglo students. S. Powers and Rossman emphasized “Although effort is modifiable, continued low achievement coupled with a greater attribution to lack of effort may result in lack of motivation and lowered expectancy of success” for American Indian students (p. 8). On the other hand, McInerney, Roche, McInerney, and Marsh (1997) did not observe a

significant correlation between task-effort and GPA among Diné students. Thus, findings regarding attributions of success among American Indian students have been inconsistent.

K. M. Powers (2006) found that motivation was significantly correlated with student success among American Indian students who were both lesser and highly affiliated with their cultural identity. When it comes to potential motivators, McInerney, McInerney, Ardington, and DeRachelwitz (1997) reported that some American Indian students may be motivated by a desire to “give back” to their community and to help others. Among the American Indian college students in a teacher education program that she interviewed, Barnhardt (1994) also noted a desire to help others was a motivating factor in their desire to become teachers. Similarly, 15 of the 22 students who grew up in tribal communities interviewed by Smith, Cech, Metz, Huntoon, and Moyer (2014) indicated that a desire to return home and improve their community was a motivating factor for them throughout college. McInerney, Roche, McInerney, and Marsh (1997) reported that a sense of purpose (e.g., a desire to someday have a good job) was a significant predictor of grades, though not school attendance, for Diné students. The desire to have a better life than their parents was also a driving factor for students interviewed by Barnhardt (1994). For the 18 female American Indian college graduates she surveyed, Andrade (2013) reported that the desire to get a higher-paying job was a motivating factor to persist in school. The desire to be a good role model to others was also an emergent theme. McInerney, Roche, McInerney, and Marsh (1997) also found that while the possibility of extrinsic rewards may have an impact on GPA, for some

Diné students, the desire for extrinsic rewards does not have a statistically significant impact on either grades or attendance. In further research, McInerney and McInerney (2000) observed that for Anglo and American Indian students, “both groups consistently emphasized the role of a supportive family in encouraging motivated learning” (p. 5), demonstrating a bi-directional relationship between family support and student motivation within the microsystem level. All in all, the desire to give back to others, to please their families, and to enjoy a better life are important motivators for American Indian students to persist and achieve in school.

Exposure to vocations that require a college education, as well as people who successfully completed college, are other considerations that fit at the microsystem level. A. P. Jackson, Smith, and Hill (2003) reported that American Indian students who had attended programs in school (such as Upward Bound) showed interest in attending college. Garcia (1999) also noted that several of the participants in her research credited similar programs, including Upward Bound, with helping them to foster an interest in pursuing college. Coburn and Nelson (1987) also found that 50% of the 123 American Indian high school graduates surveyed were involved in some sort of extracurricular activity, to which many of the graduates attributed their academic success. Coburn and Nelson identified this theme again when they observed that “essentially all” of the more than 300 American Indian high school graduates they surveyed were involved in an extracurricular activity (p. 2). Finally, Barnhardt (1994) pointed out that some of the American Indian college students she interviewed appreciated these extracurricular opportunities, such as the “Close-up” program, which allowed them to act as tutors and

mentors to younger students.

Giving students this type of responsibility is one way that schools can demonstrate high expectations and confidence in American Indian students, thereby providing some of the recognition necessary to build self-efficacy. In Coburn and Nelson's (1987) survey of American Indian high school graduates, they found that 68% of American Indian students most valued teachers that held high expectations of them. High expectations of family was also listed as an important motivator. On the other hand, students who were not given these opportunities lamented the fact that "teachers had very low expectations for the students and no one pushed us to do anything" (p. 152). This quote from one of Coburn and Nelson's participants demonstrates the need for high expectations and recognition for students by giving them the opportunity to participate in extracurricular programs. This is one way that schools may be able to foster motivation in American Indian students.

Family-related factors at the microsystem level. Family-related factors at the microsystem level have been shown to be important contributing factors to American Indian student access, enrollment, and persistence in higher education (see Table B2, Appendix B). Although findings have sometimes been inconsistent, factors related to emotional support seem to have a positive impact on American Indian students.

In their 1998 study of "at-risk" (defined as at-risk for not completing high school) American Indian high school students enrolled in a JobCorps program, Fore and Chaney (1998) discovered a significant connection between having a strong figure supporting their academic goals (such as a parent) and student retention. This phenomenon was also

noted by Guillory (2009) who reported that a desire to please family was an important factor for American Indian students in college persistence. Thompson et al. (2013) similarly found the desire to please family along with caregiver support to be important facilitators of American Indian college persistence. McInerney, Roche, McInerney, and Marsh (1997) observed that the desire for praise from the people around them (e.g., friends, family, teachers) was a significant predictor of attendance, though not GPA, among Diné students. Barnhardt (1994) also identified a lack of support and encouragement from teachers as a barrier faced the 50 American Indian college students she interviewed. Taken together, these findings indicate that recognition from the people in their microsystem is an important component of developing self-efficacy in American Indian students.

Along these lines, Gloria and Robinson Kurpius (2001) administered a survey to American Indian college students to determine which factors were correlated with their persistence intentions. They identified family support through survey items such as “I rely on my family for emotional support” (p. 93). They reported that students who felt supported by their families were significantly less likely to experience feelings of alienation and separation on their college campuses. Additionally, Gloria and Robinson Kurpius noted that family supportiveness of pursuing education was an important contributor to self-esteem, which they identify as being a key facilitator of American Indian student success. In the interviews they conducted with middle-school students at a predominantly American Indian and Latino populated middle school, Kitchen, Velasquez, and Meyers (2000) also found family support of education to be a motivator

for students to stay in school. For instance, one student reported “My parents would kill me if I didn’t go to school” (p. 14). In the survey they administered to 67 American Indian college students, Okagaki, Heilig, and Bingham (2009) found that younger American Indian students perceive their mothers to be strongly supportive of their educational goals, with a mean score of 5.17 on a scale of 1-6. This finding demonstrates that for these students enrolled in college, parental support was a key factor in getting them there. Farris (2013) and Barnhardt (1994) observed that American Indian college students relied on phone calls home for family support when they felt discouraged on campus, citing these calls as important factors to their persistence. Andrade (2013) also noted that a desire to make their families proud was a motivating factor in school persistence among the 18 American Indian women she surveyed. In their interviews with 24 American Indian college students, Dodd, Garcia, Meccage, and Nelson (1995) reported that 20 participants indicated that their families were responsible for their success in school. Finally, A. P. Jackson et al. (2003) similarly found that American Indian college students who had persisted through their programs of study attributed their success to supportive families.¹

Not all research has revealed correlations between student success and family supportiveness. In their study of American Indian and non-American Indian college students, Beck et al. (2014) concluded that they were unable to demonstrate a significant relationship between these variables.

Relationships within the school setting. Further research investigates other

¹ In this qualitative study, the authors did not provide the numbers of students who made this response, but did indicate that they found the response to constitute a significant finding.

microsystem-level relationships that take place within the school setting (see Table B2, Appendix B). One such microsystem-level relationship is that between students and their teachers. Gallop and Bastien (2016) interviewed 14 self-described aboriginal college students and found that both peer and teacher support was an important factor in student success or failure. “Specifically, finding an instructor at the institution who believed in them was a major reason many of these students remained in school” (p. 216). Coburn and Nelson (1989) surveyed more than 300 American Indian high school graduates and found that the qualities they most valued in their teachers were complimenting students when they did well (80%), showing respect (77%), demonstrating caring, (75%), and listening (72%). Coburn and Nelson’s findings demonstrate that students rely on teachers for more than academics, they rely on them as a source of emotional support.

Burack et al. (2013) conducted a survey of 81 Naskapy students in grades 6-11 and found that positive peer relationships was an important predictor of student GPA, demonstrating the benefits of “peer power” for these students. Lee (2013) studied the impact of a peer mentoring program on five Native American college students and found that in addition to providing valuable emotional support, the mentors were key in helping mentees learn about the various university support options available to them. Lee’s study demonstrates the importance of peer relationships in helping students to adjust to campus life. In Farris’ (2013) interviews with eight American Indian college graduates, difficulty with peer and faculty relationships arose as a barrier to student success (e.g., not understanding why American Indian students are given special support services, making off-hand racial remarks), indicating that negative interactions with peers and faculty can

be an obstacle for some students.

While strong microsystem-level relationships can be an important facilitator of student success, lack of support at this level can also be a significant barrier. Kitchen et al. (2000) noted that many students attributed their decision to drop out to a lack of family support (e.g., abuse, divorce). The lack of family support was made subsequently worse by a lack of understanding on the part of their teachers. Thus, it is important to keep in mind the role teachers play in a student's microsystem. Among the 22 American Indian students they interviewed who had dropped out of college, Minner et al. (1995) found that 16 made statements indicating that a lack of family support, or a sense of letting down their family, had contributed to their decision to drop out. Five of the students made comments about unsupportive faculty contributing to their decision to drop out. For example, one student recalls: "One of my professors talked to me about a paper in front of the whole class. The paper was not very good, I guess. But, he shouldn't have embarrassed me that way" (p. 55).

Mesosystem-level factors. The mesosystem level is one level removed from the participant and includes extended family related factors. Rather than dealing with emotional considerations, mesosystem-level family factors deal with interactions between home and school. As per our definition, the mesosystem is characterized by linkages between microsystem environments (e.g., home and school). For instance, parental involvement or supportiveness of school constitutes such a linkage.

Research has shown a number of family-related factors at the mesosystem level (see Table B3, Appendix B). Notably, the educational background of parents has been

shown to influence the academic achievement of their children. S. Choy (2001) studied this phenomenon by comparing the results of “three nationally represented longitudinal studies conducted by [the National Center for Education Statistics]” (p. 4). S. Choy identified one possible reason for this phenomenon “High school students whose parents did not go to college tend to report lower educational expectations than their peers as early as eighth grade” (p. 14). S. Choy also noted that children of parents who did not attend college are less likely to take the advanced mathematics coursework that is correlated with college enrollment and were less likely to be academically prepared to enroll in college. This is further supported by Willetto’s (1999) finding that parental educational aspirations are significantly correlated to student college aspirations, and Bardhoshi, Duncan, and Schweinle’s (2016) observation that parents who had attended college were more likely to be aware of college preparation resources for their students.

On the other hand, Barnhardt (1994) interviewed 50 American Indian college students about their educational experiences and found that

Although some of the parents of the...students did attend boarding schools for a short while, it was the exception rather than the rule for a Native student in this group to have parents who had graduated from high school. (p. 147)

Nevertheless, the participants indicated that their parents were supportive and encouraging of their educational goals. In Jeanotte’s (1982) examination of the differences between 49 American Indian college graduates and 71 American Indian dropouts, he found that there was no significant differences between the two groups when it came to the level of education of their parents. These findings indicate that while parents’ level of education may have some influence on student success (e.g., educational

aspirations), parents' level of education alone is not a predictor of American Indian student access, enrollment, and participation in higher education.

Based on the results of his annotated bibliography of 49 studies on the subject, Henderson (1987) concluded that the support parents demonstrate for their student's school success is thought to influence academic achievement. Furthermore, Falk and Aitken (1984) noted that 47% of American Indian students who persisted in college cited family support as a factor that promoted their success. Overall, it stands to reason that parents who were motivated to pursue an education would similarly show support and encouragement for their children's education (S. Choy, 2001).

Still, some research has been unable to demonstrate this link. Brown and Robinson Kurpius (1997) were unable to find a significant correlation between family encouragement to attend college and school persistence. Huffman et al. (1986) similarly did not observe a significant correlation between parent levels of education and student GPA. Although K. M. Powers (2006) did not find direct correlations between family involvement and educational outcomes (which she defines as achievement, presence and participation, and school completion) she did observe a significant correlation between family support and motivation. Motivation is shown to influence school success in the previous section on microsystem-level factors. Furthermore, K. M. Powers noted another significant positive correlation between parent-school interaction and educational outcomes, indicating that the mesosystem may be a particularly important level of environment when it comes to fostering American Indian school success.

Exosystem level-factor. The exosystem is in the center of the nested levels of

environment, and in this review of the research includes a single factor. The factor identified as exosystem level is socioeconomic status (see Table B4, Appendix B). Although students are not directly involved in their parents' workplace or career, one way in which they have been shown to be directly impacted by their parents' work is family income. Thus, socioeconomic status meets our definition of a linkage "taking place between two or more settings, one of which does not contain the participant, but in which events occur that indirectly influence processes within the immediate setting of the person."

Overall, the American Indian population lives with a much higher poverty rate (28.3%) than the general population (15.5%) and earns a significantly lower household income than the general population (\$37,227 compared with \$53,657; U.S. Census Bureau, 2015). Among the general population, Cabrera and La Nasa (2001) observed that high-socioeconomic (SES) students were three times more likely to apply to college than their low-SES counterparts based on data collected by the 1988 National Educational Longitudinal study of 2,668,022 eighth-grade students. Thus, it is evident that SES in itself may be a contributor to postsecondary access. Given the higher poverty rate in the American Indian population, SES may be a significant barrier for this group to overcome.

Jackson et al. (2006) found that low-income students who were given Internet access at home consistently scored better on standardized assessments compared to their peers who had limited access to the Internet. This is not surprising; the Internet provides students with access to study guides, unlimited resources for research, the ability to collaborate with peers, and so forth. Yet, as little as 10% of Indian Country (e.g.,

reservations) has access to the Internet (Running Strong for American Indian Youth, n.d.), potentially putting these students at a disadvantage when compared with their peers who enjoy Internet connectivity. The Internet is just one of many resources that students who live in poverty are without. Another resource that may be harder for low-income students to access is the high-quality counseling they need in order to prepare for college. Fann (2004) noted that students who attend low-SES schools are less likely to receive quality college counseling.

Research has shown that a myriad of social issues (largely stemming from poverty) may make school success difficult for many American Indian students (Faircloth & Tippeconnic, 2010; Vavrus, 2008). Willetto (1999) identified direct correlations between SES and student GPA. Falk and Aitken (1984) identified a lack of adequate funding as the most prominent reason American Indian students in their research dropped out of college. This is consistent with Flynn, Duncan, and Jorgensen's (2012) finding that finances were a cause for considerable stress for 19 of the 21 American Indian college students they interviewed. Garcia (1999) also reported that poverty was identified by the American Indian college graduates she interviewed as a significant barrier to their school success, noting that a lack of funds contributed to difficulty in school from childhood all the way through attaining their college degrees. Archibald and Urion (1995) similarly found that finances were a significant barrier among the Canadian First Nations graduates they surveyed. Garcia (1999), Lee (2013), Reyner and Dodd (1995), and Taylor (2001) also reported that finances were a significant barrier to school persistence for the college students they interviewed. Minner et al. (1995) interviewed 22 American Indian college

dropouts and found that finances were a contributing factor to their decision to drop out for 10 of the students.

A correlation may exist between socioeconomic status and negative school experiences. Milne (2016) observed that among the American Indian parents of students she interviewed, many of those from a low-SES background reported having negative interactions with teachers when they themselves were students. As a result, they experienced anxiety about communicating with their students' teachers. Milne's finding represents one way in which there is a bidirectional relationship between the exosystem and the chronosystem, which has to do with past events.

It should be noted that in response to these considerations, the federal government documented the present state of American Indian schools and offered directions for future governmental programs and support for the American Indian community (Executive Office of the President, 2014). These recommendations include additional support for American Indian students living in poverty.

Interestingly, Guillory (2009) observed that while both college institutions and American Indian students viewed finances as an important consideration of American Indian student success, the 30 American Indian students in he interviewed did not view financial difficulty as being as important to their success as did the college administrators. Rather, these students viewed family support and the desire to give back as the most crucial factors to maintaining their motivation. The college students interviewed by Barnhardt (1994) also did not identify finances as major barrier to overcome, with the exception of those students who were also parents. Students with

children to take care of found finances to be a significant obstacle to their academic persistence. Jeanotte (1982) examined the differences between 49 American Indian college graduates and 71 American Indian dropouts at the University of North Dakota and found that the level of family income was not significantly different. However, Jeanotte did note that students who considered themselves to be poor financial aid managers were more likely to drop out than graduate. Taken together, these findings indicate that socioeconomic status alone may not be the deciding factor for American Indian student success.

On the other hand, some research on SES and its impact on American Indian students has revealed contrasting results. Neither Huffman et al. (1986) nor K. M. Powers (2006) discerned significant relationships between SES and student achievement for American Indian students at the college or K-12 levels. While K. M. Powers did not observe a correlation in her macro-analysis of educational factors including achievement, presence and participation, and school completion, she did note a possible positive correlation between SES and underachievement among American Indian students. Still, K. M. Powers qualifies these results by noting that “underachievement” had a poor internal reliability measurement, “which suggests insufficiency in the measurement of [this construct]” (p. 45).

Although the exosystem level included only the factor of socioeconomic status, the research on this topic demonstrates its importance to American Indian student access, enrollment, and persistence in postsecondary education. It is important to note that this level is particularly influential. Its effects can be felt at the mesosystem level (for

instance, a family's socioeconomic status may impact how much time parents have to involve themselves in their students' schooling), and at the microsystem level (a family's socioeconomic status will directly influence a child's immediate surroundings). Thus, the exosystem has the potential to influence not only student achievement, but also student attitudes about school.

Macrosystem-level factors. The macrosystem level is the second outermost ring and represents “the over-arching pattern of the linkages and processes between micro, meso, and exosystems with particular attention to cultural values, customs, and laws.” By this definition, a good deal of research exists that examines the ways in which culture influences American Indian student outcomes (see Table B5, Appendix B). Torres (2016) emphasized that researchers must not ignore relationships at the macrosystem level, “... that some scholars argue are the ultimate cause of the discontinuity minorities experience” (p. 6). Rather than a feeling of cultural connectedness or inferiority due to disconnects (such as between home and school), Torres reported that it is factors at the macrosystem level (such as whether the school was controlled by the Bureau of Indian Education, or the number of teachers who quit during a school year) that resulted in inequality and fewer opportunities for American Indian students. Thus, the importance of macrosystem level relationships should not be underestimated.

Culturally responsive teaching. Culture plays a significant role when it comes to determining identity. Oftentimes, when it comes to considering the role of diversity and culture, it is limited to the “food, fun, festivals, and foolishness” mentality, which limits understandings of cultural influences to superficialities (Writer, 2008, p. 1). Wexler

(2014) argued that culture goes much deeper than “food, fun, and foolishness,” defining what it means to be a man, a woman, a child, or a student, within a community, and how people behave in each of the roles they inhabit. “This sense-making situates people as specific kinds of actors with access to different kinds of resources across time and within various contexts” (p. 75).

Thus, culture plays a part in their learning process. For students from ethnic or racial minorities, this may result in different perspectives and resources than those of students from the dominant culture (Castagno & Brayboy, 2008; Erickson, 1987; Gay, 2002). Culturally responsive teaching (CRT) is an instructional methodology rooted in this theory. One of CRT’s foundational principles is that getting students interested in a topic by teaching curriculum that is relevant to themselves and their community, and teaching in a way that is reflective of diverse knowledge, values, and norms, should increase student motivation to learn (Estrin & Nelson-Barber, 1997; Gay, 2002; Nelson-Barber & Estrin, 1995; Oakes & Maday, 2009; Reyhner & Jacobs, 2002). Another principle is that a more diverse teaching force will help our nation’s increasingly diverse student body to succeed (Estrin & Nelson-Barber, 1995; Garcia, 1999). Within this paradigm, making school more relevant and interesting will motivate students to attend and achieve (Vavrus, 2008).

The positive effects of CRT were observed when the Alaska Rural Systematic Initiative (AKRSI), a culturally responsive curriculum, which was implemented in schools with high enrollments of Alaska Native students (Emekauwa, 2004). Students enrolled in this program showed continuous growth in mathematics and outperformed

their non-AKRSI counterparts in regard to first-time rural college student enrollment. Oakes and Maday (2009) provided numerous examples of school districts that have implemented CRT with American Indian students and seen positive results. For instance, the Zuni Public School District, which began developing relationships with community members to enrich their art and math programs, and was rewarded with a 94.8% improvement in math scores. Despite these benefits, it is estimated that CRT is not widely used among American Indian or non- American Indian student populations (López, Heilig, & Schram, 2013).

Indeed, in North Carolina, 21 parents and grandparents of American Indian students indicated in interviews to the State Advisory Council on Indian Education they had concerns that their children were receiving limited or inaccurate information about their heritage from the schools their children attended (State Advisory Council on Indian Education, 2004). McInerney, McInerney, Ardington, and DeRachelwitz (1997) also reported that the Diné school stakeholders he interviewed valued teaching accurate cultural, language, and historical information. One possible reason for this disconnect within the American Indian community is that tribal colleges are having difficulty recruiting American Indian participants into teacher preparation programs (Lamb, 2016; O'Dell, 2010), a barrier to establishing a more diverse teaching force.

Nevertheless, having teachers that understand and value their culture is important to American Indian students. McInerney, McInerney, Ardington, and DeRachelwitz (1997) noted that some of the 29 students and stakeholders in his sample indicated that having a Diné teacher was important to them. "... I personally feel more comfortable

with a Navajo teacher than a teacher of a different background because they understand what it's like to grow up on the reservation and because they speak our language ... in Navajo there are some words that you can't translate into any other language" (p. 9). Although he acknowledged that there were "less references" to teachers in the interviews he conducted, this example along with the findings of the State Advisory Council on Indian Education (2004) demonstrate that American Indian people value CRT. Barnhardt (1994) also reported responses from the American Indian college students she interviewed indicating that they valued teachers who understood their culture. "Some of the teachers have been there a long time now, and they are committed to the community. They all have Eskimo names and they eat Native food and they go hunting with everyone else" (p. 153). In a focus group conducted with Canadian First Nations University of British Columbia graduates who responded to their survey, Archibald and Urion (1995) noticed a similar appreciation for having Native faculty members on campus: "...having the First Nations teachers gave me the freedom...to explore and discuss the different issues and different levels...that was...a really positive experience for me" (p. 75). Clearly, Native students value having instructors who share a similar cultural background to themselves, and their presence has a positive impact on students.

Furthermore, Coburn and Nelson (1987) noted that in their survey of 123 American Indian high school graduates, 19% of the students indicated that the most important advice they would give to a teacher is "Teachers should respect Indian students as a person and/or as an Indian, without prejudice or bias" (p. 10). Thus, American Indian students appreciate the opportunity to work with teachers who understand and respect

their Native culture and identity. Having American Indian teachers establishes a level of understanding and trust between student and teacher that may be more difficult to establish with a non- American Indian teacher.

Research has shown that American Indian students who were provided with a bilingual classroom (heritage language and English) outperformed their English-only counterparts on both reading and math standardized measures (Bacon, Kidd, & Seaberg, 1982; Rosier & Holm, 1980). Hirst (1987) observed that American Indian students on the Havasupai reservation with teachers who spoke the native language outperformed their peers with English-only teachers on standardized tests. Kanu (2006) observed that American Indian high school students who were placed in an “integrated” social studies classroom, which stressed integration of American Indian curriculum, outperformed their peers in a regular social studies classroom on exams. They also noted that frequent attendees in the integration group looked forward to what they would learn that day, whilst frequent attendees in the regular group indicated that their attendance was compulsory rather than voluntary. However, they did note that the integrated program did not have a noticeable impact on student retention or on attendance. Nevertheless, these findings lend support to the theory that a culturally responsive classroom environment may benefit American Indian students. It should also be noted that a recommendation of the Executive Office of the President’s 2014 Native Youth Report was to increase the amount of culturally responsive education offered in tribal schools. Unfortunately, few specific suggestions were put forth as to how this could be accomplished.

Cultural factors on campus. Among American Indian cultures, tribal norms are

diverse and distinct. However, American Indian students are often treated as a homogenous group despite these differences (Fixico, 2013; Writer, 2008). Research has suggested that among some tribes, structures of family and community may contradict the structures of school (Fixico, 2013). For instance, it is common knowledge that to succeed in many mainstream schools, students are oftentimes expected to be assertive by engaging in behaviors such as raising their hands, debating with other students (and sometimes even teachers) and telling others what to do (Fixico, 2013; Taylor, 2001). In many American Indian cultures, these actions would be considered disrespectful (Fixico, 2013; Garrett, 1995). In Taylor's (2001) study of challenges faced by American Indian college students, this disparate view of appropriate classroom behavior was identified as a problem students needed to overcome. Ali, McInerney, Craven, Yeung, and King (2014) found that the attitudes of white secondary students are significantly more competitive than the attitudes of American Indian secondary students. These findings are bolstered by McInerney, McInerney, Ardington, & DeRachelwitz's (1997) observation that the Diné students they interviewed did not particularly value "winning" or "[out-doing]" others (p. 7). Similarly, McInerney, Roche, McInerney, and Marsh (1997) found that the desire for power did not correlate with GPA or attendance on the self-assessment administered to Diné students. For instance, responses to statements such as "I work hard because I want to feel important in front of my school friends" (p. 215) had no relationship to GPA or attendance. The desire for competition similarly did not correlate with GPA or attendance in their research. Taken together, these findings suggest that efforts to bridge cultural differences may facilitate student success for American Indian students attending

mainstream schools.

The importance of attending to individual needs may be one reason that A. H. Mason et al. (2017) identified differentiated advising (with attention to cultural background) and community-building support services as crucial to the success of adult learners' transition to postsecondary education. Johnson, Flynn, and Monroe (2016) also reported that college students designated "at-risk" achieved a significantly higher GPA when they took part in a program that stressed intensive counseling and academic advising, than their peers who did not take part in the program. Thus, ongoing counseling and advising on their college campus may be one facilitator of American Indian student success.

As with SES and family factors, prior research on cultural factors has come to mixed conclusions. However, there is a strong body of research that indicates that spirituality is an important component of American Indian school success. Huffman et al. (1986) found a significant relationship between traditional Native values and behaviors (e.g., spiritual ceremonies and involvement) and educational achievement in their study of 28 Lakotah undergraduate students attending a mainstream college. A. P. Jackson et al. (2003) also noted that the American Indian college students they interviewed identified spiritual resources an important facilitator of their school persistence. Garcia (1999) identified spirituality as an important factor that led to the school success of the 12 American Indian college students. While it was not a recurring theme among the 24 American Indian students they interviewed, Reyner and Dodd (1995) reported that some of their participants also credited their religious faith for their school success. This is

reminiscent of Huffman et al.'s (1986) finding that Native American traditionalism (e.g., language, ceremonies) correlated with GPA among "Sioux" students. Shield (2009) also found that among female American Indian college students, the ability to draw from their own intrinsic cultural practices and university sanctioned support services as needed was an important predictor of college success.

Not all research has identified correlations between student cultural identity and their school success. Willetto (1999) did not identify any significant relationships between traditionalism, cultural conventions, or heritage and student achievement among the population of Diné high school students attending reservation schools. Fore and Chaney (1998), Patton and Eddington (1973), and Willetto (1999) examined the relationship between cultural factors and persistence in college. None of the factors (tribal affiliation, traditionalism, cultural conventions, speaking heritage language, and coping with racism) had a statistically significant relationship with student retention. Burack et al. (2013) studied the factors related to GPA among Naskapi students. They found that neither comfort in white culture nor Aboriginal culture was a significant predictor of student grades. Similarly, Wood and Clay (1996) studied the factors that led to good grades among 352 American Indian high school students and found that attachment to American Indian culture was not a significant predictor of GPA.

Other reasons for American Indian persistence in college may have to do with the campus climate. Like many college freshmen, American Indian students report difficulty adjusting to campus life. Unlike the average college freshman, American Indian students, especially those coming from close-knit tribal communities, have additional cultural

challenges to circumnavigate. Flynn et al. (2012) found that 15 of the 21 American Indian college students they interviewed regarding postsecondary persistence regarded a lack of resources for American Indian students on college campuses as a barrier to their success, noting factors such as a lack of experience with or resources for American Indian students (e.g., sweat lodges, powwows), and resulting feelings of isolation. Furthermore, 12 of the 21 participants related feelings of difficulty adjusting to campus life after having grown up on a reservation, citing dissimilar values and struggles assimilating to the dominant culture as barriers to their college persistence. Flynn et al. also noted that 11 of their 21 participants reported experiencing racism at their university, engendering feelings of disempowerment, marginalization, being silenced by others, and being verbally hurt by others” (p. 444). This finding was echoed by Garcia (1999), A. P. Jackson et al. (2003), and Taylor (2001), who also noted that experiencing racism was a significant barrier addressed by the American Indian college students. Dodd et al. (1995) noted that 23 of the 24 American Indian college students they interviewed indicated that they had experienced racism on their campus. Finally, Reyner and Dodd (1999) reported that 11 of the 21 American Indian college students they interviewed indicated that experiencing prejudice on their college campus was an obstacle that they frequently encountered, while 25 of the 26 participants reported that prejudice exists on college campuses. Carlyle, Thompson, Hare, Miller, and Purvis (2011) surveyed 87 Choctaw college students to learn more about the transition to postsecondary education and found that cultural clash was a significant barrier experienced by many of their participants. They conducted in-depth interviews with six participants and noted this clash was felt

more strongly by the three participants who were not involved in a Native American student organization. This demonstrates the importance of cultural programs on campus to American Indian student persistence. They noted that 88% of their participants felt comfortable interacting with other races; however, only 40% felt comfortable expressing their own cultural background on campus. Carlyle et al. concluded that these students may have been seeking acceptance through assimilation. Interestingly, Fore and Chaney (1998) directly addressed racism as a variable in their research; however, it was not found to relate to student retention.

Guillory (2009) and Gloria and Robinson Kurpius (2001) each observed that American Indian students indicated that campus cultural support services such as Native American Student Centers were critical to their college persistence. Gallop and Bastien (2016) reported that a common theme among the 14 self-described aboriginal students they interviewed was the importance they placed on aboriginal-centered education, advising, and counseling programs. Students reported actually choosing an institution based on the presence of these programs. K. M. Powers (2006) observed a strong relationship between American Indian cultural programs and student presence and participation in school (p. 40). Taylor (2001) found that some of the American Indian college students she interviewed indicated seeking out coursework and academic programs that had to do with American Indian subjects, hoping to find knowledge that would be relevant to themselves and their community. Some of the participants in Reyner and Dodd's (1995) sample of American Indian college students also credited such cultural supports as important to their success. These cultural supports are especially

important to helping American Indian students feel less overwhelmed by “culture shock,” on their college campus. Barnhardt (1994) also reported that many of the college students she interviewed felt overwhelmed by the cultural differences between their homes and their campus and relied on phone calls home for support.

Like many new college students, one factor that helped to alleviate some of the culture shock was befriending roommates and dorm mates (Barnhardt, 1994). Those students who were able to live in single-housing developed strong relationships and a sense of community with their dorm mates. In order to help college students to feel as if they are part of a campus community, many universities implement cohorts which allow students to take multiple classes with the same group of peers. This feeling of community may be one of the reasons why A. H. Mason et al. (2017) identified cohorts, or small-group learning, as one factor that helps adult learners to successfully transition to college. Huffman (2001) found that feelings of estrangement, beginning with feeling that there is “little with which to relate” on their college campus (Huffman, 2001, p. 7), are often a predictor of student dropout. Thus, a lack of American Indian student resources, familiar culture, and hostility from the dominant culture are factors that have been shown to make college persistence difficult for American Indian students. Universities that provide these supports have enjoyed increased interest, presence, and participation from their American Indian students.

Conversely, in Jeanotte’s (1982) survey administered to 49 American Indian college graduates and 71 American Indian dropouts at the University of North Dakota, he observed no differences between the two groups when it came to dropping out or

persisting based on cultural considerations. The cultural factors he examined included cultural conflicts and difference between home and school life. It should be noted that the University of North Dakota has a robust American Indian Student Services program that offers events and opportunities (e.g., powwows, tutors, scholarships) along with cultural considerations (e.g., allowing American Indian students to burn sweetgrass, sage, and cedar in university housing). Thus, it is possible that students at this institution did not perceive cultural conflicts as sharply as students at institutions without such a program might. However, Jeanotte did note that students who were more culturally involved did tend to graduate more often than drop out, indicating that for some students, tradition may serve as a source of strength to draw from in order to strengthen persistence.

Interestingly, Taylor (2001) observed that for the most part, the college students she interviewed were either unaware of or did not mention support systems their university had put in place. For instance, although the university had donated \$70,000 to a powwow budget and had set up numerous minority student initiatives, the students still indicated that they felt unsupported. Further questioning revealed that the students felt unsupported because “we never see them,” or “they never come to our meetings” (p. 11). Thus, it is possible that in order to feel supported on a college campus, American Indian students may find more value in face-to-face interactions with administrators than in funding. In this way, Taylor’s finding may all in line with Johnson et al.’s (2016) research, which studied a successful intensive counseling program that necessitated a good deal of “face time” with counselors and advisors. Therefore, personal interactions

with university faculty and staff may be one key component to feelings of university support among American Indian students.

On the other hand, Huffman (2001) observed that the transculturated American Indian students in his sample were able to “relate at both cultural levels as demanded by the situation, were more successful in college, and did not experience the disengagement and disillusionment felt by students who identified as culturally estranged (p. 15). D. D. Jackson and Chapleski (2000) similarly identified bicultural identity (the ability to shift between two cultures’ norms) as one of the factors of resilience that allowed American Indian elders to survive Indian boarding school and to preserve their culture, further demonstrating that the ability to navigate both traditional Native cultures along with the dominant culture may be a facilitator of American Indian student success. In their survey of 67 American Indian college students, Okagaki et al. (2009) noted that on a scale of 1-6, bicultural efficacy received a mean score of 4.97, indicating that the average American Indian college student in this study felt comfortable navigating both mainstream and Native cultures. Finally, Garcia (1999) identified a “bicultural identity,” similarly defined as the ability to walk between the dominant culture and traditional American Indian culture, as one of the facilitators of school success shared by the American Indian college graduates she interviewed. Therefore, transculturated students who are able to navigate the dominant culture without assimilating or losing their own cultural values may be able to better circumnavigate the cultural barriers reported by American Indian students.

Chronosystem-level factors. The outermost level of environment, furthest from the individual, is the chronosystem. The chronosystem represents the environment a

participant is situated in with particular attention to changes over time or historical events (Bronfenbrenner, 2005; Johnson, 2008). This review of the literature yielded three results regarding the influence of chronosystem-level factors on student access, enrollment, and participation in higher education. The studies that were located had to do with the influence of boarding school systems on parents, how these experiences impacted their attitudes towards education, and subsequent relationships with their children's schooling (see Table B6, Appendix B).

As evidenced in the previous section, the original desired outcome for American Indian students in the U.S. was assimilation. In a 2014 report generated for the Secretaries of the Departments of the Interior and Education, the Bureau of Indian Education acknowledged that at their inception in the 19th century, "The Federal Government created the boarding schools as part of a larger assimilation policy that sought to eradicate Native cultures and languages through Western education" (p. 1). After ending the "devastating" policy of assimilation, the Bureau indicated their focus shifted to fulfilling their treaty obligations by educating American Indian students. Today, the Bureau of Indian Education oversees 130 tribally operated schools (Bureau of Indian Education Schools, 2017). The 2014 report proclaimed their goal for these schools: "This administration is determined to address this stain on our Nation's history by turning the [Bureau of Indian Education] into an organization dedicated to supporting each tribe's capacity to educate future generations of students who are prepared for college and career, and know and value their heritage" (pp. 1-2). Additionally, many non-American Indian teachers, administrators, and researchers recognize the value of

fostering a culturally inclusive environment for all students, further demonstrating a shift away from the assimilationist mentality (Gay, 2002; Lopez, Schram, & Heilig, 2013; Vavrus, 2008).

Taken together, these findings suggest that the historical impact of Indian boarding schools has helped to slowly shape reform when it comes to American Indian Students. The impact of past policy on present policies and attitudes demonstrates one significant way in which the chronosystem has influenced the educational experience of many American Indian students today. However, not all schools are created equally, and many modern American Indian students come from communities impacted by harmful boarding school experiences (Fixico 2013; D. D. Jackson & Chapleski, 2000; Prucha, 1979). These historical events influenced the lives of grandparents and parents and continue to impact the lives of American Indians today.

Parent educational experiences influence the educational experiences of their children. Milne (2016) interviewed 26 educators and 24 Indigenous parents, and found that oftentimes, parents who had undergone poor or traumatic educational experiences themselves felt uncomfortable being involved in their children's school lives. In the words of one parent, "I have the worst fear of teachers, to be honest with you" (p. 276). This sentiment was echoed and elaborated on by a teacher, "some of the [Indigenous] parents won't even come to the school door... There are generational effects because of the things that happened to them in school" (p. 277).

Bisbee (2013) also noted that the lingering impact of boarding school experiences was a recurring theme among the 10 Nez Perce college graduates she interviewed

regarding the factors that led to their school persistence. Participants speculated the traumatic experiences had influenced their parents' attitudes towards education, and subsequently, their own. This phenomenon was also reported by Wexler (2014), who interviewed 11 Inupiaq youth, seven adults, and seven elders. The elder participants in her research reported traumatic experiences in boarding school that the adult children believe impacted their childhood and educational experiences in turn. However, "Instead of being resentful, adults suggested working hard to gain back what was lost" (p. 82). Perhaps as a result of this attitude, the youth in this study did not link problems they faced with historical oppression and seemed to value education.

Parents' personal history with education impacts the ways in which they relate to their students' education, demonstrating a bidirectional relationship between the chronosystem and the mesosystem. Furthermore, this is one way in which the past era of boarding schools has led to a direct impact on American Indian students today, demonstrating the important role that the chronosystem plays in student development.

Summary of Literature Review

Although the results of this literature review did not yield any qualitative studies that relied on semi-structured interviews to situate the educational and life experiences of American Indian participants within EST, it is evident that prior research has indicated the impact of the five levels of environment on student accomplishment. While microsystem, mesosystem, exosystem, and macrosystem-level factors yielded a high number of search results, a gap in the literature was revealed for the chronosystem level.

More research is needed regarding connections between the school experiences of modern students to the historical trauma suffered by their ancestors. Importantly, there is clearly a need for research that specifically investigates the impact of the five levels of environment in regard to access, enrollment, and persistence in postsecondary education for American Indian students.

CHAPTER III

METHODS

This study relied on qualitative research methodologies to investigate how American Indian students currently enrolled in college describe the factors that supported their pursuit of higher education. Specifically, this study explored the following research questions.

1. What factors do Diné students identify as essential to their access, enrollment, and persistence in postsecondary education?
2. How do these factors align with ecological systems levels (Bronfenbrenner 1977, 1979, 1994, 2005)?

The research design, instrumentation, and strategies outlined in this section were formed to facilitate a detailed understanding of the factors and levels of environment that contributed to the post-secondary school access, enrollment, and persistence of the Diné students in this study. An important goal of this study is to understand and report on their perceptions as accurately as possible.

Design

Multiple Case Study Research

Case study research seeks to identify and understand the multiple dynamics present within a single setting or context (Eisenhardt, 1989). Multiple case study expands upon this premise by allowing researchers to draw conclusions from studying multiple cases simultaneously (Chmiliar, 2010). Among any student demographic, performance in and attitudes towards school are highly contextualized and are defined by many

mediating factors. As Cliff and Nesbitt (2005) noted, real life can be messy and difficult to quantify. However, case study inquiry “copes with the technically distinctive situations” in studies such as this one (Yin, 2014, p. 17). It is through developing a good understanding of the experiences of a few participants that future work can become more informative (Stake, 1995). Multiple case study research allows for the examination of themes within and between cases, thus leading to stronger conclusions than examination of a single case (Gustaffson, 2017). One advantage of multiple case study research is that it allows for greater transferability than through examination of only a single case. Although the interview transcriptions were treated as a single case initially, once the coding process begins, cross-case comparisons were developed (Chmiliar, 2010).

Stake (1995) noted the purpose of case study research is to begin to understand a phenomenon through examination of a single case or cases, despite the fact that the participants may not be representative of the larger population. Zainal (2007) similarly pointed out the strength of multiple case study research is not due to sampling, but rather through replication of themes across multiple participants. Thus, the purpose of using multiple-case methodology is to observe a theme across multiple participants, rather than in observing the theme through random sampling.

This research seeks to examine the experiences of a homogenous group of participants in order to identify and analyze the multiple facilitators that helped each participant to achieve postsecondary access, enrollment, and participation. The results of this analysis will be used to draw broader conclusions about how these facilitators could offer potential benefits to other American Indian students, their families, or to educators

interested in postsecondary accomplishment. Given its strengths in identifying themes across a group of homogenous participants, multiple case study research is an appropriate methodology for this study.

The Presentational Dimension

One of the advantages of qualitative research is that it is able to address complex questions about human behavior. As Guba and Lincoln (1994) observed, “Human behavior, unlike that of physical objects, cannot be understood without reference to the meanings and purposes attached by human actors to their activities. Qualitative data, it is asserted, can provide rich insight into human behavior” (p. 106). One of the ways qualitative research can provide insight is through the opportunity it offers to describe a phenomenon comprehensively.

Herreid (2005) identified the presentational dimension as an important element in developing a case study. The presentational dimension refers to the level of detail which is used to describe components of the research including the setting, the participants, and their responses. The presentational dimension of this study is particularly important because a thorough understanding of the participants, their backgrounds, and their experiences is necessary in order to situate the interview data within the levels of environment. In any study, researchers must decide how much information they wish to include in the case (Leedy & Ormord, 2016). As this study seeks to represent participants’ experiences as faithfully as possible from their own point of view, I utilized “thick, rich, descriptions” that are a hallmark of qualitative research (Creswell & Miller, 2000; Firestone, 1987). With this in mind, the thick, rich, description is further warranted

given the nature of this qualitative study, which supposes that “reality is socially constructed through individual or collective definitions of a situation” (Firestone, 1987). Thus, this attention to description helps to demonstrate the nature of reality through the lens of the participants.

Role of the Research Team

One distinguishing feature of qualitative research is that the researcher acts as an instrument of data analysis (Creswell, 1998; Lincoln & Guba, 1985). Thus, subjectivity is an important consideration when it comes to evaluating the trustworthiness of the research. The purpose of this section is to disclose information about my own positionality and perspectives to aid readers in their interpretation of the results.

While Lakotah heritage is part of my background, this research is being conducted from an etic, or outsider, perspective (Creswell, 1998; Morris, Leung, Ames, & Lickel, 1999). American Indian culture was not a significant part of my family life or my K-12 educational experience. However, as an undergraduate student, I completed an internship at a charter school for urban American Indian youth; at that time, I was made aware of the unique challenges facing this student population. Furthermore, I studied American Indian literature as a part of my degree program and enjoy being active in my local American Indian community. Despite these connections, I am not an expert or an insider to Diné culture, norms, or traditions.

However, Diné culture is not entirely divergent from the dominant American culture. Many of the experiences that American Indian students reported in the studies analyzed in the literature review section are similar to those of students in the American

dominant culture. Thus, I strived to utilize Berry's (1969) derived etic concept. "A derived etic concept includes the essential characteristics of the concept common to the two cultures as well as an appreciation or sensitivity to the characteristics that are unique to specific groups" (Jones, Lee, Phillips, Zhang, & Jaceldo, 2001, pp. 300-301). In this research, I attempt to utilize the derived etic concept by remaining sensitive to the differences between Diné culture and the dominant culture, while also being mindful of the ways the results of the analysis may apply to other groups. As this research will not necessitate writing from the perspective of a cultural insider (Creswell, 1998; Morris et al., 1999), my role is that of an observer, rather than an actor (Harris, 1976).

A university faculty member served as the second researcher in this study. An Associate Professor in an education department, she has experience working with and publishing research on American Indian student populations. In addition to being involved in the conception and design of the research, she was actively involved in the recruitment of the participants. She does not identify herself as Diné or American Indian, and thus her participation is also from the etic perspective.

Context of the Study

Participants

In qualitative research, sample size is an important consideration. "Samples must be large enough to assure that most or all of the perceptions that might be important are uncovered, but at the same time if the sample is too large data becomes repetitive and, eventually, superfluous" (M. Mason, 2010). Six participants were selected for this

research. Although this is a relatively small sample size, it was deemed appropriate for this research as evidenced by the number of similar qualitative studies examining American Indian students that used similarly small sample sizes. For instance, Garcia (1999), studied 12 American Indian college graduates, Bisbee (2013) studied 13 Nez Perce college graduates, and Taylor (2016) studied 16 American Indian college students. This study set bounds in regard to postsecondary enrollment (students must be enrolled in postsecondary education), tribal affiliation (students must be Diné), and age (students must be under 28 years old). Given the homogeneity of the participants this research seeks to investigate, this study used a smaller sample size (Leedy & Ormrod, 2016).

Sampling Strategy

In order to identify participants from this population, homogenous purposive sampling (Devers & Frankel, 2000; Leedy & Ormrod, 2016; Teddlie & Yu, 2007; Tongco, 2007) was used. Homogenous purposive sampling is a non-random sampling technique that is especially useful when studying a particular population; in this case, Diné students seeking a postsecondary degree. Thus, this research relied on multiple purposive techniques, or multiple non-random methods of recruiting participants (Teddlie & Yu, 2007). These methods are outlined in the following sections.

Setting

Participants were recruited from a satellite campus of a University in the western U.S. Although the University does not publish demographic information related to race, the campus Administration reported that approximately 78% of these students are

American Indian, with the majority of these students identifying as Diné. Given this high enrollment of American Indians and its close proximity to the Navajo Nation, this campus was a logical place from which to recruit participants.

To recruit participants for this study, I contacted a university instructor who worked with a large number of Diné students. I informed the instructor of the purpose of the study and asked to refer potential participants. This individual agreed to help, and distributed a flyer that briefly described the research, the incentive for participation, and invited students who were interested to provide their contact information via email. I contacted 13 of the 22 potential participants who had provided their contact information by email. I reached out to three or four participants at a time over the course of a week and invited them to be part of this study via email. I worked from the beginning of the list, and kept the genders of those who had already responded in mind in an effort to reach out to males and females equally. Once seven of the thirteen potential participants I had contacted responded via email, they were sent IRB-approved informed consent documents inviting them to participate in the research and outlining what the research would entail. Due to scheduling difficulties, only three of these seven participated in the research.

As more participants were needed, snowball sampling was also used. In this strategy, researchers ask existing participants to help them to identify additional participants (Atkinson & Flint, 2001; Cohen & Arieli, 2011; Noy, 2008). This strategy is useful when working with minority groups for which identifying participants can be difficult, such as American Indian college students (Atkinson & Flint, 2001; Noy, 2008).

Furthermore, Cohen and Arieli point out that snowball sampling is useful when working in “conflict environments,” that is to say, an environment “in which people...perceive their needs, goals, or interests to be contradicted by the goals or interests of the other side” (p. 424). Since many American Indian students perceive their cultural values to be at odds with the majority culture (Fixico, 2013), Cohen and Arieli’s definition of a conflict environment may apply. In this research, the first two participants who were interviewed referred three of their friends soon after participating themselves. These friends had heard about the research and were interested in participating; and, thus, the final three participants were identified through snowball sampling rather than recruiting from the initial list of 22 participants.

In consideration of the contributions on the part of the participants, compensation of \$50 Visa gift cards were given for participation in this study. Bentley and Thacker (2004) found that monetary compensation increases participants’ willingness to participate in research. Thus, monetary compensation was thought to be one method of ensuring that the necessary six participants were identified for this research. Participants received their compensation after they completed the demographic questionnaire, the semi-structured interview, and provided feedback as a part of the member-checking stage of the research.

Instrumentation

Instrumentation for this study consisted of a descriptive questionnaire and a semi-structured interview.

Descriptive Questionnaire

A descriptive questionnaire was created for this study (Appendix A). The questionnaire included questions about gender, age, household income, school attendance, and program of study.

Semistructured Interview

A semi-structured interview was particularly well-suited for this research as it allowed for the “exploration of attitudes, values, beliefs and motives” (Barriball & While, 1994, p. 329). This interview could be classified as “semi-structured” due to its conversational nature (Harrell & Bradley, 2009; Leedy & Ormrod, 2016). Furthermore, “semi-structured interviews are often used when the researcher wants to delve deeply into a topic and to understand thoroughly the answers provided” (Harrell & Bradley, 2009, p. 27). A deep understanding of the participants’ backgrounds was necessary to address the research questions as it allowed for the flexibility necessary to elicit the breadth and depth of information that was required from the participants.

A list of interview questions designed to address each of Bronfenbrenner’s five nested levels of environment (1977, 1979, 1994, 2005) was developed for the interviews. The questions explicitly address ecological systems theory as it is integral to the research questions (Chenail, 2011; Leedy & Ormrod, 2016). The majority of questions were open-ended to allow participants to provide an “insider’s perspectives with little or no limitations imposed by more closed-ended questions” (Chenail 2011, p. 255). This is important as there may be significant factors associated with the participants’ access, enrollment, and participation in postsecondary education that are related to, but not

directly addressed, by the interview questions. By leaving the questions open-ended, it was intended that instrumentation bias (Leedy & Ormrod, 2016) was kept to a minimum by reducing the likelihood that any potential variables were necessarily excluded by overly specific questions. Thus, the open-ended questions were designed to elicit detailed information on the participants' experiences, how their experiences fit into the ecological systems, and how their experiences influenced their access, enrollment, and participation in postsecondary education.

The questions were inherently personal in order to ascertain the impact of a student's background on their postsecondary access, enrollment, and participation. Thus, details about their home and school life emerged. Since background is being established in this research, participants were allowed to answer each question in a way meaningful to them, even if their response may be seen as tangential by the researcher (Chenail, 2011).

Interview Procedures

I met with five of the six participants in person and met with the sixth participant via technology (Facetime). I gave students the choice of completing the interview and demographic questionnaire in one meeting or multiple meetings. Four participants completed the questionnaire and interview in one meeting. Carol and John elected to complete the questionnaire and interview in two meetings. The time it took participants to complete the questionnaire and interview varied by participant, with a range of one hour to three hours. Carol was the only participant who completed the interview via FaceTime, and her interview lasted roughly an hour and a half between the two sessions. Participants

were given the opportunity for a break approximately every 30 minutes. Participants were encouraged to answer the questions in the way most relevant to them, and to add details that they felt were important to promoting understanding of their answers. Participants were informed that I might ask follow-up questions. Interviews were recorded using a digital audio recorder so their responses could be transcribed for analysis.

Data Analysis

Transcription

Transcription of the interviews was completed by the researcher and a professional transcriptionist, properly certified to assist in this research, using denaturalized (or “clean”) transcription methodology (Oliver, Serovich, & Mason, 2005). Denaturalized transcription omits details such as accents, utterances, and length of pauses, focusing instead on transcribing dialogue verbatim. Thus, denaturalized transcription is appropriate for research that seeks to focus on informational content rather than conversation analysis (McLean, Meyer, & Estable, 2004; Oliver et al., 2005). Oliver et al. noted this method is particularly useful for researchers because “the focus is less how one communicates perceptions...but the perceptions themselves” (pp. 5-6).

Coding

Data was open-coded in order to identify common facilitators and barriers to student access, enrollment, and participation in postsecondary education. In this research, open coding refers to the process of separating data into units for analysis by theme by “breaking down the data into first-level concepts, or master headings, and second-level

categories, or subheadings” (Biddix, 2009). These codes were organized in relation to Bronfenbrenner’s 1977, 1979, 1994, 2005) ecological systems theory, using the five nested levels of environment. The major themes included each of the five levels, with subnodes that classified codes into more detailed categories (Miles, 1979). For instance, under the “Microsystem” master heading, there were subnodes such as *view of self, being a role model, and family supportiveness*. Thus, the data were applied towards answering the research questions while still allowing participant responses to drive the analysis.

As part of the coding process, the codes were be refined and checked to increase quality of the coding. This included developing an initial coding scheme. This initial work was then discussed with another researcher to evaluate the coding. Coding was refined through cross checking of coding strategies and interpretation of data (Barbour, 2001). New codes were developed and themes were identified as the researchers evaluated the transcriptions. While we built upon each other’s analyses by offering commentary or suggesting additional sections be coded, there was no disagreement between the two researchers. As I continued coding, I maintained periodic contact with the other researcher to address questions that arose and for cross checking.

Member Checking and Reflexivity

Writer (2008) emphasized that when American Indian stories are told by non-American Indian people, or from the frame of references of the dominant culture, systems of inequality are allowed to persist. She noted, “... the information regarding indigenous people must come from what we have to say about ourselves, through our stories and perspectives” (Writer, 2008, p. 2). As a researcher working from an etic, or outsider

perspective, I believe that Writer's point is particularly important to this research (Creswell, 1998). An accurate interpretation of the interview data according to the participants themselves is crucial to the credibility of this research. Every person is entitled to an accurate retelling of his/her story. Given the review of the literature conducted for this study, it is safe to say that American Indians are a student population at greater risk than the general population of not graduating from high school and enrolling in college. Thus, it is especially important to tell the stories of these participants accurately. I was not raised within a Diné community and may lack the necessary cultural lens to make accurate interpretations of participant responses. Thus, member checking was an important part of the analysis to increase reflexivity in analysis of the data (Haynes, 2014; Leedy & Ormrod, 2016; Shenton, 2004). Haynes defined reflexivity in qualitative research as thinking about how our thinking came to be, how pre-existing understanding is constantly revised in the light of new understandings and how this in turn affects our research" (p. 3).

The portions of the dissertation that deal with my interpretations of participants' responses were shared with them to get their feedback (Beuving & De Vries, 2015; Creswell, 1998). After their interviews had been transcribed, both myself and the other researcher selected particular quotes as examples of the coding themes supplemented short explanation of the interpretation of each quote. I then emailed these exemplars from each participant to the participant who had provided the quote. I explained to each participant that I planned to use some or all of the quotes and analyses. I asked the participant to respond regarding the accuracy of the interpretations. After this initial

member check, the participants were contacted via email periodically to check additional quotes and pieces of information as the researchers developed the relevant themes. After reviewing the quotations and interpretations, each of the participant indicated that the interpretations were accurate. One participant requested that I omit some information because of a potential threat to his confidentiality, which I did.

Beauving and De Vries (2015) suggested “If the people you study recognize themselves in what you are writing and find your conclusions helpful and revealing, you may have confidence in your findings and reflections” (p. 184). Thus, member checking was an important method of ensuring that the data analysis is as accurate as possible.

Credibility (accuracy of the conclusions drawn) was established in this way by ensuring that the focus on the analysis remained on the participants, their perceptions, and the relationships to ecological systems theory (Cresswell & Miller 2000; Miles, 1979). By focusing on the participants’ narratives and designing the interview instrument in relation to ecological systems theory, it helped to promote measurement of what is intended to be measured (Leedy & Ormrod, 2016).

Ensuring Research Quality

Dependability and Credibility

In this research, dependability refers to the replicability of the results of the research, while credibility refers to the accuracy of the conclusions drawn (Beauving & De Vries, 2015; Leedy & Ormrod, 2016; Lincoln & Guba, 1985; Shenton, 2004). These constructs work together to establish trustworthiness in this research (Lincoln & Guba,

1985; Shenton, 2004). The most significant way that dependability was established was through the detailed presentational dimension outlined earlier in this section.

Understanding contextual details about the participants, their backgrounds, and their responses is an important way to ensure that the research can be replicated as accurately as possible. One way that credibility was established in this research was through member checking, which allowed participants to review the research and judge its accuracy in reporting on their perceptions (Beauving & Devries, 2015; Cresswell & Miller 2000; Leedy & Ormrod, 2016; Miles, 1979). Additionally, exemplars are provided in the form of excerpts from the transcriptions that demonstrate how themes manifested themselves in the data. Finally, each of the six transcripts was coded by the other researcher using the established codes. This helped to address confirmability of the coding and serve as a check for investigator bias (Miles & Huberman, 1994). Member checking, exemplars, and agreement between the researchers provided clarity as to how themes were identified, and their pervasiveness in the data.

Transferability

This research deals with a highly contextualized population, and thus the potential for transferability of this research is limited. Still, the audience of this research may recognize similarities between the participants and groups that they work with. Thus, utilization of the derived etic concept, which recognizes the researcher as an outsider, yet still seeks to find themes of similarity to the dominant culture, may allow future readers to make connections to other student populations that share commonalities with the participants in this research (Berry, 1969; Jones et al., 2001). Thus, the thick, rich,

description that is crucial to the design of this study will also help future readers to identify such connections (Creswell & Miller, 2000; Firestone, 1987; Lincoln & Guba, 1985).

Ethical Considerations

One goal of this research is to provide a benefit to American Indian students by giving stakeholders relevant information that will assist with increasing their educational access, enrollment, and persistence. Furthermore, Writer's (2008) assertion that Native stories should be told as accurately as possible "...from what we have to say about ourselves" (p. 2) is an important component of this research design. Thus, in the interest of furthering the interests of American Indian students, it is important that their words are not manipulated in order to address the research questions or taken out of context. One way I hoped to address this ethical consideration is through member checking and through maintaining open and honest communication with participants throughout the data collection and analysis phases by establishing reciprocity. Creswell (1998) posits, "High-quality interpretive or qualitative research involves a reciprocity between the researcher and those being researched. This means that intense sharing, trust, and mutuality exist" (p. 196). Through establishing sharing, trust, and mutuality, I attempted to mitigate the ethical concern of taking participant responses out of context.

One key ethical consideration in research is the susceptibility to harm of the participants (James & Platzer, 1999). In addition to the procedures that were taken to keep their identities anonymous, I made efforts to ensure that participants' names did not appear in any of the study's official data, including transcripts, by using a participant

number or pseudonym in all data collected except for their informed consent documents. In this research, I gave the participants the opportunity to choose their own pseudonym. Two of the participants did not have a preference, so I assigned them pseudonyms which they found agreeable. One participant could not decide initially, so I assigned that person a number temporarily until the person selected a pseudonym.

James and Platzer (1999) noted that harm can be done to participants in the form of offensive or ignorant comments or questions from the researcher. As previously stated, I am not affiliated with the Diné peoples in any way and, in many ways I am ignorant of Diné norms and traditions. In some ways, this ignorance is a positive factor in that it reduces the likelihood of bias on my part towards the participants. However, it may manifest itself in a negative way if I were to inadvertently offend one of the participants with a question or comment. Shenton (2004) recommended taking the time to learn about an organization before beginning research in order to establish both trust and understanding. Thus, I took care to learn more about Diné culture before beginning data collection. In addition to a careful review of the questionnaire and interview questions before data collection, I located three experts in Diné culture and asked them to provide me with feedback on the questionnaire and the interview questions. Leedy and Ormrod (2016) reported that judgment by experts is one way of ensuring the validity of an instrument.

Methodological Quality

The methodological quality of this research was ensured by relying on the strategies presented throughout this section, which are all well-established methods of

conducting qualitative case study research. Homogenous purposive sampling allowed me to recruit participants for this research (Devers & Frankel, 2000; Leedy & Ormrod, 2016; Teddlie & Yu, 2007; Tongco, 2007). Member checking allowed me to develop credibility, while also ensuring dependability (Leedy & Ormrod, 2016; Lincoln & Guba, 1985). Using a thick, rich description resulted in rhetoric designed to enhance the presentational dimension of the research, while also aiding in transferability (Creswell & Miller, 2000; Firestone, 1987; Lincoln & Guba, 1985). Attention to the security of the data, along with a mindfulness regarding my role as an outsider, helped to mitigate ethical concerns (James & Platzer, 1999; MacLean, Meyer, & Estable, 2004; Morris et al., 1999).

Summary of Methods

This research investigates the factors that Diné students identify as essential to their access, enrollment, and persistence in postsecondary education, and how those factors align with ecological systems levels (Bronfenbrenner 1977, 1979, 1994, 2005). Analysis of the data relied on open coding (Biddix, 2009), member checking (Beauving & De Vries, 2015; Creswell, 1998), and cross-checking of coding strategies and interpretation (Barbour, 2001). The data to be analyzed included semistructured interviews and demographic questionnaires.

CHAPTER IV

RESULTS

“Education is the ladder. Tell our people to take it.”— Chief Manuelito

Chief Manuelito, one of the primary leaders of the Diné people circa The Long Walk period, famously delivered this quote on his deathbed, and it describes the common goal to achieve education shared by each of the six participants. The young people who participated in this research are all highly motivated to obtain a postsecondary degree and hold education (both the acts of earning a degree and of gaining knowledge for their own edification) in high regard. While the students are diverse in their goals, programs of study, and personalities, they share a common respect for education. Education is a strong form of empowerment for these students.

The purpose of this research was to learn what factors Diné college students identify as essential to their access, enrollment, and persistence in postsecondary education and to analyze how each of these factors align with the levels of ecological systems theory (Bronfenbrenner, 1977, 1979, 1994, 2005). In this chapter, a brief biographical sketch of each participant is provided, followed by analysis of themes revealed in the coding process in relation to ecological systems theory.

Participant Biographical Sketches and Educational Histories

The six participants in this study were registered members of one of the chapters of the Navajo Nation, had graduated from high school, and were enrolled in a

postsecondary university. I asked participants to attest to their tribal membership, but I did not require verification through formal documentation. A second criterion for participating was age; participants in this research were under 28 years old.

Ben

School and personal history. Ben was a 21-year-old male who attended Diné Nation schools from grades 4-12. His kindergarten through grade 3 years were spent at a public school off of the reservation. Ben attended four schools during his K-12 education. As a child he was not a big reader, but he did enjoy books on sports and military history. As a secondary student, he was driven to attend college and made it a point to seek out opportunities to prepare for college. For instance, he took concurrent enrollment courses to earn college credit, and joined a student group that allowed him to tour college campuses. In high school, Ben was involved extensively in extracurricular activities including multiple sports such as football and track, and student government. His family spoke primarily English at home, but Ben is conversant in Navajo and is comfortable speaking both languages. Ben's mother holds an associate's degree and his father is a high school graduate. Ben's parents are separated and he was largely raised by his mother.

Postsecondary work. Ben was a junior in college. Ben was an Engineering major and credits some of his interest in mechanics and design to his childhood love of video games such as Call of Duty, which features grand mechanical devices (largely weapons) that players can use to compete against one another. He hopes to use his Engineering degree to give back to his community (in terms of both improving infrastructure and

mentoring youth) and to help support his family. He is a member of the University's American Indian student group and also affiliates with other groups such as the Black Student Union. He is deeply committed to equity and social justice causes such as the conflict at Standing Rock. When we met, he was wearing a button promoting the inclusion of LGBTQA students in engineering.

Interests and hobbies. Ben takes leadership seriously and takes advantage of any opportunity he can find to be a leader in his school community. Initially torn between joining the military or going to college, Ben decided to opt for college on the advice of his mother and his father, a military veteran. Still, Ben remains very interested in and knowledgeable about military history. Ben regularly takes part in traditional Diné practices and is very knowledgeable about Diné history and current events. While video games don't interest him much anymore, he likes to take part in powwow events when they're held and is an especially talented Gourd Dancer (an American Indian practice). In his own words, "For me Gourd Dancing is my go-to, 'cause the way I describe it to people is if I have something on my mind, something's been bothering me or troubling for so long... finally, something familiar to me is here."

Carol

School and personal history. Carol was a 20-year-old female who was a sophomore in college. For her entire K-12 education, she attended school at a public institution for Diné students located off of the Reservation. Carol was involved in extracurricular activities including student leadership and softball throughout high school, and she enjoyed a friendly relationship with her school administrators. She took part in

extracurricular activities both because she enjoyed them and also to help bolster her college applications. Her family spoke both English and Navajo at home, and the language spoken at her K-12 school was mostly Diné. For these reasons, she is comfortable speaking both. Although she appreciates the religious diversity on her college campus, she follows traditional Diné spiritual practices: "...for me, I still need to follow and obey my traditional rules." As a first-generation college student, Carol's education is important to her entire family and she has enjoyed the support of her parents and her siblings. From a young age, her parents made it clear that they hoped she would attend college.

Postsecondary work. Carol's major was Criminal Justice and she hopes to become a criminal defense lawyer. Carol is disturbed by the number of mass shootings in the U.S., and is also motivated to work in the legal profession to help advocate for gun control. She also hopes to work in a capacity that will help her to defend those who are unable to defend themselves. She is currently a member of her school's student government, a role she also filled in high school. Helping others is important to Carol, as demonstrated by her career goals and her continued interest in participating in student government. She enjoys attending American Indian dance events when they are organized by her school.

Interests and Hobbies. As a high school student, Carol enjoyed playing softball and reading. *The Lord of the Rings* was one of her favorites. Sports are important to Carol's entire family, and as a K-12 student they would often watch sporting events on television together. She also enjoyed taking part in student government, and working as a

tutor to help her classmates to improve their grades.

Elena

School and personal history. Elena was a 20-year-old female who was a sophomore in college. She attended Navajo Nation schools throughout her elementary and middle school years, and attended a private dormitory school on the Reservation during high school. This school was a college preparatory school, and as such the curriculum was rigorous. Her parents worked hard to pay the tuition so that she could enjoy the college preparation offered by this institution. Her family spoke both English and Navajo at home. Her mother has a bachelor's degree and her father attended vocational school. Having a college degree herself, it was especially important to Elena's mother that Elena be well-prepared to attend college.

Postsecondary work. Elena's major was Wildlife Science and Ecology, and she hopes to use her degree to preserve and care for important Diné sites. She is also driven by her love of animals; she hopes that her future work will help to protect habitats for animals on the Reservation. She is a member of her university's American Indian student group and enjoys attending their meetings and events. "...being in this [American Indian student group], it's really nice. And it also makes me happy to be a Native American, and to realize I'm not alone in this big college all by myself."

Interests and hobbies. As a K-12 student, Elena's family lived on a farm and caring for their animals was one of her responsibilities and hobbies. She recalls how animals played an important part in her development: "I do have horses, goats ... I have a long list. Ducks, chickens, cats, dog, I had a fish once... rabbits. So, it was pretty fun,

especially as a kid... taking care of my animals helped me become more responsible, and also being on time with things.” She looks forward to going home on breaks so she can visit with her pet dog. Also as a K-12 student, Elena was involved in numerous extracurricular activities, such as sports and acting as her school’s mascot. She loves to try new things, leading her to discover her talents in a variety of arenas. She also enjoys comic books and is especially a fan of Marvel comics and movies.

Ezio

School and personal history. Ezio was a 21-year-old male who was a junior in college. He attended Navajo Nation schools throughout his K-12 education. All in all, he attended four schools during his K-12 years. His family spoke English and Navajo at home, and he feels comfortable with both languages. His mother earned a bachelor’s degree, and his father attained a high school diploma. For most of his K-12 years, he was raised by a single mother. Education was very important to Ezio’s family and they continue to support him as he pursues his college degree. Spirituality is very important to Ezio and his family, and religious ceremonies are both sources of confidence and important goals for Ezio.

Postsecondary work. Ezio’s major was Civil Engineering, and he hopes to use the knowledge and experience he gains in college to improve the infrastructure on the Reservation. In his own words, he is attending college in part “because I kind of got sick of people denying our requests to fix roads, they’re not listening to us.” Helping to strengthen Diné communities across the Reservation through infrastructure improvements like this one is an important motivator for Ezio. He is deeply knowledgeable about the

politics affecting Diné people, and further hopes to use his education to advocate for other Diné causes, such as preserving important heritage sites. Getting involved in community issues in order to advocate for Diné causes is important to Ezio and his family.

Interests and hobbies. As a high school student, Ezio was involved in numerous sports such as football and track. He continues his interest in athletics today by staying active and working out. He is knowledgeable about pop culture, and loves sci-fi and fantasy franchises such as *Star Wars* and *Assassin's Creed*. When he isn't studying, he loves to keep up with new titles in these franchises. Ezio loves to read, and especially enjoys fantasy and science fiction titles such as *The Lord of the Rings*, and novelizations of his favorite video games. He also enjoys skateboarding, and he uses his board to get around campus. He is a member of his school's American Indian student group and attends their meetings and events when he has the time.

Jane

School and personal history. Jane was a 19-year-old female who was a sophomore in college. She attended public, off-reservation schools in an urban environment for most of her K-12 education. She attended Diné Nation schools during her K-3 and 12th grade years. All in all, she attended four schools throughout her K-12 education. Her family primarily spoke English at home, and she feels more comfortable speaking English than Diné. Although college was always a goal for Jane, she considered herself an unmotivated high school student, sometimes earning poor grades. As one of only a few American Indian students at her large high school, feelings of isolation were a

contributing factor to her lack of motivation. Her family and teachers helped to motivate her to start actively preparing for college, and she worked towards earning a higher GPA as a junior and senior in high school. Jane's mother has a bachelor's degree and her father attended vocational school. Jane's parents are separated, and for the most part she was raised by a single mother.

Postsecondary work. Jane's major is Psychology and she hopes to work as a counselor to help Diné students who may be struggling with personal or academic challenges. As a high school senior who had spent most of her education in an urban, off-reservation environment, she was surprised at some of the struggles she observed her peers coping with when she switched to an on-reservation school: "I could tell the difference between the education that I received in [the schools I attended off of the reservation], compared to the reservation. I don't know, I just felt this overwhelming need to help out my people." She is active in her school's American Indian student group and enjoys attending their meetings and events.

Interests and hobbies. Reading was Jane's primary hobby throughout her K-12 education, with fantasy books being special favorites. Jane empathized with the characters she read about, and identifying with them and their adventures was another motivator for her. In her words, reading "kind of helped me escape from the current situation I was in. Like in those stories, they have a bunch of friends, and they have a main mission they have to complete, they're going to save the world or something. I don't know, I liked it because it helped me escape from where I was, into that world." Although she wasn't involved in extracurricular activities as a K-12 student, she is now

an active member of her university's American Indian student group.

John

School and personal history. John was a 21-year-old male who was a sophomore in college. He attended the same Navajo Nation school throughout his K-12 education. His family spoke English and Diné at home, and he feels comfortable with both languages. A first-generation college student, John was studious and reserved throughout his K-12 education. As a secondary student he was motivated to attend college, and regularly stayed after school to access tools such as computers and the Internet in order to complete his homework. He enjoys challenging himself, and elected to take difficult AP coursework in high school because of the satisfaction it gave him. His education was important to both of his parents, and they demonstrated their support by providing him with important school supplies, and voicing their desire for him to attend college.

Postsecondary work. John's major is Computer Engineering. He is passionate about computers and received his first laptop when he was in high school. He chose this major because he enjoys learning more about technology, and he hopes to use his knowledge to somehow help others. He hopes that more Diné students like himself can use their knowledge of computers to teach technological literacy to others on the Reservation.

Interests and hobbies. As a K-12 student John enjoyed reading, one of his favorite books was Ken Kesey's *One Flew Over the Cuckoo's Nest*. Listening to music is also an important hobby for John. One of his favorite bands is Led Zeppelin, he listens

to their music “every day.” At one of our meetings he demonstrated his enthusiasm by wearing a Led Zeppelin shirt. As a K-12 student, he did not mind completing household chores such as chopping wood because they gave him the opportunity to listen to music while he worked. Computers were also a hobby for John, he enjoyed teaching himself how they function before he decided to major in Computer Engineering. John is also an active member of his school’s American Indian student group. He relies on them to make new friends, but also to learn about resources such as scholarship options.

Themes in Relation to Ecological Systems Theory

In this section, the major themes of the interviews will be presented based on Ecological systems theory (Bronfenbrenner, 1977, 1979, 1994, 2005) The themes will be presented in order of the levels of ecological system with which they align. Themes will be presented beginning with microsystem level factors, such as those relating to the participants conceptions of self and relationships. Next, mesosystem-level factors will be presented, such as the relationships between participants’ families and their schools. Exosystem-level factors will follow, including factors such as the relationship between family income and access, enrollment, and participation in school. Macrosystem-level factors will come next, describing factors related to culture and community. The chronosystem will be presented last, including factors related to historical figures and events.

Microsystem Themes

The microsystem encompasses the relationships and interactions a person has in

the environment closest to the participant (Bronfenbrenner, 1979; Johnson, 2008).

Personal conceptions such as view of self are presented. Direct interactions with family, school, neighborhood, workplace, and relationships with the person's family, friends, classmates, teachers, religious leaders, and others constitute relationships in the microsystem level and are also presented in this section (Ben-David & Nel, 2013; Table 2).

Table 2

Microsystem Themes

Theme	Summary
View of self as good student	Each of the six of the participants believed themselves to be good students in college.
Being a role model	Each of the six participants believed being a role model to future Diné students was important.
Strong work ethic	Each of the six participants in this research valued hard work. They demonstrated this by putting strong effort and time into their studies.
Family encouragement and support	All six of the participants reported that their families encouraged and supported them as they prepared for and persist in college.
The influence of friends	All six of the participants reported that their friends had some influence on their academic performance.
Teachers are important motivators	All six of the participants reported that their K-12 teachers played a role in motivating them to attend college.
Relationships with advisors and administrators	Each of the six participants reported that high school guidance counselors helped them to research, access, and enroll in college in some way. Two of the six participants reported having friendly relationships with their K-12 school administrators.
Extracurricular activities	Five of the six participants took part in extracurricular activities as K-12 students.
High standards are important motivation	All six of the participants valued high standards being set for them by teachers in high school.
Poor grades cause students to be discouraged	Three of the six participants reported feeling discouraged after receiving poor grades in college

View of self as a good student. Five of the six participants in this research considered themselves to have been “good students” during their K-12 education, demonstrating a strong self-efficacy. Factors such as their good grades and their successful completion of assignments led to their self-perception as good students. For instance, Ben proudly remembered feelings of excitement when he would earn better grades on assignments than his peers. He and his friends sometimes viewed school as a friendly competition, and outcomes such as grades helped them to push each other to do better. This is one example of how grades are an important measure of view of self as a good student.

All of the participants developed routines or strategies to help ensure they received good grades in their courses. For instance, Ezio reported that he makes it a habit to review his tests after he takes them to ensure that he understands why he missed any incorrect answers, and Ben has designed a study routine wherein he does his least favorite homework first, and saves what he is most comfortable with for last. Each of the six participants reported comfort with contacting their professors, knowledge of office hours, and spending a good deal of time studying.

John brought up standardized testing and advanced coursework in the context of viewing himself as a strong student. He remembers taking state tests in high school almost fondly, because “I knew I would pass.” John felt confident in his test-taking ability, and passing state tests was valuable reinforcement that he was proficient in the tested content. John also demonstrated strong self-efficacy when he elected to enroll in an advanced physics course: “I decided to take that challenge.”

When asked if she considered herself a good student, Elena replied: “Yeah, I do, I feel like if I see myself as third person, you know describe myself as a hard-working student who is trying to give back to the community, and family, and environment. That’s how I see myself.” In Elena’s case, she views herself as a good student because of her hard work and her intentions to help her community

Carol also took into account her willingness to help others when it came to her view of herself as a good student.

Back in high school, I had many duties. For instance, I was the Student Council President, and I was also on the National Honor Society. I also was like a tutor; I would see students struggling with an assignment or any other subject, I would go and help them. I have a passion to always help others who are struggling or are in need of help.

One participant, Jane, viewed herself as a “pretty horrible” student until her later high school years because she had been largely unmotivated to complete her homework or put her full effort into her studies. However, moving to a new school combined with her family’s efforts to encourage her eventually led a changed attitude about her schoolwork. She partially attributes her change in attitude to the support of her peers: “And they helped, the friends that I made there, they helped build me. They gave me compliments like ‘Hey, you’re so smart. How do you know this?’ And I guess in a way it helped build me up, like ‘Hey you know what, I’m actually a pretty good student. I can do better than what I did in high school.’”

Each of the six consider themselves to be good students at the university level. They now consider factors such as their study habits, grades, and campus involvement when assessing themselves. For instance, Carol felt she was a good student in high school

in part because of her involvement in student leadership. She still considers herself to be a good college student, and has continued her involvement in student leadership on her campus. Ben views himself as a good student in part because of his dedication to his studies. He has developed a rigorous study schedule that he sticks to. All of the participants felt that getting good grades was an important factor in being a good student.

While not all of the participants felt that they were good students in the past, all of them feel that they are good students now. They consider factors such as grades, hard work, and desire to help others in their conceptions of what makes a good student.

Being a role model. All of the participants indicated that being a role model to future generations of Diné students was an important motivator. They seemed to be keenly aware that many of their peers from their K-12 education never made it to college, and they theorized that having access to Diné role models who had persisted in college could serve as much-needed inspiration to students. Carol is actively working to this end, and has already given a talk in her chapter house to inspire younger students to pursue college. She summarizes how she was invited: I would go to the chapter house ... And [a community leader] tells me, “You should come back and talk to the community students, because you’re [making] a big influence in your life.”

Being a role model is also important to Ben. In his words:

One of the big things I always wanted to do was I’ve always wanted to go back and help the youth. I’ve had teachers who made me believe, who believed in me more than I [did] at the time. So I wish... I had someone to mentor, someone like that. I didn’t really have that, even though I had my parents and some of the teachers, I just needed that one person, or people to look up to. And I think if I were to be able to go home and be that for the youth, I think it would be satisfactory.

Along these lines, some participants thought specifically about influencing their family members to attend college. In Elena's words, "The reason why I'm also going to college, is again, to motivate my siblings. They are looking for a role model and I really want to be that role model to them." Jane also thinks of being a role model to her future children: "I want to teach my daughters how you can be a Diné woman in today's society, and what you can achieve."

Whether they are looking to be a role model to their family, their community, or to Diné people in general, being a role model is motivation for all of the participants in this research. They value the role models they had in their lives, and in some cases are aware that they had few role models to look up to. Reflecting on these figures provides these students with the impetus to persist in college.

Strong work ethic. Hard work was an important value to each of the participants in this study, and they each demonstrated an extremely strong work ethic. All participants reported taking their studies very seriously and spent a good deal of time doing homework and projects. As these interviews were conducted around the time midterms were being assigned, all of the participants mentioned preparing for their exams as an important part of their week. For example, Ben and Ezio indicated that their involvement in extracurricular sports in high school helped to teach them the value of hard work, and how it can pay off. They apply the lessons they learned in sports regarding the value of diligent practice to their university studies. Carol also participated in multiple extracurricular activities, and needed to work hard in order to fulfill all of her obligations. Ben summarizes some commonalities between schoolwork and sports:

...It didn't matter how much I knew, or if I can recite, if I can write a good paper, it was just always the ability to constantly work, just work, work, work. 'Cause I was also involved, too, in sports. And I kind of applied what my father had taught me, that if you're not working hard enough, then someone out there's working harder than you, and if you meet up one day, they'll beat you. So, I know someone may be smarter than me, or if they're more talented at this topic or subject, that they may be that- but they won't out-work me.

Elena also spends a good deal of her time working. She holds a part-time dishwashing job that often requires her to work late into the night. She sometimes goes to class and completes her homework after getting only a few hours of sleep. Elena wishes that people recognized how hard-working Diné students are: "Dinés work as hard as anyone just to get into college.... We're not guaranteed a full ride or anything. We're just practically working our butts off." Ezio expressed similar frustration at the perception that it was simple for Diné students to access college funding. Doing all of this difficult work is worth it to Elena because she looks forward to graduating and using her degree to effect positive change for Diné people.

John also understood the value of hard work. Not having a computer of his own for much of his K-12 schooling, he spent many hours working in the library after school in order to access the tools he needed to complete his homework. Doing well on his homework was important to him, and he always put in his best effort despite not always having the tools to complete the work at home.

The strong work ethic these participants developed throughout their K-12 education continues to serve them well in college. Willingness to dedicate free time (and sometimes even sleeping time) to studying is a quality shared by all of the participants.

Family encouragement and support. All of the participants reported having

families who encouraged and expected them to access, enroll, and persist in college. Their families showed encouragement in a variety of ways. Jane's brothers regularly helped her with her difficult math homework throughout her K-12 education. Elena's parents made it a point to help her with homework and to get involved in parent-student activities when she was a K-12 student. Elena's mother also transferred Elena to another school when she noticed that most of Elena's friends "didn't even want to go to high school." Ben's mother would regularly remind him to apply for scholarships. Carol's older siblings helped her to fax paperwork and visit her campus during her college enrollment process. John recalls how his family showed that they wanted him to pursue a college education. In some cases, grandparent support was also important, with Ben and Jane recalling instances that their grandparents provided valuable emotional support. These are just a few of the ways the participants' families showed encouragement and support towards their education.

Five of the six of the participants reported that their families had held traditional Diné ceremonies, sometimes at great expense, to promote their academic success. In Ben's case, his grandparents took part in an all-night ceremony, praying for his success from seven in the evening to seven in the morning: "To see them sit up all night, not even tired, they would pray- pray to the point where my grandmother was crying while she was praying at the same time for us. That was a huge eye-opener for me."

In addition to making the participants feel supported, family encouragement often made the students feel motivated to succeed in order to make their families proud. Jane describes her feelings when reflecting on the support her family provided: "You also got

to realize that people put a lot of effort and work to get you where you are now, you shouldn't waste that."

Family encouragement was an important facilitator of these participants' access, enrollment, and persistence in higher education. Families showed support through actions such as helping with school work, getting involved in school activities, and carrying out religious ceremonies. These actions helped participants to feel supported, encouraged, and motivated as students.

The influence of friends. All of the participants reported friends had some influence on their academic performance. Five of the six participants reported having friends who positively influenced their performance. Only one participant described a friend who negatively influenced her performance.

As high school students, Ezio and his friends would sometimes text message each other in order to share help and hints on homework assignments. As a college student, Ezio continues to rely on the support of his peers. He describes how listening to his classmates discuss homework has helped to encourage him in difficult classes.

And when I hear [other classmates] talk about homework, I mainly pay attention to how they're doing it. And they say they're having trouble as well. And I'm like okay, so I'm not alone, having difficulties beyond this campus, I guess. But they somehow manage to do it and get it done, so that's what kind of got me thinking, so if they can do it, I can do it.

Ben reported having a friendly rivalry with friends that pushed all of them to achieve higher grades: "They'd always make fun of me, saying 'Hey, I bet I can get a higher score than you on this.' They would make little jokes like that, at the time I would laugh it off, but then I would keep that in the back of my head."

Elena's high school friends were similarly motivated to do well in school. In her words:

And then when I went to high school, my friends there as we went grades up, they were really supportive. Especially when we applied for colleges, or stuff like that, they'd be like "Oh did you get this done? Did you get this assignment done?" Especially if we had the same classes. I remember for Calculus and Algebra, they would help me if I kind of struggled... It was really nice, we'd always help each other with those kind of questions. And they'd ask if we got our scholarships in, FAFSA in. Especially during Senior year, they were really supportive.

Jane recalled that as a high school student, she had not been motivated to achieve high grades, and oftentimes did not do her homework. One of her close friends during this time had a similar attitude, and she reported that they would often encourage each other's apathy. In her words: "She would get bad grades and it kind of made me feel good about myself, 'cause I was like 'Hey I got bad grades, too.' But we were negatively reinforcing, we never tried to push ourselves to get better grades. We're just like 'It's okay, we've both got bad grades.'"

Friends proved to have the power to motivate and to de-motivate the participants in this research. Jane described how an unmotivated friend served to de-motivate her when it came to doing her schoolwork. The other participants described more symbiotic relationships, where friends had positive influences on one another to positive ends, such as getting homework done more efficiently and accurately, and helping each other with important college preparatory work.

Teachers are important motivators. All of the participants indicated that teachers had played an important part in influencing them to enroll in college. Each shared stories of high school teachers who had made an effort to forge a special

connection with their students and who made it clear to students that they believed in them and cared about their future.

John remembered one teacher in particular who would share stories of her own college experience while making it a point to emphasize that although college was challenging, she was always able to overcome academic challenges through hard work. While John had always heard how challenging college was, her stories about overcoming challenges made him feel as though he, too, could succeed in college. Similarly, Ezio recalled a teacher who shared stories of the fun she had in college. Ezio found these stories eye-opening, as he had not considered the non-academic aspects of college life.

Elena, who was challenged by the rigorous curriculum offered by her school, relied on dedicated teachers to help her understand difficult concepts.

One middle school teacher that I was taking freshmen Algebra- and I was an eighth grader- this was ninth grade Algebra, and I was struggling, and he'd offer his lunch time to help me. I thought that was really thoughtful, and I remember coming every day with my lunch and some questions from the homework the night before that I was struggling [with] at home. And he'd spend his lunch time with me, helping me. And he'd be like "Oh yeah, this is what you need to do," and completely help me. I noticed a big ol' "oomph" in my math quizzes, or my math test.

Ben also recalled a special teacher who helped him to develop an early interest in engineering. He explains how this teacher helped to foster his interest in the subject that would become his major.

And another teacher I thought that looked out for me was our construction [teacher]...but he was one of the first teachers that introduced me to an engineering textbook. He would have us do little hands-on projects, building little bridges out of balsawood, little trebuchets. And then one day handed me a book, and I was like "I don't know what this," it looked like graphs and 3D graphs, and I was like "what is this?" So, I flipped through the pages and it was engineering. I see turbines, and I'm like "huh," that's when that kind of opened up another door, of maybe he's really wanting me to go this route, too. So, I think he was a

supporter even though he didn't make it known, but now that I look back on it, he always had challenged with me in certain projects in his class. I think... he was very influential in that way, too.

Jane, also, recalls a teacher who helped to motivate her by showing her that she was a valued student.

...just everyday things, the way that he presented himself, and the way he taught to us, kind of made me feel more special. And there were times when he would just kind of ask me "Hey, are you doing okay? I can see that you look like you're not doing okay today. Do we need to talk after class?" I don't know, he was a teacher, but he was also like a friend.

College professors also had the power to motivate students. All of the students in this research felt comfortable reaching out to their professors when they needed help or had questions. Elena, Jane, and Ezio had transferred to their large college campus from a smaller campus. These three noted that they found the professors to be generally more interested and invested in their students on the smaller campus, but still felt comfortable reaching out to their professors on the larger campus.

Ben has also noticed that college professors on his large campus sometimes have large class sizes, so he takes the initiative to get the most out of class lectures.

So, now I make it a goal to sit in the dead center of class, and within the first three rows, so that way I can see what's going on, my professor can see me, and just making small adjustments like that where I try to include myself in the lecture to force myself to understand what's going on.

Another important factor for these participants was having teachers who stressed the importance of learning about Diné culture and language in school. Each of the participants except for Jane largely attended all-Diné schools for the majority of their K-12 education. All of these participants reported that conversant Diné was spoken for at least some of the time during their school day, and that particularly in the lower grades,

Navajo language (especially greetings) were required subjects. In Carol's case, Navajo was spoken up to 80% of her school day throughout her K-12 education. She recalls:

They would do that because they would like to stress that to us we need to learn our language, and we should understand it, and we should speak, and we shouldn't not know our language, because our Diné language is very precious to us. So, they would stress that to us, and they would talk to us in Navajo.

Diné greetings are complicated to master and involve describing one's family history in Navajo. John fondly recalled a Caucasian teacher who could not speak Diné, but who made attempts to greet them anyway to the delight of students, "Cause that means that they showed interest." Elena and Ben recalled introductions and kinship (in which a person introduces themselves by listing the clans of their mother and father) as being a particularly important subject that they learned in their K-12 education. Ben recalls that for the most part, Diné topics covered in school were mainly related to language. He recalls that while some teachers would try to pull Diné history into their content areas, "some teachers didn't really have an understanding of the culture, that they didn't know how to try to tie in cultural and traditional teachings into the curriculum." All participants who attended Diné-centered schools looked back at this Diné-specific curriculum that they learned in school fondly.

Jane attended a suburban high school off the reservation that was not geared toward American Indian students. She received far less information in school about American Indian history and culture than her counterparts.

In terms of the absence of Native American studies and whatnot, we were in the history books just like a good paragraph or so, or maybe two pages, explains about our culture...and after that we're just glossed over. Which in a way, I guess, was annoying because it made me feel less important as a person. Especially in those history classes where my whole culture, or my ancestry, was just limited to

two pages, and everything else, we were just kind of easy to forget, in a way I guess, from the history books. And in a way, I guess, that brought up the differences in culture and I started to view myself as less important. That's probably one of the factors, but there's other factors that made me feel less important as compared to the White students in my class.

Jane experienced feelings of isolation during her K-12 experience, and she attributes this in part to the lack of American Indian history and culture her teachers brought into the classroom. When she reflects on the short time she attended a reservation school as a child, she further states: "It saddens me that I missed that part of my life that I could have been more, it sounds weird, but more Diné in a way I guess."

Jane was the only participant who was not exposed to much Diné culture and curriculum in her K-12 schooling, and as evidenced above, she wishes that she had been exposed to more. The rest of the participants were exposed to higher degrees of Diné culture and language during school time, and valued the presence of this curriculum in their K-12 schools.

Another factor related to teachers that was important to participants was teacher turnover. Ben, Ezio, and John all indicated that there was a good deal of teacher turnover at their K-12 schools. They found the high turnover rates to be disruptive. In Ben's words, "It was hard, because I would have these established relationships with these teachers who were good teachers, but then after two or three years, find out they were leaving." Ezio also found the teacher turnover rate to be disruptive, and was always thankful to be in a class led by a more experienced teacher due to their strong classroom management skills.

John describes one class he remembers that had a particularly high turnover rate...

“Cause [one of my classes] was like that, we had like four different teachers throughout the year. And it kept changing the format and everything, and we just kept losing track of where we were, and stuff, so...” When asked why he thought it was such a high turnover rate, John replied, “I felt like maybe no one wanted to come to the reservation to teach that [class].”

All of the participants in this research shared stories of special teachers who helped to motivate them to persist in school and to attend college. Whether by sharing stories of college, dedicating time to extra help, or simply demonstrating belief in the students’ capabilities, all of the teachers the students recalled had had a positive attitude towards their students and encouraged them to try their hardest.

For the three participants in this research who went to schools that experienced a high teacher turnover rate, the constantly changing classroom environment made things difficult. Ben pointed out the difficulty of establishing relationships and understandings of teachers, only to have to do it with another teacher when they had left. Ezio recalled the classroom management difficulties that occurred when a new teacher stepped in, and John summarized the disruption to students and curriculum when his school had trouble securing a year-round teacher.

Relationships with advisors and administrators. Each of the participants in this research indicated that their high school guidance counselors were instrumental in their ability to access college. Each of the participants felt comfortable visiting their high school guidance counselors and indicated that they received some information that would help them enroll in college. Elena and John both recalled their guidance counselors

monitoring their progress, for instance by keeping an eye on their GPA. Carol and Jane both recall receiving informational brochures from their counselors. Ezio also found his advisor to be “very helpful” when he was in the process of researching colleges. While Jane does recall receiving college enrollment information from her high school guidance counselor, she indicated that the aim of the counselors at her high school was “more focused toward getting [students] to graduate high school.” Ben recalls the ways his high school guidance counselor helped him and his fellow students.

She was very proactive, especially the students that she saw potential in. She would contact us, and let us know when to stop by her office. And when we did, she would tell us all these opportunities, and ask us if we were interested, or if we wanted to be a part of certain programs. So, I think I would give some credit to her.

Three of the participants felt that they got to know their K-12 administrators to some degree. Carol’s involvement in extracurricular activities gave her more opportunities to interact with her school administrators, and she recalled that both she and her parents had friendly relationships with them. Elena also described having a friendly relationship with her high school principal and felt comfortable saying “hi” to him. Ben, as a student council leader, had the opportunity to interact with his school principal, but the two sometimes disagreed on matters of school policy.

Each of the participants in this research relied on their guidance counselors to various degrees for information about accessing and enrolling in college. As college students, each of them still feel comfortable contacting their advisors whenever they have questions or concerns. While three of the participants in this research had regular interactions with their school administration, only two of the participants considered

these interactions to be positive.

High standards are important motivation. All of the participants recalled the value of high standards being set for them by their teachers in high school. In some cases, they would view high standards as a valuable opportunity to learn. For instance, when John's high school offered a new advanced physics course, he volunteered to enroll: "I was told it was the first year to ever offer a physics course, and you have to sign up for it, and they were going to decide if you could get in based on your grades. So, I guess I took that. I think I may have thought of it as a challenge, so I decided to take that challenge."

Carol recalls that for her high school teachers, the goal was always to go above and beyond: "Like they would know how I do my academics and everything, I was mainly on the honor roll through my high school years. So, they'll be like 'I know you can do better than this.' And I'm like 'Oh.' I had to do assignments higher than what I would usually do."

Ezio recalls how his teachers would react when their students wouldn't meet their expectations: "They would get after us and they'd say, 'You know, you're not going to get by when you're in college if you keep doing this.'" Elena similarly recalls that her teachers held her to high standards, hoping to prepare them for the challenges of college.

They did have that mentality, they would want us to succeed, but not at an easy level. They would challenge us, because that's what college is about. They'd always tell us in high school, this is how college is, they're not going to give you a break. Out of college preparatory school, they'd really up our game.

Ben fondly recalled a math teacher who would sometimes give him more difficult problems than the rest of his peers because he recognized that Ben could handle the more advanced material. Carol classified her high school guidance counselor as "a challenging

woman” who set high standards for her students in order to help them to access and enroll in high school. Four of the six participants elected to take AP or CE courses at their high school in an effort to take on more challenging curriculum. Elena and her family elected to hold Elena to high academic standards by enrolling her in a college preparatory school.

In Jane’s case, she recalled that her teachers sometimes did not set high standards for her. Jane, who had not always felt valued by her high school teachers, described how one teacher helped her to become a more motivated student.

She would say, “From what I know, from what you’ve been telling me, people kind of expect less from you.” And she’s like “I just want you to know I don’t see you that way. You’re just like another student in my class, and I will grade you the same. I hold you to the same expectations that I do for my top students.” And stuff like that. And then kind of made me feel like, “Hey I’m normal, I’m an actual student, she’s not going to view me as [though] I’m less intelligent or something, or try to give me...call it “pity points” or something.... She kind of helped me figure out, “Hey I’m normal, I can do this.”

Jane perceived that her teachers may have believed her to be less capable than her peers because she is a minority. She fondly recalled one teacher (described in the section above) who made it clear that she held Jane to the same high standards as her peers.

These examples demonstrate that being held to high standards was an important motivation for the students in this study. Whether those high standards were set by individual teachers or through a particular program or curriculum (such as AP or concurrent enrollment), the high standards these students faced served to encourage and motivate them to persist in school.

Extracurricular activities. Five of the six participants reported being involved in multiple extracurricular activities during high school. Between football, basketball, track, cheerleading, yearbook, student government, and mascot, these students were involved in

many extracurricular activities. For the most part, they were involved in these activities because they enjoyed them and not as a means to bolster their college applications. For instance, Carol took part in both student government and sports extracurricular activities. She enjoyed student government so much that she continues to participate in this capacity at her university. In Carol's words, "It was equal [parts preparing for college and for fun]... It actually helped me to be in college because it helps me with the leadership role and everything."

In some cases, such as with Ben and Ezio, the extracurricular activities helped to teach the students valuable lessons about persistence and hard work. Ben recalled that between playing sports and staying on top of his schoolwork, he felt as if he was always working. Ezio recalled that his time on his high school basketball team taught him that "hard work can pay off." He also recalled a football coach's advice as being particularly meaningful to him: "Keep your head up high. Stop looking at the ground, that's where people spit and step on." Finally, Ezio noted that his time on his high school track team gave him valuable exposure to college campuses that he would not have otherwise gotten. While all of the participants reported having less time for extracurricular activities in college, five of the participants take part in a university American Indian student group. The student group serves as a social hub for American Indian students, regularly organizes cultural events such as pow-wows and author events, and also seeks to raise awareness about American Indian issues on campus. Carol, whose campus does not have a chapter of this student group, is still involved in extracurricular activities by being a member of her campus student council. Extracurricular activities were important to each

of the participants in this research. While the activities themselves varied, the students enjoyed being involved in extracurricular activities both in their K-12 education and on their campus community at the time of this study.

Poor grades can cause students to become discouraged. As demonstrated above, being a good student is something that these participants value, and they often place importance on receiving good grades. For some of these students, receiving poor grades despite hard work was a significant barrier to their persistence, with three of them having a story about a particular test or project in college that made them rethink their decision to persist in their postsecondary education.

For instance, Elena often works at least 18 hours a day between her classes, her part-time job, and time spent studying and completing homework. Despite all of this hard work, she doesn't always do as well as she would like on assignments. She described a poor grade on a biology test as an event that made her consider leaving college: "I got an F on my biology test. So, that really put me down a lot, 'cause I studied so hard. This past week I couldn't even have a break." Elena countered this frustration by relying on her self-efficacy: "I pulled myself together and I was like 'You can do this.' So now I'm just going to be like 'I can do this. I'm going to study more.'"

Ezio reported feeling discouraged about a poor grade he received on a chemistry exam. After talking to a peer who also had a hard time with the test, Ezio felt less discouraged, and became motivated to study the questions he missed and to aim for a higher score next time. Similarly, John was discouraged after receiving a poor grade on a physics test: "failing my first physics test, made me kind of think, 'Is this really for me?'"

Like Elena, after feeling discouraged John determined to study hard so that he could achieve a better grade next time. Grades are important to all of the participants in this study, and all of them reported feeling discouraged at times when they received lower grades than they would have liked. All of the participants in this research decided to persist despite these feelings of discouragement.

Mesosystem Themes

The mesosystem is made up of the linkages and processes taking place between two or more settings of the microsystem (as opposed to direct relationships), such as interactions between home and school (Johnson, 2008). The mesosystem-level themes are associated with the interactions of people and institutions in these participants' lives. The most significant way this presented itself in this research was through the interactions between parents and school (see Table 3).

Parent involvement in school. All of the participants reported that their parents had been active in parent teacher conferences while they were K-12 students. Although only three of the participants came from single-parent homes, five of the six participants

Table 3

Mesosystem Level Themes

Theme	Definition
Parent involvement in education	All six of the participants reported that their parents were involved in their education to varying degrees (e.g., parent teacher conferences, checking grades, interacting with teachers).
Parent views on school	All six of the participants reported that their parents had a favorable view of school and encouraged them to pursue a postsecondary education.

reported that their mother interacted more with their school than their father. Two participants (both of whom were living with single mothers) reported that their mothers did not usually attend conferences beyond elementary school years as the mother's work schedule did not allow them to attend.

Three of the participants reported that their parents had connections at the K-12 schools they attended, such as being friends with teachers or administrators. Their parents (particularly their mothers) would sometimes take advantage of these connections in order to learn what their students were doing during the school day. For instance, Ben recalled a time in high school when he had been disrespectful to a substitute teacher and his mother was informed of the incident through one of her contacts at the school: "I remember one time we had...she was a substitute, so of course, a substitute, I was kind of [lackadaisical], kicking back and relaxing. Then my mom [asked] me a few days later, 'So, why weren't you doing your homework assignment?'" Ben was caught off guard by his mother's question, and it demonstrated to him that she was aware of what he was doing in school. Elena noted that her mother would sometimes call her contacts who worked at the school to see what she was doing: "And they'll be like 'Oh, she's just studying in the library right now,' or 'She's doing homework in the grass.' So that's what they would tell her."

Elena and Ezio's mothers used their knowledge of their children's activities and connections to help their children thrive in school. When Elena's mother observed that Elena was not being challenged at her current school, and worried about the crowd of friends she knew her to have adopted, and observing that her school's curriculum may

not be challenging enough, she transferred Elena to a new school to provide her more opportunities to learn. “My mom, she didn’t feel that I was educationally challenged there for some reason, so she thought that moving me to a [different] school would make me more, I guess, smarter. So, that’s what she did.” Similarly, when a tragedy struck Ezio’s family, his mother transferred him to a different school that she felt would be a better fit for his emotional needs. These examples both illustrate a high level of parent involvement in and awareness of their children’s education.

All of the participants reported that during their K-12 education, their parents had been active in checking their grades and making sure that they got their homework done. Jane recalled one incident where her mother discovered she hadn’t turned in an assignment, and punished Jane for not doing so. Ben recalls the way his mother would keep up on his progress at parent teacher conferences: “She’d be writing everything down, she’d have a page-long report.” Elena’s mother always made sure that she was available to attend her parent-teacher conferences: “It was mainly my mom, she would take time off from work, especially during parent-teacher [conferences]. Although Elena attended a college preparatory school, she also recalled that both her mother and her father would help her with completing homework in her elementary years.

While John’s parents trusted him to complete his homework, they were aware of his grades on report cards, and his mother actively attended parent teacher conferences to keep up on his progress. Carol’s parents also kept up on her progress by attending parent teacher conferences and maintaining friendly relationships with her teachers.

Similarly, Ben’s mother was well aware of the scholarship options available for

her son and would regularly check with him about his progress in completing the applications. These examples show that the parents of these participants were active in monitoring their children's school work and educational progress. Jane's mother also got involved in the college application process by reminding her to apply: "She would ask me like 'Hey, what college are you going to?' Throughout my Senior year she would remind me, 'You're going to college, and you need to start figuring out what you want to do... what are you going to do with your life? What do you expect your life to be if you don't go get an education?'"

The parents of the participants in this research were highly involved in their children's' school experience. Whether checking on students through contacts at school, ensuring that homework was completed, or monitoring grades, these parents were aware of what their students were doing at school and what they should have been doing to prepare for college. Through interacting with both K-12 schools and their children, they helped the participants to access and enroll in college.

Parent views on education. All of the participants reported that their parents valued education and did everything they could to help their children succeed. While not all of their parents had attended post-secondary schools (Carol and John are first-generation college students), all of the parents encouraged their children to go to college and stressed the importance of education. For instance, Elena recalled that her mother was a college student as she herself was in high school. She remembers: "...it would hit me that that's going to be me in a few years.... I've got to take school seriously, 'cause I remember she worked really hard." Carol recalled that her parents would regularly talk to

her about college, and made it known that they would like for her to enroll. John's parents would also discuss this subject with him, making it clear that they wanted him to prepare to attend: "I guess it's really been pushed on me to go to college, by my parents and siblings."

Elena's parents sent her to a school that charged a high price for tuition. Despite the financial difficulties this caused, her parents felt it was the right place for Elena to go to school. When John's mother realized that a laptop computer could help John to do better in school, she worked hard to find the money to buy him one. These examples demonstrate that the parents of the participants in this study were dedicated to their children's education.

Ezio's mother, who has a bachelor's degree, made her views on education clear to Ezio. He recalls of her: "My mom did everything she could to live a more comfortable life, with a good house, a good warm, comfortable house. Including school. And so, and while she was in school, I guess, she picked up the idea that you can get a better life when you go to school." She passed this ideology on to Ezio.

The parents of the participants in this research all valued college education and encouraged their children to attend college. They showed the importance they placed on college through discussion, financial sacrifices, and demonstrating the benefits of a college degree in their own lives.

Exosystem Themes

The exosystem is made up of linkages and processes taking place between two or more settings, one of which does not contain the participant, but in which events occur

that indirectly influence processes within the immediate setting of the person (see Table 4, Johnson, 2008).

Internet Access. One of the most prominent themes that arose was accessibility to the internet for use in applying to college. Only two of the participants (Jane and Carol) had Internet access available at home. Jane and Carol were able to use the Internet to complete school work as well as to research and apply to colleges. Carol summarizes the usefulness of the Internet.

That helped me tremendously, because the assignments. I didn't have a dictionary book, but I would go onto the Internet to use a dictionary, and that was a main help. When I didn't understand a word or something, I would look it up on the Internet. So, the Internet at home really helped me with my homework.

Being able to use the Internet at home was an important facilitator to their ability to access and enroll in college. The other four participants had to find other ways to access the Internet in order to complete these tasks, such as staying after school or using

Table 4

Exosystem-Level Themes

Theme	Definition
Internet access	Four of the six participants did not have Internet access in their home as K-12 students. All of the participants indicated that it was an important resource for schoolwork and preparing for college.
Family income	Five of the six participants reported that family income was a barrier to their ability to access, enroll, and persist in college.
Burden of maintaining scholarships	Each of the six participants pays their tuition with scholarships, and thus invest a significant amount of time maintaining their scholarships.
Accessing books and other materials	Four of the six participants work part-time in order to supplement their scholarships so that they can pay for books and other materials, along with considerations such as food and housing.

their local chapter house's Internet (a chapter house is a local government building where community meetings are held). John, a highly-motivated student, would spend hours after school each day so that he could have access to a computer to complete his assignments because he did not have access to a computer or to the Internet at home. Ben, busy with the extracurricular activities he participated in, needed to carve out more time in the evenings to use the Internet at his school to research colleges. Ezio went so far as to note the importance he places on Internet access in a piece of advice to aspiring Diné college students: "use your access to the Internet wisely," and going on to explain that it can be used as a powerful tool to research potential careers.

All of the participants brought up the Internet as an important factor in their ability to access and enroll in college. Needing to find access to the Internet outside of their home was difficult for those participants who did not have Internet connectivity at home. Many universities place most of their enrollment information and required forms on their websites, making it difficult to research and apply to these institutions when Internet access is limited. Thus, participants' access to the Internet played a direct part in how easy or difficult it was for them to access and enroll

Family income. For five participants, family income presented a significant barrier to accessing, enrolling, and persisting in higher education. Each of the participants rely heavily on scholarships to pay for the majority of tuition and expenses while in college. Ben, Ezio, John, and Elena relied on school and community resources in order to access the tools they needed to apply and enroll in college, not having access to these tools at home. Four of the participants work part-time to make up the difference between

their scholarships and their living expenses. For instance, Elena attends school and completes her homework during the day and works at a dishwashing job late into the night. This job keeps her busy, but it is necessary for her to work in order to pay her bills. Sometimes this requires her to go without sleep or valuable study time, but it is a necessary sacrifice in order for her to persist in her studies.

A lack of income sometimes made things difficult for the participants when they were K-12 students. John recalled that his home did not have heating, so he would sometimes need to spend his after-school time chopping wood to keep the home warm during the winter (although he did not see this as a barrier, he enjoyed the time to be able to listen to music uninterrupted). Elena recalls that sometimes her mother was unable to pay her school lunch balance on time: “And it sucked, sometimes her checks wouldn’t come in on time. So I wasn’t able to eat, same for my sister, too. So I had to eat off of friend’s plates. I tried not to get in trouble for that, it was the only way.”

Money was an important factor for all of the students in this research. A lack of funds during K-12 education resulted in difficulties for some participants as outlined above. Family income also plays an important part when it comes to the burden of maintaining scholarships.

The burden of maintaining scholarships. Each of the participants in this research pays for their college through scholarships. Ezio and John explained that they put a significant amount of energy into maintaining their scholarships. This is a time-consuming endeavor that requires coordination with the agencies granting the scholarship and the financial aid office of their university. For Ezio and John, the time and energy

they need to spend coordinating scholarships is a barrier. These two participants mentioned that it can be extremely time-consuming to locate and complete scholarship applications. Ezio noted that some of these scholarships require extensive documentation: “You have to put your full attention on [completing the documentation], to the point that you have to set aside your homework and your studying time.” Ezio and John noted that although they had received scholarships, various logistical hurdles prevented them from being able to pay their tuition on time. In Ezio’s case, this led him to miss a semester of school, and in John’s case caused him to take out a student loan. Both of these participants were extremely discouraged by these financial hurdles, and considered dropping out of college as a result of this discouragement.

For Elena, the fact that she is receiving scholarships is, in itself, a motivation for her to persist.

When I feel like ‘Oh, I’m going to give up,’ or sometimes I have a breakdown and I start tearing up, I just think ‘There’s all this money coming to my education, I better toughen up and get on to studying,’ or ‘All this money is going to be for a waste.’ I just try to think ‘I better get this done, let’s not have this all be for nothing.’

For Carol, the scholarships she has earned also motivate her to persist.

Yeah. They say they’re proud of me. One time I just joked around with them saying ‘I’m tired, I’m going to head home, not going to do college no more,’ but then they got after me like ‘No you can’t, college is paid for you.’ Scholarships are paid for me and I shouldn’t throw away the opportunity.

These examples demonstrate that while scholarships can be difficult to obtain and maintain, for Carol and Elena simply having funding in place is motivation to persist in their studies.

All of the participants in this research relied heavily on scholarships to pay the

majority of their college expenses. The difficulty and stress associated with maintaining these scholarships varied, but keeping these scholarships was an important consideration for each of the participants.

Access to books and other materials. In addition to the cost of tuition, the expense of books, technology tools, and other materials can be a barrier to student persistence. Helping to pay for these materials is one reason that four of the six participants work part-time jobs to supplement their income. Ezio noted that in his experience, professors sometimes seemed insensitive to the fact that money was an issue for some students. He noted It is a constant source of struggle and frustration for Ezio to come up with money for books, sometimes up to \$800 per semester, that are seldom, if ever, used in the course.

Ben and Ezio in particular noted that paying for the materials they needed was a part of their financial stress. Ezio noted that sometimes professors would assume that students had easy access to the Internet, a laptop, or email. in Ezio's case, he needed to go to the library to access these tools. This expectation led to conflicts with his professors in the past.

He [the professor] sent an email one time, and I just wanted to check on my exam and talk to him over it, that's all I wanted to do, nothing else. But I walked up to him and said, 'I'm here to look at my exam,' and all he just said was 'Did you read the email? Did you read the email? You need to look at your email. Go look at your email.' And that's it, and he walked away.

Along these lines, Ezio wished that people involved in postsecondary education would understand this about American Indian students.

We don't have...an extra thousand dollars [to spend] on tools that we need, like laptops, or computers, or printers, all the electronics that we need in college.... I

think it was one of my classes, the professor was like “Alright everybody, pull out your calculators,” and I didn’t have a TI calculator at that moment. And everybody would pull out their calculators, like seriously, I was the only one that didn’t have a calculator, and everybody would look at me like “Why doesn’t he have a calculator?” And so I had to spend an extra \$80 of what I made for the TI, you know, those expensive calculators.

Ben also articulated frustration in regard to unexpected expenses given his tight budget.

It wasn’t more until this year is when I had to pay more out of my pocket, and ... knowing that my parents wanted to help in some way, I would call and ask them “Hey, can you help me? Can you send fifteen dollars for gas so I can get to school?” And the response... “I wish we could, but we don’t have the money for that.” So, even just getting simple groceries, or getting five dollars for gas, it’s very hard for my parents to help me out with.

Ezio and Ben articulated the challenge of maintaining the funds to purchase supplementary materials necessary to persist in college. Additionally, Ezio related his perception that university faculty are sometimes unaware or insensitive to the financial difficulties these students must overcome to take part in their courses. All of the participants diligently maintain their scholarships and sometimes work part-time jobs in order to help manage the expenses (e.g., gas, supplies, and food) aside from tuition of postsecondary education.

Macrosystem Themes

The macrosystem represents the over-arching pattern of the linkages and processes between micro, meso, and exosystems with particular attention to cultural values, customs, and laws (see Table 5; Berk, 1991). Cultural factors proved to be a significant part of the school experience of each of the participants in this research.

Spirituality as a motivator. All participants except for Jane considered

Table 5

Macrosystem-Level Themes

Theme	Definition
Spirituality as a motivator	Each of the six participants reported that traditional Diné spirituality was a motivator.
Community support	Three of the six participants shared stories of community support in their efforts to access, enroll, and persist in postsecondary education.
Giving back to the Diné community	Each of the six participants desired to give back to the Diné community in their own way.
Community as a barrier	Two of the six participants shared stories of times their community served as a barrier to their intentions to persist.
The importance of the American Indian student group	Five of the six participants had access to an American Indian student group on their campus. All five found it to be a valuable and worthwhile club in which to participate.
Cultural conflicts and taboos in school	Five of the six participants had experienced cultural conflicts or had encountered Diné taboos in school.
Racism in school	Four of the six participants had encounters that they qualified as examples of racism during their postsecondary education.

themselves to be largely traditional in their beliefs. In this research, the term “traditional” with regards to spirituality refers to Diné customs and beliefs that are influenced by tribal values, history, and standards (e.g., ceremonies, dances, and ways of knowing), as opposed to Western values, history, and standards (Webster & Scott, 2014). Even Jane, who considers herself to be largely agnostic, takes part in some traditional thinking and action. Elena summarizes her take on traditional Diné spirituality.

Actually, it did [influence my schooling] positively. My family believes in the Diné culture, and that itself is, I feel, a religion. I was taught all these things, what to do, and what not to do, how to present yourself respectfully. It was just all about how to present yourself in a way that you stand out, if that makes sense. Navajo culture is just all about being yourself, representing yourself well, and

your family, and your community. So, that's what I pretty much believed in. School-wise, it did affect me positively. My parents always prayed for me, sometimes they did ceremonies for my success. They really wanted to do one before I came here.

All of the participants mentioned a spiritual factor as part of their motivation to persist in college. For instance, burning cedar and sweetgrass or carrying a corn pollen pouch as a source of cleansing, clarity, and/or protection was a common theme among all participants. Both Ezio and Jane mentioned their frustration that dorm regulations prevented them from burning these substances on campus.

Five participants had taken part in some type of ceremony to mark their passage into adulthood. While the specifics of these ceremonies are deeply personal, the common purpose of the ceremonies they took part in was to celebrate the new stage of life they were entering into. The effect of these ceremonies on the participants in this research was positive, with participants regarding it as an experience that served to inspire them. In Jane's case, she gives her coming of age ceremony some credit for helping her to become a more serious and motivated student.

It was kind of like one of the hardships of my life. It wasn't hard in terms of how much effort I put into it, it was kind of hard because at that point in my life I realized how many people were around me, and how much they actually contribute to my life. Because my whole family was there to help.... So, my whole family helped me in the ceremony, and I started to realize, "Hey everybody's helping you become a woman, you got to realize it's not just you in your life, it's everyone in you in your life...." I kind of figured out that everyone helps me out, I've got to help everyone out also. I can't just be thinking about what I want to do in life, I've got to figure out how I can help everybody else in my family. My grandfather, he also gave like a little analogy where he's like "I'm the oldest person in our family, and there are a bunch of people after me, and they have expectations of where I'm leading them. I'm the leader in our group.... Based on what I do in my life, and how I present myself, is how the rest of the family will be viewed, or represented." So, in that way I figure I also have that responsibility, because I also have younger nieces, and then I have one nephew,

and later on when they grow up, and they start to have conflicts like I did in high school, and just growing up, I can provide them with answers, and I can show them “Hey, I know you’re struggling right now, but when I was your age....” You know, the when I was your age thing, and I can just show them that. And I can explain that the way that my grandfather did, ‘cause I feel like maybe he might not be there for them as they grow up in high school, ‘cause we get older and we pass away.

Three of the participants discussed participating in other types of ceremony as well. The purpose of these ceremonies was to provide protection, inspiration, and other positive outcomes for participants. In addition to demonstrating family support, as outlined earlier, these ceremonies provided spiritual inspiration for the participants who took part in them. In Ezio’s case, he is looking forward to participating in a Beauty Way ceremony once he finishes college.

When you succeed into something, or want to achieve something, we call this one ceremony The Beauty Way ceremony, and you get some good blessings from that. Some good prayers, and a lot of good vibes from it, and that’s a very good reward to have, and a very good...I want to say experience, but it’s a privilege to have.

This ceremony is an incentive for Ezio to persist in pursuing his degree.

Spiritual resources such as rituals (burning sweetgrass and sage or carrying a corn pollen pouch) and ceremonies were important sources of strength for these participants. All of the participants reported relying on traditional Diné spiritual practices in some way as a source of motivation. Whether they took part in these practices publicly (such as participating in ceremonies) or privately (as in burning sage and sweetgrass or carrying a corn pollen pouch) varied, but each of the participants relied on these practices.

Community support. Feeling supported by the community in which they grew up was a common theme noted by three participants. In addition to participation in

ceremonies and extracurricular activities, three participants shared examples of chapter houses and other community organizations helping them to access and enroll in college. For instance, Elena recalled a youth program that allowed her to use a computer lab, access fitness facilities, and more: “They had a computer lab, and they also had a weight room, and a student center nearby where you could play basketball and stuff like that.” John recalled using the fax machine at his chapter house (a local community gathering place) to send in college applications. Carol summarized her feelings of belonging to a community.

There’s people looking at you, and people believe in you to succeed, so when you hear that song [about Chief Manuelito], or you hear people offering you money to go to school, it just gives you a bigger challenge.... “Hey, there’s other people that want me to succeed, not just my family and everything, there’s other people that believe in me to go and become something.”

These examples demonstrate that community support was especially important as the participants sought to access and enroll in college. Allowing students to use resources such as the Internet and fax machines helped Elena and John to conduct valuable research and to submit important application materials. Receiving scholarships and feeling supported by her community motivated Carol to persist in postsecondary education.

Giving back to the Diné community. Giving back to the Diné community was an important motivator for each of the participants in this research. Jane transferred to a reservation high school for her senior year of high school, having previously attended school off the reservation. She observed that social issues such as poverty and substance abuse had a negative impact on many of her peers on the Reservation. Observing the negative impact these social issues had on the educational experience of her peers, she reflects: “I could tell the difference between the education that I received in Phoenix,

compared to the Reservation. I don't know, I just felt this overwhelming need to help out my people.”

John is similarly motivated to help Diné people. After he finishes college, he hopes to use his expertise in technology to increase computer literacy for people on the Reservation. Ben also is motivated to “give back”: “I wanted to have fun, and I wanted not only have some benefits, some personal gain, but something I can also contribute: give back to my community, to help back in some way.” Ezio is motivated to use his engineering degree to help to rebuild roads and infrastructure on the Reservation. Elena hopes to use her degree to protect the environment on the Reservation.

Navajos, we're faced with all kinds of environmental issues from coal mining, which made our elders sick, and get bronchitis, and all kinds of lung diseases. Also, oil, fracking, it's taking our land. And so, Navajos are facing this every day, especially clean water. Some grandmas don't even get access to clean water, and it's just sad.

Carol is motivated to become a criminal defense lawyer so that she can stand up for those who cannot stand up for themselves. Furthermore, Carol gave a talk at her local chapter house to inspire high school students to attend college, demonstrating her commitment to giving back to her community.

A desire to give back to their communities and the Diné people is a common motivator for the participants in this research. All of the participants expressed a desire to use their education to improve the communities from which they came in some way.

The importance of the American Indian student group. Five of the participants had access to and participated in an American Indian student group on their college campus, which they view as an important facilitator of their persistence in college.

These five reported that the group was important in making them feel a sense of belonging on campus. Ezio and Ben both value the group because it brings familiar people and cultural practices (such as traditional dances) to campus. In this quote, Elena explains how the group and its faculty sponsor help her to identify familiar sights and develop a sense of pride.

It does bring a little comfort to me, a home-ness. Because again, I've gone to the advisor's office and she has nice Native designs and it totally reminds me of [my first college campus], or even home. So, I'm like "Oh okay." Because once you go to these other buildings, they don't have any pottery or paintings like [my first college campus] did in every building.... So, here in these clubs, or being in this [American Indian student group], it's really nice. And it also makes me happy to be a Native American, and to realize I'm not alone in this big college all by myself.

Jane describes how the American Indian student group helps her to feel a sense of belonging in a predominantly White student body.

When I first came here, I was alone. And it kind of [made] me feel really scared, then I started missing home, 'cause I wanted my family. There's just a bunch of white people here, and there's hardly any colored skins. So, [the American Indian student group] gives me like a little feeling of home. They kind of get our culture, and the way we talk, and how we share jokes. Yeah, definitely does make me feel a lot better being away from home.

John relies on the American Indian student group both as a source of social support, but also as a source of moral support when it comes to his studies. In addition to looking to the group when he has questions about scholarships, he also looks to them for inspiration: "I would say it influences me, 'cause it's part of home here with me... There's times that I feel like 'Why am I here? I should just give up.' But then I see them succeeding, and I feel like if they can, then why can't I?"

Although Carol did not have access to an American Indian student group, she

reported participating in American Indian cultural events when she had the time. She describes the cultural offerings on her campus.

Yeah, I actually, I like it here on campus because it brings out different students. And there are some other religions that go into that dance [event], so it's not just Native Americans, it can be different tribes and everything. So, [different kinds of students go there], and it's actually pretty experimental, and I'm enjoying it. Just by watching them perform, it's really awesome.

All of the participants in this research appreciated the availability of American Indian cultural activities on their campus. The five participants who had access to an American Indian student group participated in the group, and found that it helped them to persist for reasons related to moral support, as well as acting as a source of information in John's case.

Community as a barrier. At times, community-related issues also functioned as a barrier to two of the participants' persistence. While Ben is highly motivated to give back to his community, he did report that seeing others in his community choose to go into the workforce rather than attend college sometimes made him question whether he should enroll.

I think a lot of it, that kind of had a little doubt, was seeing that just the youth, or the community in general, that they're not really heavy on sending their kids to go get a higher education. That a lot of it is, some families it's a big achievement if someone were to graduate high school, and then from there they go immediately straight into the workforce, that way they're like another source of income to help the family. So, there were some doubts because you don't see a lot of your peers continuing and getting their education too, so I was like, if they're staying here, what am I supposed to do?

On the other hand, when he is on campus Ben sometimes feels proud when he realizes that he is one of a small number of Diné students. He recalls waiting in line to enroll in a math class when he realized that the other students in line were largely white

males: “When I realized that, I had a little smirk on my face, and I kind of stood up a little taller, chin up, and felt a little more proud that in a way I’m representing my people.”

Carol also noted that being a Diné college student sometimes made her feel isolated:

I think, because a lot of Diné people, some of them back at home, you don’t see very [many] Dinés going to college. You don’t see [many] Dinés being doctors or lawyers and all that. So being a Diné student in college, how do I say it.... They put a spotlight on you, because not all Diné students are out succeeding and doing something. So, being Diné student in college; it’s a challenge, but you feel happy that you’re actually in college.

These examples demonstrate that while participants were for the most part motivated by the social problems they observed, at times they felt discouraged by them. Ben and Carol both related that being a Diné college student, and feeling as though they are in the minority, can present its own challenges.

Cultural conflicts and taboos in school. Each of the five of the participants who attended Diné schools for the majority of their K-12 education were aware of cultural conflicts that could arise in school (and in some cases, had arisen for them) at every level. While all five noted that their K-12 schools were sensitive to these conflicts for the most part, they noted that in a university setting professors and administrators are often not aware of taboos that Diné people should avoid.

Four of the six students identified pictures of snakes as a source of conflict. Snakes are generally a bad omen in Diné culture and watching a snake eating something (a mundane occurrence in biology class) is considered to be particularly bad luck. Ezio recalled that at his high school, teachers would allow students to put their heads down or

cover textbook images of snakes eating. Ben recalled that their teachers would warn the group that a snake was about to be shown. In a larger university culture, many professors are unaware of this taboo. Viewing a solar eclipse is also considered a taboo. Carol recalled that there were two solar eclipses during her K-12 education. On one occasion the students stayed inside all day, and on the other school was cancelled.

One taboo that has impacted the university experience of four of the six participants is the presence of a graveyard located next to their college campus. In Ben's words, "It's always been a teaching that we shouldn't be close to any deceased bodies. It not only keeps their spirit at unrest, but also, it's not good for us as well." The four participants were extremely uncomfortable with the presence of the graveyard on campus and took measures to avoid it whenever possible, such as taking a longer route to get where they need to go if the graveyard is along the way.

In Ezio's case, the graveyard has been the subject of family discussions. His mother is uncomfortable with him living so close to the graveyard and has asked him to take precautions such as putting ash on the soles of his feet to prevent any negative presence from following him. Ezio and John have taken spiritual precautions to guard against the graveyard's negative spiritual influence: Ezio has participated in ceremonies that are intended to protect him, and John keeps an arrowhead on the wall of his bedroom.

Two participants were not impacted by the graveyard. Jane, who considers herself to generally be agnostic, is unfazed by the graveyard. Carol attends a different college campus than the other five participants, so she is not affected by a graveyard next to her

campus.

Cultural conflicts were relevant in the interviews of the five students (all but Jane) who had largely attended Diné-centered schools. All of these five recalled instances of taboos arising during their K-12 and college experience. These taboos were sometimes barriers to their persistence, as in the case of the graveyard, due to the participants' level of discomfort.

Racism in school. Racism, in the form of discrimination or microaggressions, was another common theme in this research. Four of the participants had experienced at least one form of racism during their school experience.

This research was conducted just before Halloween. Elena had not seen any students dressed as "Indians" but was extremely apprehensive about seeing such a costume on a White student. She reported that her friend had seen such a costume.

Especially the feathers, as a Native American they're very [symbolic] to us, they have a lot of symbolism to us.... Meaning strength, the mind, mind strength, perseverance, responsibility, integrity, all of that in a feather. So, [my friend] seeing these girls goofing around in headdresses it really hit him big time, and it really made him mad. So, I'm really hoping not to experience any racism, but it's not guaranteed that I'm not going to be coming across it.

Ben had seen some students dressed as Indians and it affected him profoundly. As an avid supporter of the military, he likened it to someone wearing a purple heart as a costume. He was so anxious about seeing another such costume that he reported he would be going straight home as soon as we finished our interview, and would be staying inside for the rest of the evening.

Ben related another story that was also witnessed by Ezio and Jane. Some students were about to take a departmental trip to the Diné Nation to recruit high school

students to their program. They had asked the campus Native American student group to provide advice on how to interact with the people they would meet. The student group was happy to oblige, but when their guests were leaving, one of them referred to a Native student's traditional regalia as a "costume." While this was offensive to Ben, Ezio, and Jane, Ezio mentioned that he took this as an opportunity to help the students even more on their trip to the reservation. He was worried that they would make another such remark, so he accompanied them to the reservation in attempt to help them bridge the gap between the two cultures and avoid any conflict.

Ben and Ezio recalled an incident in which the Native American student group was selling Diné tacos as a fundraiser. They reported that a student arbitrarily decided to start an argument over the origin of frybread, and insisted that it was not a true Native food. The student eventually left, but they both recalled the incident as an example of racism.

In Jane's case, as she attended high school at an institution that was not exclusively for Diné students, the racism she experienced was unique from the experiences reported by other participants. For instance, she described getting the message that accessing college would be simple for her because she was a minority: "It made it seem like college would be easier for me because I'm a minority. I don't know if that makes sense, it's kind of like they patronize you. Like 'Oh, you're Brown. You're gonna get it good.'"

Along these lines, Jane felt that her teachers sometimes did not hold her to the same standards as her white counterparts: "I feel like the teachers' kind of crippled me in

a way, as a student... Just because I didn't feel like they treated me to the normal standard, like I was explaining earlier. And they just kind of gave me pity points...[so] that I could pass along. Which doesn't help anybody, because nobody learns that way. But I feel like that was another thing, 'cause I was Native and brown."

Jane also reported being asked somewhat ignorant questions by her classmates.

They thought I had money from casinos.... And I'm like "Nope. No, I do not." And then they thought that I could talk to animals or something.... During that time people would ask me crazy questions, and I wouldn't really know if they were joking. But I think most of the things were pretty serious. Like they thought maybe that I couldn't talk to animals, but I had a special connection with animals or something, because I was Native? But there was definitely a time when someone asked me if I lived in a teepee.... At that point in my life, it made me feel small, and alone, 'cause I was the only Native, I had nobody to back me up. So, I just answered honestly, "No, I don't live in a teepee, I live in a house."

The racism experienced by the participants took various forms. Whether being asked ignorant questions, being subject to hurtful remarks, or witnessing offensive cultural stereotypes, racism was a source of discouragement to the four participants who reported experiencing it.

Chronosystem Themes

The chronosystem represents the environment a participant is situated in with particular attention to changes over time or historical events, and how these factors impact the experiences of individuals (Bronfenbrenner, 2005). In this research, the experiences of family members along with historical figures proved to be important to participants (see Table 6).

Resilience. Two participants reported their grandparents (two of Ben's and one of Jane's) had attended Indian boarding schools and had traumatic experiences.

Table 6

Chronosystem-Level Themes

Theme	Definition
Resilience	Two of the six participants reported that grandparents had forcibly attended boarding schools and had developed a sense of resilience due to the experience.
Honoring ancestors, elders, and tradition	Each of the six participants felt that honoring ancestors, elders, and traditions was important.
Chief Manuelito	Each of the six participants referenced Chief Manuelito as either a role model or in the context of receiving the Chief Manuelito Scholarship.

Interestingly, these grandparents went on to develop a deep appreciation for education.

Four of the participants indicated that their family members did not, to their knowledge, attend Indian boarding schools.

Ben summarizes his take on the boarding school system, and his grandparents' reaction to it.

...The whole idea behind it was to kill the Indian, save the man... To where you try to civilize them. And I think when it came to that aspect of where they try to strip you of your cultural teaching, of your cultural beliefs, that is where it didn't sit well with any of my grandparents. But education-wise, they knew it was something that was important at the same time.

Jane and Ben indicated their grandparents resented the attempt to assimilate them into mainstream culture, but that the experience did not hamper their grandparents' love of learning. Jane's grandfather attained an associate's degree, and he has always strongly encouraged her to achieve a college education.

...Going to college, he really helped push me. He explained to me the logistics of what would happen if I didn't go to school, what would I do, what kind of life would I lead. And he would often use the comparisons of the reservation that we

lived on, and the people that didn't go to college, and he would explain "I know this isn't the type of person that you are. I didn't raise my daughter," my mom, "to raise children in that way. I know you're smarter than you think you are."

Jane and Ben reported that their grandparents have continuously shown support and encouragement for their children's and grandchildren's education despite their own negative experiences with education. Ben and Jane's parents have also shown support for their children's education, demonstrating the generational impacts of this resilience and value for education.

Honoring elders, ancestors, and tradition. An awareness of the sacrifices and values of ancestors was an important consideration to all participants in this study. For instance, Ezio is a descendant of a celebrated Diné leader. Reflecting on this lineage is a source of pride and inspiration to Ezio.

Jane was inspired to become more serious in her studies due to her grandfather's positive influence.

He kind of instructs us on what to do, in terms of what we want to achieve in our lives. He kind of motivates us and tells us we're good, and we have the ability to achieve whatever we want, as long as we attempt to obtain it. He was really also another person that kind of helped me focus more on my education.... Ever since we were little, he was kind of a figure in the background where he would always ask me about my grades, and kind of persuade me to try to do better than what I was doing before.... So, he kind of motivated me to see myself in a different light than from when I was in high school.

Jane takes her grandfather's advice seriously, and she hopes that she can similarly inspire future generations of her family: "So, in that way I figure I also have that responsibility, because I also have younger nieces, and then I have one nephew, and later on when they grow up, and they start to have conflicts like I did in high school... I can provide them with answers." In Jane's case, mentoring younger generations is an

important family tradition.

Ben also described having a strong relationship with his grandparents (as outlined in the Microsystem-level Factors section). He listens to their advice, and values their insight about his family. This is why Ben takes pride in a family tradition that he hopes to carry on himself: leadership. Leadership is an important quality for Ben, and he characterizes it as a trait he inherited from his ancestors.

I knew that personally it did influence me, I've been told by my grandparents before that I come from a lineage of leaders, especially within our area, so they would always tell me that we come from a long line of leaders, and it's not something that you can teach, it's just something that you have within you.

John, Carol, Ezio, and Ben take pride in honoring traditions. In Carol's words, "Even though we're surrounded with different religions here on campus, personally for me, I still need to follow and obey my traditional rules."

Elena finds motivation when she considers what it means to be a Diné: "Being a Diné...that just meant having to step up. There were times where some people would get lazy of a certain thing. So, the [Diné] youth would get tired of it and [the Diné youth] would just have to step in and be like 'This is what we need to do, we can't just be slacking off all the time.'" Elena believes that an important tradition for Diné youth is to be proactive and to solve problems in their community. Like the Diné youth she describes, Elena also hopes to make a positive impact on the Reservation's ecology using her degree.

Each of the participants in this research honor elders, ancestors, and traditions. Each of these factors demonstrate the impact of historical events and values on the participants. Their desire to become role models to future generation of Diné students (as

outlined in the microsystem-level factors section) demonstrates the way chronosystem-level factors will continue to influence these participants, their families, and their communities.

Chief Manuelito. All of the participants in this research mentioned Chief Manuelito either as a motivating figure or because of the scholarship in his name. Chief Manuelito was a decorated Diné chief who was a famous advocate of education. He is quoted as saying “Education is the ladder; tell our people to take it.” A prominent scholarship foundation exists in his honor, and each of the participants in this research were familiar with the scholarship. Ben summarizes the significance of Chief Manuelito to Diné students.

Chief Manuelito was very charismatic person that the people look up to. He saw that...the traditional way life prior to The Long Walk, it wasn't going to be the same. That the Western world, it was spreading.... But he told them that whenever that time comes, that you're going to have to adjust to the White man's world. That going about our way, like how we've been used to, it's not going to work anymore. That you're going to have to get your education to compete with them in their own world. So, his key message was go get your education. Everything that's here, that you're used to, you've learned, it will always be here, it's a part of you... But what you need to do now because the world is changing, is that you've got to go to the White man's school, get the education that they offer, and take that. So, that way you learn from them, and come back to help your people. So, that was one of the key messages. That's why the Diné Nation, one of the highest scholarships that they offer is the Manuelito scholarship.

Carol recalled that in elementary school, students learned a song about the value of education inspired by Chief Manuelito. She summarizes the significance of the song.

I would say, there's people looking at you, and people believe in you to succeed, so when you hear that song, or you hear people offering you money to go to school, it just gives you a bigger challenge. And saying, “Hey there's other people that want me to succeed, not just my family and everything, there's other people that believe in me to go and become something.”

Ezio also mentioned Chief Manuelito as a historical factor who serves as a role model to him today, and the other participants discussed him in the context of having received the Chief Manuelito Scholarship.

Chief Manuelito's influence, either through the scholarship foundation that helps Diné students to access college or through stories of his life and legacy, has touched the lives of each participant in this research. Ben, Carol, and Ezio see Chief Manuelito as a revolutionary figure that inspires Diné students to this day.

Chronosystem-level factors were evident among these participants both in terms of inherited values and significant historical figures. All of the participants had a great deal of respect for their family elders, and in some cases demonstrated inherited traits such as resilience. All of the participants were aware of Chief Manuelito to some degree, and in all cases considered him to be an important role model.

Chapter Conclusion

Each of the participants in this research is extremely hard-working and dedicated to attaining a bachelor's or higher degree. In our conversations, I was struck by the sacrifices that they and their families made to help them to access, enroll, and persist in college. All of the students indicated that their families were a very important facilitator to their access, enrollment, and persistence in higher education. After talking with these six participants, the themes related above became evident and were repeated between the participants. In the next section the significance of the themes for stakeholders will be discussed.

CHAPTER V

DISCUSSION AND IMPLICATIONS

The purpose of this study was to examine the facilitators and barriers to postsecondary access, enrollment, and persistence among Diné college students. This study was designed to learn more about their backgrounds and educational experiences through their participation in a semistructured interview and a demographic survey. Specifically, this study examined the following questions.

1. What factors do Diné students identify as essential to their access, enrollment, and persistence in postsecondary education?
2. How do these factors align with ecological systems levels (Bronfenbrenner, 1977, 1979, 1994, 2005)?

The interviews were open coded to identify these factors. Recurring factors were organized into themes, and the themes were organized by the levels of ecological systems theory. The themes that emerged in this research demonstrate the importance of each of the levels of ecological systems theory in facilitating Diné access, enrollment, and persistence in higher education. This chapter will summarize and interpret the research findings in response to the research questions and provide recommendations for stakeholders.

Summary and Interpretation of Themes

In this chapter, the factors that the Diné students in this research identified as essential to their access, enrollment, and persistence in postsecondary education are summarized and interpreted (see Figure 2). These results are in response to research

question one, “What factors do Diné students identify as essential to their access, enrollment, and persistence in postsecondary education?” They are organized and presented in order of the ecological systems they align with, addressing research question two, “How do these factors align with ecological systems levels?”

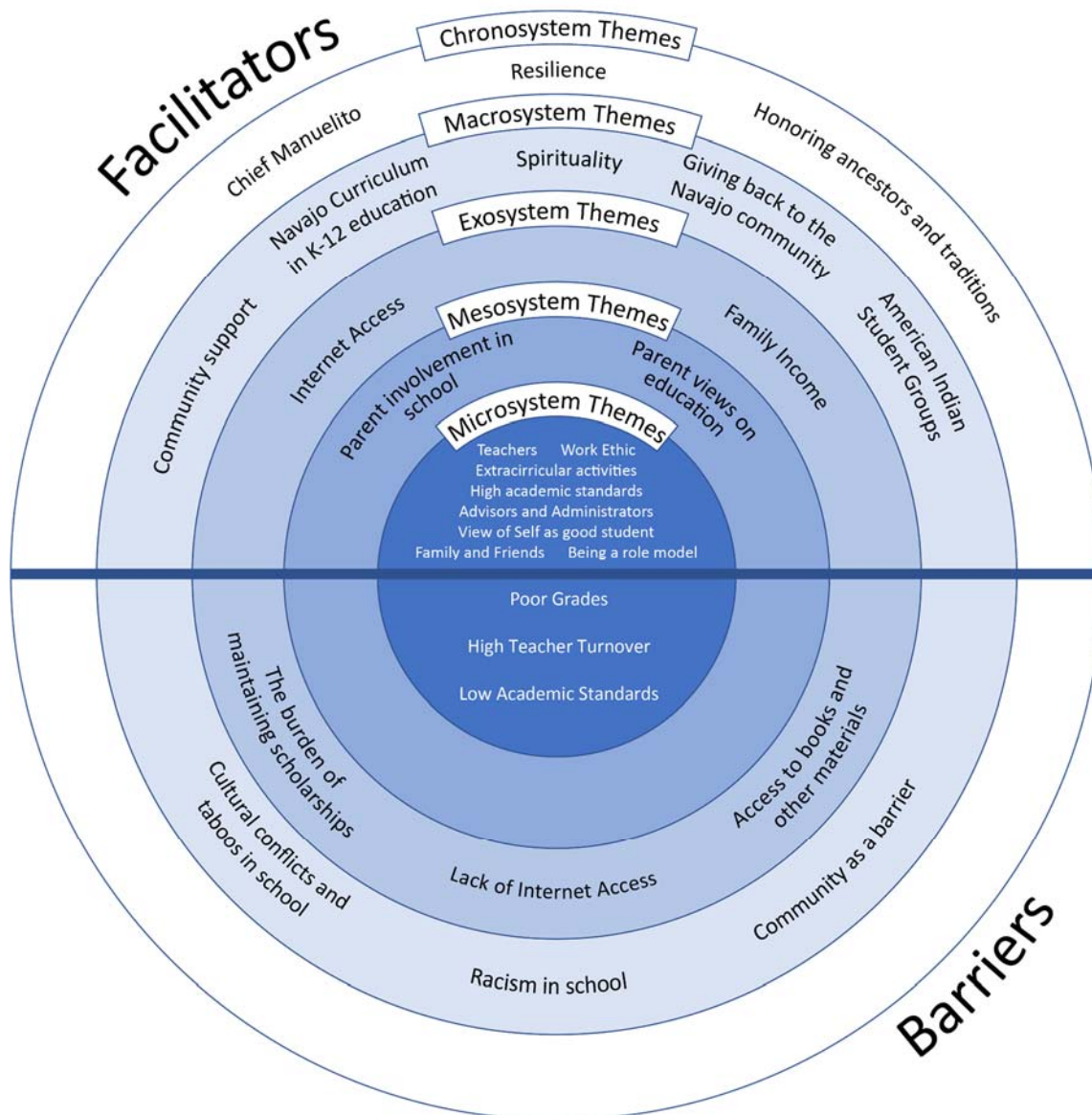


Figure 2. Facilitators and barriers organized by ecological systems levels.

Microsystem-Level Factors

Factors related to self are important facilitators. Factors related to self at the microsystem level were identified as important facilitators of student access, enrollment, and persistence in postsecondary education. View of self as a good student, being a role model, and strong work ethic are qualities that were shared by each of the participants.

The participants in this research all believed themselves to be good students by the time they entered college. Earning good grades and test scores were important ways in which they came to see themselves as good students. Their confidence led them to help other students, and to seek out challenging coursework. These findings are similar to the findings of Gloria and Robinson Kurpius (2001) and Thompson et al. (2013), who noted that view of self was a strong predictor of Native American student persistence intentions. As each of the participants believed themselves to be strong and capable student, this belief in their ability gave them the confidence to apply to college, and the desire to earn a degree. Thus, the findings of this research indicate that this view of self is one important facilitator of access, enrollment, and persistence in postsecondary education.

It is important to note that poor grades were one factor that served as a barrier to these students' persistence intentions. Three of the six participants reported feeling discouraged after receiving poor grades. Given the role of grades in their strong view of self, it follows that receiving poor grades would be disconcerting, given their perceptions of themselves as good students.

The participants in this research each had a strong work ethic. Their motivation to

earn a college degree led them to put in extra effort in many different ways. Balancing schoolwork with extracurricular activities and/or part-time jobs, studying and helping others to study, seeking out challenging coursework, and spending extra time at school as K-12 students in order to access resources, such as the Internet, are a few ways that these participants demonstrated their strong work ethic. They took on these challenges to help them access and enroll in college and for the sake of learning and growing.

Of these participants, Ezio was the only student who elected not to take advanced coursework (such as AP) in high school. While Elena was not offered AP courses, she attended a college preparatory school that offered advanced curriculum by design. The students who did elect to take advanced courses did so because they looked forward to the challenge (such as John), or because they were seeking to prepare themselves for college (such as Carol). These students' willingness to seek out challenging curriculum is one important indicator of their strong work ethic.

Another key way that the participants demonstrated a strong work ethic was in their desire to be a role model to other Diné students. Each of the participants shared stories of a student, teacher, family member, or community member who inspired them to persist in their education. In turn, each of the participants indicated a desire to be a good role model to others. In some cases, the participants were already working to set good examples for other Diné students. For example, Carol taking the time to give a talk at her chapter house, or Jane trying to set an example for her younger relatives.

These examples demonstrate that a strong work ethic was an important quality shared by each of the participants in this research. Whether to help them access and enroll

in college, for the opportunity to learn and grow, or to help other Diné students, the strong work ethic of the participants led them to pursue many endeavors.

Relationships with family. Consistent with the review of the literature, family support proved to be very important to the participants' accessing, enrolling, and persisting in college. Although three of the participants came from single-parent homes, all of the parents of the students in this study strongly encouraged their children to earn good grades in their K-12 education and to attend college. Parents demonstrated their dedication to their children's success through interacting with teachers, attending school functions, organizing spiritual and religious ceremonies, helping students to remember due dates and visit college campuses, and more. All of the students in this study considered their parents and family to be one of the most, if not the most, important factor in helping them to access, enroll, and persist in higher education. This is consistent with McInerney and McInerney's (2000) finding that there is a strong relationship between family support and student motivation. Thus, a key finding of this research is that family support is a crucial factor for Diné student access, enrollment, and persistence in postsecondary education.

Relationships with friends influence school performance. Each of the six participants reported that their friends had some level of influence on their academic performance. Whether these relationships led to stronger performance (such as Ben and his friends challenging each other to achieve higher grades) or weaker performance (such as Jane and her friend enabling each other in not completing their homework), peers had an influence on the participants' ability to access, enroll, and persist in postsecondary

education. This is consistent with Burack et al.'s (2013) finding that peer relationships were an important predictor of student GPA among Naskapi students. Therefore, peer relationships are an important microsystem-level factor the postsecondary access, enrollment, and persistence of Diné students.

Relationships with teachers and administrators can motivate students to enroll. Teachers and administrators who had high levels of expectation was another key microsystem-level factor. Coburn and Nelson (1987) found that 68% of the American Indian students they surveyed most valued teachers who held high expectations of them. When asked about teachers who influenced their desire to attend college, each of the students in this study recalled multiple teachers who motivated them either by demonstrating a belief in their capabilities or by sharing stories and information about the college experience. A common factor among each of these teachers was that the participants believed that they held the student up to high standards, demanding a high quality of work and developing rigorous curriculum. This was especially poignant in Jane's case, who felt that she was often given "pity points" by many of her teachers, who sometimes allowed her better grades than she deserved because she was a minority. Jane was unique in this study because she was the only student who was not always motivated to do well in school, and who did not always consider herself to be a strong student. She felt a special sense of gratitude inspiration when she encountered a teacher who assured her that she would not be graded differently than anyone else. It was around this time that Jane began to take her studies more seriously. These findings demonstrate that holding students to high standards is an important way that teachers can motivate Diné students to

enroll and persist in postsecondary education. The confidence and experience these students gained from being held to high standards helped to inspire them to attend college, and prepared them for the expectations they would face once enrolled.

Another teacher-related factor that was significant to John, Ben, and Ezio was teacher turnover. Each of these three students reported that a high number of teachers at their school left after only a short time, with negative impacts on their learning. In John's words, "it kept changing the format and everything, and we just kept losing track of where we were." This aligns with one of Barnhardt's (1994) observations that students value teachers who have years of experience in their schools. Thus, schools which are able to retain a strong and experienced staff could be helping to give their students the skills they need to access, enroll, and persist in higher education.

Finally, cultural supports in the classroom were also important, such as learning about Diné-specific topics in K-12 education. All five of the participants who were taught Diné topics thought it was a positive motivator, and the one student who did not receive education on Diné-related topics wished that she had. John recalled that even when one of his teachers did not speak Diné, he appreciated her attempts to greet them in Diné "Cause that means that they showed interest." This aligns with McInerney, Roche, McInerney, and Marsh's (1997) observation that American Indian students appreciate it when teachers are knowledgeable about their language and culture, and Kanu's (2006) finding that American Indian students in a class with more culturally-specific language and content looked forward to what they would learn that day. Teachers of Diné students may find that efforts to integrate Diné language and/or culture into their curriculum could

lead to increased engagement.

Extracurricular activities help students to access college. Extracurricular activities were an important theme among the participants. Each of the students, with the exception of Jane, participated in extracurricular activities as K-12 students, and each of the six participated in extracurricular activities as college students. As K-12 students, extracurricular activities helped students to prepare for college by gaining valuable experience. For instance, Carol's experience with student government was "was equal [parts preparing for college and for fun]." Ezio and Ben both recalled that their time playing high school sports taught them the value of hard work. As college students, five of the six participants credited their extracurricular involvement in their university's American Indian student group with helping them to persist in college.

The involvement of these participants in extracurricular activities is consistent with Coburn and Nelson's 1987 finding that many American Indian students who graduate from high school are involved in extracurricular activities. Thus, an important conclusion of this research is that involvement in extracurricular activities is an important facilitator of Diné student access, enrollment, and persistence in postsecondary education.

Microsystem-level factors had a significant impact on the participants in this research both in terms of sheer numbers and the potential they demonstrated to motivate and inspire students. Microsystem-level factors are made up by the attitudes and goals of the participants themselves, as well as the people and places that these students interact with directly. This research demonstrated that at times, these factors have a bidirectional effect. For instance, a student's attitudes about school are shaped in part by their teachers,

but the way they interact with their teachers has the potential to influence their attitudes about school. A good example of this is John, a highly motivated student who feels comfortable and confident in school, feeling discouraged after receiving a poor grade. He then relies on his view of himself as a good student to conclude that he will do better next time, offsetting the feelings of discouragement.

Bidirectional relationships like this one demonstrate the power that each of these microsystem-level factors has to influence the others. It's possible that students who see one or more of these factors as barriers (such as not viewing themselves as good students) may be able to overcome these barriers if the other factors are strong facilitators. Thus, parents, teachers, friends, and administrators all have the power to positively influence Diné students to access, enroll, and persist in postsecondary education.

Mesosystem-Level Factors

All of the participants reported that at least one of their parents regularly attended parent teacher conferences throughout their K-12 education, although this attendance may have tapered off through high school. All of the participants reported that their parents checked their grades and were invested in helping students keep their grades up. All of the participants reported that their parents held education in high esteem and made college enrollment a family goal.

Parent involvement in school. All of the parents in this research were involved in their students' schooling to varying degrees. Each of the participants' parents (either one or both) attended parent teacher conferences and checked their grades. Some parents (like Ben's) attended every conference and took careful notes. Other parents (like

Elena's) had contacts at the school and would use them to check up on their children. Still other parents (like John's) attended conferences occasionally, but generally were confident in their student's performance and did not develop strong relationships with teachers. This diverges from K. M. Powers' (2006) finding that parent involvement does not correlate with achievement, presence and participation, and school completion. On the contrary, this research revealed a strong relationship between parental involvement and students who successfully accessed and enrolled in higher education. In this research, it appears that parent involvement in education may have an even stronger impact on their children's desire to persist in school than their own level of education.

Parent views on education. All of the families in this research held education in high regard and demonstrated this mindset through their own educational pursuits (four of the six participants had at least one parent who had achieved some level of postsecondary education) and through their words and actions (checking grades, going to conferences, setting high expectations). This is consistent with Barnhardt's (1994) finding that parents of American Indian students were supportive of their children's educational goals regardless of their level of education. This lends credence to the conclusion drawn in the review of the literature that parent education level alone is not a predictor of Native American student access, enrollment, and persistence in higher education.

These mesosystem-level factors deal with the ways in which two or more microsystem-level factors interact with one another. The most significant ways this manifested in this research was through the parent-school relationships described above.

Although the parents of the participants in this research were different in many ways (e.g., careers, education level) the one thing they had in common was their support for their children's education, and the ways they demonstrated that support to their children and their children's schools. While the parents of the participants in this research did not always have the time to attend every parent teacher conference, they were active in checking their children's grades, maintaining positive relationships with their children's teachers, and making it known to their children that education was a worthwhile pursuit. Thus, the parent-child relationship was an important and significant common factor for the six participants in this research.

Exosystem-Level Factors

Exosystem-level factors were important to the participants in this research. Internet access was limited for four of the six participants during their K-12 education. None of the participants relied solely on family to pay for their college expenses, and all of them relied heavily on scholarships to pay their tuition (although two of the participants' parents contributed a small amount of money). A lack of family income to supplement their scholarships made it difficult for four of the six participants to pay for things they needed such as supplies and room and board during their K-12 and college education.

Internet access. Only two students in this research (Jane and Carol) had access to the Internet in their home, making it much simpler for them to research and apply to colleges. The students who did not have Internet in their homes were forced to spend extra time and energy on things like researching colleges, accessing necessary forms, and

applying for scholarships. These students needed to arrive to school early or stay late, or rely on other resources such as chapter houses to access this technology.

The lack of Internet access at home among these participants is especially troubling when taken together with L. A. Jackson et al.'s (2006) finding that low-income students who do not have Internet access at home tend to score lower on standardized measures. The participants in this resource relied on the Internet in order to complete homework assignments as well as to research and apply to colleges. Four of the participants were only able to take advantage of the Internet because they were highly motivated to earn good grades and attend college, and put in extra time and effort to access it. This finding coupled with L. A. Jackson et al.'s indicates that students who do not have Internet access at home may be unable or unwilling to access it elsewhere, thus having a negative impact on their ability to complete their schoolwork.

Still, the students in this research were able to access the Internet when they needed it, despite the extra effort required for four of the participants. The Internet was an important resource for these students, and the fact that they were able to access it through their schools proved to be a great asset as they completed their schoolwork and worked through the process of applying for college. Easier access to the Internet may be an important facilitator in motivating Diné students to complete their homework as well as to research and apply to college.

Socioeconomic factors. In this research, we considered socioeconomic status to be an exosystem-level factor. SES was a major factor when it came to the access, enrollment, and persistence of the students.

SES was an important factor in how these students paid for school. For each of the six students, scholarships were the primary way they paid for school. Three of the participants relied on their parents to pay any smaller remaining balances, and four of the participants held part-time jobs. Each of the participants dedicated a great amount of time to searching and applying for scholarships. Ezio pointed out that applying for scholarships often required extensive documentation and research, making this process akin to holding a part-time job. John, a highly motivated student, considered dropping out of school when a technicality caused him to temporarily lose one of his scholarships. Ezio also felt discouraged due to problems coordinating the timing of his scholarship payments. given the complexity and rigor of maintaining scholarships, Carol and Jane pointed out their frustration at the perception that American Indian students can get an easy and free ride to school.

Thus, one important conclusion of this research is that the complex process of locating, applying for, and maintaining scholarships may be a barrier to the enrollment and persistence of Diné students. Efforts to better coordinate scholarship payments with university deadlines is one change that could make the experience of paying tuition simpler for Diné students. Furthermore, advising services that help students to understand the requirements of maintaining their scholarships over the years could help to clarify the process, saving Diné students valuable time and energy.

The exosystem-level factors presented in this research demonstrate potential barriers when it comes to Diné students being able to access, enroll, and persist in postsecondary education. The barriers of Internet access and socioeconomic status were

overcome by the participants' motivation and diligence in navigating these barriers. The participants' schools and communities also made remarkable efforts to provide Internet access to these students. While not all participants had Internet access at home, they were all able to use the Internet at school and chapter houses. These community efforts to provide Internet access helped these participants find the resources needed to learn and progress in their schoolwork and to research about and apply to colleges. Thus, the availability of the Internet within their communities was an important facilitator to accessing and enrolling in college for these participants.

The extra work required to access the Internet outside of school hours and to locate and maintain scholarships was a barrier for the students in this research. Because of their motivation to access, enroll, and persist in postsecondary education, they were able to overcome these barriers. For students who are not similarly motivated, putting in this extra effort might be prohibitive. Thus, these exosystem-level factors could be substantial barriers to students who are not sufficiently motivated to spend the time required to access the Internet and research and maintain scholarships.

Macrosystem-Level Factors

Community and cultural supports were important to the participants in this research as they sought to access and enroll in college. Community and cultural supports continue to guide the participants as they persist in college. Community resources such as chapter houses were important to students as they applied to college, providing a valuable source of technology support such as the Internet and fax machines. The participants in this research were motivated to persist because of a desire to give back to these

communities. Cultural supports such as spiritual practices helped the participants to persist in college.

Spirituality helps to motivate and overcome barriers. Spirituality was a strong motivator for all of the participants to varying degrees. Most of the time this spirituality was discussed in a positive context, with participants reflecting fondly on ceremonies they had taken part in, or hoped to take part in one day. Participants who had taken part in ceremonies viewed them as a source of strength and support. The use of spiritual artifacts such as corn pollen pouches or sage and sweetgrass was common among all of the participants, and they viewed these artifacts as sources of cleansing and protection. The Diné students in this research were all spiritually active people, and they all attributed their spirituality as a facilitator of their ability to access, enroll, and persist in college.

One key example of spirituality helping the participants to overcome a cultural barrier to their persistence is the graveyard on campus, with four of the six participants reporting strong discomfort with its presence. These four participants took various measures to negate their feelings of discomfort, from walking around it instead of through or alongside it (Ben, Ezio, and Elena) to attempting to counter its negative presence by using artifacts designed to elicit protection (John). In Ezio's case, the presence of the graveyard was a factor that he and his family considered when deciding on enrolling on the main campus. The graveyard in campus is a strong example of a cultural conflict between Western and traditional Diné values. While it was a barrier that the four participants who were impacted by its presence were able to overcome, other Diné students may not have the same outcome. Depending on their spiritual beliefs,

living and studying so close to a graveyard is a taboo that may prevent Diné students from choosing to enroll on campuses that are in close proximity to one.

A reliance on traditional spiritual practices was an important motivator to participants as they accessed, enrolled, and continued to persist in college. Specifically, participation in ceremonies and the use of artifacts such as corn pollen pouches to clarify and provide protection serve as sources of motivation for the participants in this research. In the instance of the graveyard on campus, Ezio and John's reliance on these practices helped them to overcome the cultural barrier of its presence. This example aligns with Huffman, Sill, and Brokenleg's (1986) finding that spirituality is an important component of American Indian school success. However, both Ezio and Jane mentioned their frustration that dorm regulations prevented them from engaging in some of their spiritual practices. Greater tolerance in campus policies when it comes to the spiritual practices of Diné students may lead to an increase in persistence. If these students are permitted to burn sage, sweetgrass, and other traditional plants, they may feel a greater sense of safety and belonging on their campus.

Community can be a source of support and sometimes a barrier. Three of the six participants in this research relied on community resources, such as chapter houses, when they decided to enroll in college. Whether because of chapter-wide youth programs (as in Elena's case), access to technology such as fax machines (as in John's case), or feeling supported by the community (as in Carol's case), these resources were valuable to the participants.

While the participants in this research were all enthusiastic about giving back to

their communities, occasionally cultural factors were also described as a barrier to persistence. Ben's sadness when he considered the lack of role models and college educated people in his community sometimes made him feel discouraged. Along these lines, although she herself was enrolled in college, Carol described feelings of isolation because of being a Diné college student which was something of a rarity in her community. Ben also expressed feelings of discouragement at times during his K-12 education due to the relatively low number of his peers who would be attending college. These examples demonstrate that while cultural considerations are often a source of pride and motivation for Diné students, their status as college students makes them a minority among the Diné population. This minority status can sometimes be a cause of discouragement. While the American Indian student group helped five of these participants to feel a sense of community and belonging on campus, universities should keep in mind the feelings of isolation that go along with being a minority on campus as they seek to create new strategies in helping Diné students to persist.

Giving back to the Diné community. Each of the participants in this research were motivated to help the Diné people, oftentimes by helping to address social issues. Ezio wanting to improve the road systems on the reservation and Jane wanting to help struggling teenagers are two good examples of this. The drive to improve the lives of Diné people demonstrates that these participants were largely inspired to solve some of the problems that observed during their K-12 education. They demonstrated strong resilience by choosing to improve their communities rather than accepting the problems.

American Indian student groups are important to persistence. One significant

cultural support was the presence of the American Indian student group on the main campus. All five participants who attended school on the main campus were members of this group, and all five of them indicated that it was a positive factor that helped them to persist in college.

Elena and John both mentioned making connections through the club that helped them persist in school. John learned important information about scholarships, and Elena made a connection with an adviser. Jane mentioned that her adviser's office "has nice Native designs," which makes her feel comfortable. This aligns with Mason, Narlock, Muhisani, and Bhatt's (2017) conclusion that differentiated advising with attention to cultural background and community-building support services is important to adult learners' transition to postsecondary education. It also correlates with Shield's (2009) observation that for female American Indian students, the ability to draw from their own intrinsic cultural practices and university sanctioned support services as needed was an important predictor of college success.

Another way that the club positively influenced the participants in this research was by helping them to feel a sense of connection and belonging on their college campus. The literature reviewed in this research revealed that American Indian students often have a difficult time adjusting to life on a college campus (Flynn et al., 2012). Consistent with the literature review (Guillory; 2009; Gloria & Robinson Kurpius, 2001), the American Indian student group proved to be an important facilitator to a sense of belonging to the students in this research. Whether because of the overwhelming number of white students (as in Jane's case), the lack of familiar designs (as in Elena's case), or because of the lack

of familiar traditional practices (as in Ben and Ezio's case), these students all expressed that the American Indian student group on their campus helped to provide them with familiarity that was missing from their daily campus life.

Racism is a barrier to college persistence. Consistent with the literature review, racism was a theme in this research (Flynn et al., 2012; Garcia, 1999; A. P. Jackson et al., 2003; Taylor, 2001). Four of the six participants reported experiencing racism at various times throughout their education. In Jane's case, being asked ignorant questions and being treated differently by her teachers was discouraging, and led to feelings of isolation that persisted through much of her high school tenure. In Elena and Ben's case, seeing white students on their college campus dress in Indian costumes made them feel as though their culture, and by extension themselves, was misunderstood and objectified by the dominant culture on their campus. These feelings were echoed when the white student referred to traditional regalia as a costume in the example related by Ben, Ezio, and Jane.

The examples of racism shared by the participants are noteworthy because in each case, the racism was motivated by ignorance rather than hatred or anger. A lack of understanding, knowledge, and empathy led to each of the instances reported by the participants. Thus, a better understanding of Diné and broader American Indian culture could help to alleviate this lack of knowledge. Students and teachers who are equipped with stronger knowledge may be less likely to make comments that can lead to frustration and discouragement among Diné students. Colleges and universities that are seeking to impart more knowledge about American Indian cultural practices on their campuses might find an American Indian student group to be an excellent resource.

The macrosystem-level factors identified in this research demonstrate the immense importance of cultural and spiritual considerations when it comes to Diné student persistence. The three most significant barriers identified in this level were feeling like a minority as a Diné student, cultural conflict on campus (e.g., the graveyard), and experiencing racism. In each of these instances, the students relied on cultural and spiritual supports to help them to overcome these barriers.

The experience of going off to college on in an unfamiliar place is a scary experience for students of any background. For the students in this research, the experience was especially scary. For instance, Jane's observation that "There's just a bunch of white people here, and there's hardly any colored skins" demonstrates how isolating being on a large campus can be for minority students. Five of the six students had spent the majority of their lives in communities that were predominantly Diné or American Indian. The transition onto a more diverse campus was intimidating to the participants in this research. Although university policy sometimes made it difficult, reliance on spiritual practices helped some of these students to feel safe in an unfamiliar place with values different than their own (for instance, John relying on an arrowhead for some measure of protection and comfort because of the nearby graveyard).

All five of the participants on the main campus unequivocally voiced their support for the American Indian student group. It functions as a cultural touchstone for them, helping them to feel less isolated in an unfamiliar place where they are in the extreme minority, some of them for the first time in their lives, and where four of them had experienced racism from their non-Native peers. The group was a source of comfort and

also a source of knowledge, as in John's case when he found members to be helpful in solving financial problems related to scholarships. The participants' involvement in the American Indian student group may help them to develop some of the qualities of transculturated students, a phenomenon studied by Huffman (2001). Huffman determined that American Indian students were able to derive strength and confidence from their identity that allowed them to thrive within their campus community. Similar to Huffman's findings, the students in this research derived strength and confidence from the American Indian student group, helping them to navigate the different cultures they are a part of on campus. Their reliance on this community resource mirrors their desire to give back to the broader Diné community: All six of the participants in this research were motivated by their desire to help improve the lives of Diné people through improving life on the Reservation, mentoring other students, and sharing the knowledge they acquired in college.

For these reasons, the mesosystem-level factors presented challenges but also solutions for the students in this research. All six of the participants in this research relied on traditional spiritual practices to some extent to help them persist. All five of the participants who had access to the American Indian student group participated and found it to be useful. Each of the six participants was motivated by a desire to give back to the Diné community. These motivating factors helped them to persist even when they were faced with challenges such as racism, feelings of isolation, and cultural conflicts.

Chronosystem-Level Factors

Historical role models, ancestors, and events played an important part in

motivating the students in this research to access, enroll, and persist in college. Resilience along with a respect for ancestors, elders, and traditions were some of the key themes that manifested in the chronosystem level.

Resilience motivates students. Ben's characterization of Indian boarding schools as institutions that "try to strip you of your cultural teaching, of your cultural beliefs," is consistent with the 2014 Bureau of Indian Education report referenced in the literature review. In contrast to Bisbee (2013) and Milne's (2016) findings, the two participants who had relatives who attended Indian boarding schools reported that the boarding school experience did not lead to a negative perception of education for these relatives. On the contrary, these relatives developed a strong sense of resilience, and passed on a deep reverence for education to the participants. This finding is consistent with the conclusion of Wexler (2014), who observed elder generations of American Indians stressed working hard to regain what was lost because of the boarding school system. This sense of resilience, along with a desire to honor and respect their ancestors, is an important motivator to these students when it comes to persisting in education.

Diné students are inspired by elders, ancestors, and traditions. All six of the participants in this research expressed a desire to persist in college in order to honor their ancestors, elders, or traditions. Whether to honor their ancestors (as in the case of Ezio), their elders (as in Jane's case), or because of a reverence for tradition (as in John's case), a respect for traditions and generations who came before was a common theme in this research. For these participants, earning a postsecondary degree was an important way that they could honor their families, their tribe, and their traditions.

Chief Manuelito is an important historical figure mentioned in all of the interviews. A Diné chieftain who valued education, his views on the importance of education to the Diné people were a strong encouragement to the participants in this research. A highly competitive scholarship exists in his name to help Diné students to attend college. Chief Manuelito served as a role model to the participants in this research, who understood him to be a highly influential figure that supported education.

Chronosystem-level factors played an important role in this research through resilience passed down through the generations, a shared value of traditions, elders, and ancestors, and a respect for Chief Manuelito and his goal for the Diné people to educate themselves in order to prosper. The participants in this research had tremendous respect for their elders and ancestors, evidenced by the tremendous respect they had for their grandparents and also for Chief Manuelito in particular. Jane and Ben in particular shared stories that demonstrated the way they look up to their grandparents, and intend to carry on ancestral legacies by going to school and being role models and leaders to the younger generations of their family.

Along these lines, honoring traditions was very important to John, Carol, Ben, and Ezio. Following traditions was an important part in establishing their identity as Diné students and also in setting goals for themselves. Elena's example about Diné youth acting as problem solvers is an excellent example of a tradition that reinforced her identity as a Diné student and motivated her to solve problems in her community. Chief Manuelito's quote, "Education is the ladder, tell our people to take it." was highly influential in establishing a need for education in the minds of these participants. In

context, Chief Manuelito was perhaps expressing the only way for Diné people to continue to thrive in their new colonized world was to become educated in order to preserve their heritage. The participants in this research desire to use their education to preserve Diné heritage, whether through preserving important cultural sites, improving infrastructure, or improving the lives of others by acting as a positive role model. The participants in this research paid close attention to each of these factors, which played an important role in their decision to attain a postsecondary degree.

Recommendations for Stakeholders

The results of this research reveal the important role numerous stakeholders play in various levels of ecological systems when it comes to helping Diné students to access, enroll, and persist in college. In this section, we present recommendations for stakeholders based on the results of the research.

Students

Diné students have the ability to affect change for themselves by interacting with the factors in the different levels of their ecological systems. Below are a recommendations for Diné students to assist access, enrollment, and persistence in attaining a postsecondary education.

Microsystem. Goal setting was important to the participants in this research. While their personal reasons for attaining a college education varied, a common goal they all shared was to give back to the Diné community through using their degree to improve life on the Reservation and to provide mentorship to other Dine students. Diné students

may find it useful to consider what they would like to accomplish with their life, and then evaluate the ways in which postsecondary education could benefit them in this pursuit. The participants in this research relied on guidance counselors as well as advisors to form a plan to help them achieve their goals. Thus, other Diné students may also find it valuable to utilize similar resources within their microsystem to develop a plan of their own.

Many K-12 students don't relish the idea of a teacher who assigns difficult homework assignments or who seems to be a tough grader. However, the participants in this research valued teachers such as these who set high standards. For these participants, high standards made them feel empowered. They also helped to prepare the participants for college, as in Elena and Ezio's cases. Diné students who would like to attain a postsecondary education might consider the way they view high standards. While high standards set by teachers can sometimes mean lower scores or extra time spent on homework, they also represent an opportunity for growth. Instead of being discouraged by teachers who set high standards, Diné students might find that challenging themselves to meet these high standards leads to personal growth and valuable experience.

Extracurricular activities were also a common theme in this research, with five of the six participants having been involved in extracurricular activities in the past. These participants credited extracurricular activities with teaching them important values they could apply to their school experience, such as the value of working hard. Participants (such as Carol) also took advantage of the extracurricular activities at their school to help build their college resumes. Diné students who are interested in accessing and enrolling

in postsecondary education may find that involvement in extracurricular activities can help to prepare them for college in these ways. Some of the extracurricular activities these participants engaged in included yearbook, student government, sports, and “mascot.” This range demonstrates that there are a number of extracurricular activities from which to choose.

Finally, another factor that Diné students can be mindful of is the peer groups they develop in school. All six of the participants reported their attitudes and goals about school aligned with at least some of their friends,. In Ben’s case, he and his friends valued high grades and took the opportunity to create friendly competitions with each other. These competitions helped his group of friends to push each other to high grades and good understandings of their coursework. Conversely, Jane recalled a friend who didn’t value achieving academically. Jane and her friend enabled each other to not study or complete homework. These examples demonstrate that peers have the ability to impact academic performance. Diné students who are interested in achieving a postsecondary education would do well to think carefully about the influence their friends have on their academic performance. An important part of achieving personal goals is adhering to a plan. Diné students should make an effort to surround themselves with friends who will help them to adhere to their plan.

Mesosystem. Each of the participants in this research had parents who were involved in their schooling at the mesosystem level. These parents took steps on their own to facilitate this involvement. Diné students who would like to pursue a postsecondary education should consider the opportunities their parents have to be

involved in their schooling. Many schools offer events outside of parent teacher conferences for parents to attend, but it can be difficult for schools to communicate these events to parents. For the Diné students in this research, family was one of their greatest resources. Diné students who consider ways to help their families become more involved in their school, such as passing on information about school events or discussing their school day, may find that this extra effort helps their families to be better-equipped to support them.

Exosystem. Finding access to the Internet within their community is an important step Diné students can take. Ezio gave this piece of advice to any Diné students who might read this research. While it may take extra time and effort, the Internet is an important resource that can help Diné students to identify and apply for important scholarship opportunities, as well as research colleges. Regardless of the level of counseling support within a K-12 school, Internet access can help all students to find this valuable information independently.

Scholarships are one important way Diné students can overcome the exosystem-level barriers related to socioeconomic status. A number of tribal scholarships exist to help these students access college. Conducting independent research by accessing the Internet independently or contacting organizations such as the Office of Navajo Nation Scholarships and Financial Assistance is a first step Diné students can take to learn about the scholarships they qualify for. Consulting with counselors is another way for Diné students to learn about scholarship opportunities.

Macrosystem. Locating resources for American Indian students on campus may

also be a valuable endeavor for Diné students as such groups were a valuable resource to the students in this research. Finding or even starting such a group on campus may help Diné students to feel more motivated and supported in their studies.

Spirituality was another important support for Diné students at the macrosystem level. By relying on spiritual artifacts (such as arrowheads) and practices (such as ceremonies or burning cedar), the students in this research were able to overcome barriers they faced on their college campuses such as racism or cultural taboos (such as the graveyard near campus). While every individual will determine their own spiritual beliefs, the findings of this research suggest that identifying spiritual practices that are affirming and meaningful may help Diné students to persist in postsecondary education.

Giving back to the Diné community was also important to the participants in this research. Whether a future goal (as in the case of five participants) or a current practice (as in Carol's case), giving back to the Diné community was an important motivator to these participants. Other Diné students might consider the benefits of giving back to their community. Organizing informational sessions about college for high school students and their parents might be one important way that Diné college students can give back to the communities they serve. Engaging in activities such as this has the potential to reinforce to Diné students that educational pursuits are worthwhile and important to their community.

Chronosystem. Diné students with an interest in their culture may find inspiration from interacting with their elders and actively learning more about their family history. For some of the participants in this research, these interactions provided a

sense of purpose. Another way that Diné students can engage with their history to help them access and enroll in college is by investigating tribal scholarships, such as the Chief Manuelito scholarship. The participants in this research were inspired by Chief Manuelito's hope for future generations to become educated in order to preserve the Diné way of life. Other Diné students may find similar inspiration in these chronosystem-level factors.

Parents

The parents of the Diné students in this resource were extraordinarily important in supporting and motivating their children to attain a postsecondary education. While not all parents of the participants had the same amount of time or financial resources, they all showed support for their students in a variety of ways. For these participants, family expectations played an important part in their decision to enroll and persist in college. Thus, parents of Diné students can similarly help their students to enroll and persist by finding their own ways of showing support for education

Microsystem. For some participants, their parents simply voiced their expectations that they would attend college. John's recollection "I guess it's really been pushed on me to go to college" is a good example of parents who voiced their expectations in this way. Parents who show support for education in their direct interactions with their children are taking an important step towards motivating them to access and enroll in postsecondary education.

Extracurricular activities were important to the five of the six participants who participated in them. Extracurricular activities sometimes require sacrifice not just from

the student, but from the whole family. Coming home late and missing out on dinner or chore time and sometimes needing money to pay for items such as uniforms or equipment are two ways that families sometimes sacrifice so that their children can participate in extracurricular activities. While these sacrifices can be difficult to circumnavigate, especially financially, extracurricular activities were important to these students' ability to enroll in college due to the skills and experience gained through their participation. Parents might consider the benefits of extracurricular activities. Supporting their children in participating in extracurricular activities is one important way that parents of Diné students can help them to prepare for college.

The influence of friends was an important finding of this research. Each of the six participants reported that their friends had at least some influence on their own school performance. Participants whose friends were also motivated to achieve postsecondary education found their friends to be great supports. For parents of Diné students, keeping abreast of who their children befriend and how they influence one another may be one important way they can help their children to access and enroll in postsecondary education.

Mesosystem. For some of the participants, their parents were involved in their students' education by attending parent teacher conferences. For instance, Ben's recollection of his mother writing a "page-long report" at his parent teacher conferences is a good example of a parent who showed her support by paying close attention to what he was doing in school.

Three of the participants in this research also reported that their parents paid close

attention to their children's social and emotional well-being in school. Ezio, Ben, and Elena all reported that their parents were aware of what they were doing during the school day during their K-12 education, and sometimes took actions to intercede if they were concerned. Elena's recollection that her mother was concerned about some of her friends is a good example of this.

It is arguably impossible for parents to be aware of everything that their children do at school. Still, these parents made efforts to monitor their children's actions and attitudes at school in an attempt to ensure that they made the most of their K-12 educational experience. Thus, parents of Diné students may find that similarly monitoring their children's social and emotional patterns could help them to better access postsecondary education.

Exosystem. The two factors related to exosystem identified in this research were Internet access and socioeconomic status. Diné parents can help their students to access and enroll in college through both of these factors.

While not all of the participants in this research had access to the Internet at home, they were all able to access it at school. The Internet proved to be a valuable resource when it came to researching and applying to colleges. Parents of Diné students who do not have Internet connectivity at home can help their students to access this important resource by providing them with easier access to public Internet sources, such as libraries or schools. Providing or arranging for rides so that students can access the Internet before or after school is one important step parents can take to give their children easier access to the Internet.

The participants in this research came from varying economic backgrounds, but all of them relied on scholarships to pay for college. In some cases, such as Ben's, parents were active in helping them secure these scholarships by reminding them of important deadlines. Other parents of Diné children might similarly support their children. The Office of Navajo Nation Scholarship and Financial Assistance offers families information on a range of scholarships, including the Chief Manuelito scholarship. Parents who are interested in learning more about scholarships for their children can access this organization online at <http://www.onnsfa.org/>, or by phone at (928)-871-7444.

Macrosystem. Each of the participants in this research relied on spiritual practices as a way of finding motivation to persist when they encountered barriers. In all of these cases, the participants learned about these spiritual practices from their families. Parents who engage in traditional spiritual practices may find that explaining to their children how the practices can be used to cultivate feelings of comfort, protection, and safety can help their children to find motivation when they encounter obstacles in school.

The students in this research relied on community-level supports to access and enroll in college. The youth program described by Elena offered access to computers and sporting equipment, making it an ideal place for youth to prepare for postsecondary education by practicing research and extracurricular skills. Parents of Diné students might identify similar programs available in their communities, and consider supporting their students in taking advantages of the resources they offer.

Chronosystem. The participants in this research valued Diné traditions as well as

their family legacies. Ben and Jane are good examples of two students who felt that they were carrying on family legacies due to the influence of grandparents. Parents of Diné students may find that defining a family legacy (either through their influence alone or with the help of grandparents), and demonstrating how education is a part of that legacy, is an important way that they can motivate their students to persist in achieving postsecondary education.

Teachers and Professors

Teachers and professors were important to the participants in this research. All of the participants had stories to share of teachers and participants who motivated them to access, enroll, and persist in achieving a postsecondary education. Following are recommendations that teachers and professors can to help their Diné students to better access, enroll, and persist in achieving a postsecondary education.

Microsystem. An important way that teachers of Diné students can demonstrate caring is by setting high standards for their students. All of the participants in this research appreciated high standards and advanced coursework. Jane is a good example of a student who felt that low standards were set for her by her teachers, and she in turn did not set high standards for herself. It was not until a teacher told her “You’re just like another student in my class, and I will grade you the same. I hold you to the same expectations that I do for my top students” that Jane felt motivated to set a higher standard for herself. Although K-12 students may not show signs of excitement when their teachers set high standards by strictly grading a paper or assigning extra reading, the participants in this research appreciated that their K-12 teachers challenged them by

holding them to high standards.

High standards were important to the students in this research as such standards ultimately prepared them for college. Ezio recalls his teachers saying, “You’re not going to get by when you’re in college if you keep doing this.” By setting high standards in high school, the teachers of these participants prepared them for the challenges they would face in college, ultimately making the challenge of handling their coursework more manageable.

Each of the participants in this research had a strong work ethic, and all of them valued earning high grades. However, three of the participants had specific stories about times they felt discouraged that related to receiving poor grades. Teachers and professors of Diné students might consider their grading policies and the impacts they are likely to have on Diné students. Teachers and professors who find ways to acknowledge strong work ethic while still maintaining high standards, may find that their Diné students are less easily discouraged. Providing specific feedback on assignments that earn poor grades may be one way to help Diné students feel empowered to do better next time.

Finally, being a role model was important to each of the participants in this research. A good example of this phenomenon is Carol, who worked as a tutor to other students during her K-12 and college experience, and who has already given one talk at her chapter house to inspire younger students to pursue college. For Carol, helping other students to achieve good grades helps her to strengthen her view of herself as a good student. Teachers and professors of Diné students may find that allowing these students to have leadership roles in their classes where they are allowed to mentor other students

helps to motivate their Diné students. Peer tutoring and teacher's assistant opportunities are two examples of leadership roles teachers could consider implementing in their classrooms.

Exosystem. Teachers of K-12 Diné students on the Navajo Nation should keep in mind that many of their students likely don't have Internet access, and thus rely on classroom resources in order to complete assignments. Furthermore, students without Internet access at home may have less experience when it comes to conducting research online. Researching colleges online was an important way that these participants accessed and enrolled in postsecondary education. Therefore, teachers of Diné students may find that teaching their students how to conduct research online during school hours may help to sharpen their students' abilities. In-class assignments about how to research and apply to colleges may be especially useful for students who are unaware of how to do these things, or who are unmotivated to do them on their own time. In-class assignments about how to locate and apply for scholarships online would have the dual effect of teaching online research skills while also teaching students how to overcome socioeconomic barriers associated with paying for college.

One important way that college professors can support their Diné students is by keeping in mind that in general, not all students have access to the same resources. Ezio provided several examples of feeling frustrated when professors would require him to purchase expensive textbooks, only to find that these textbooks were seldom, if ever, used. There are many college students like Ezio who are on a tight budget, and who work diligently to find the funding to pay for their college education. For these students, being

asked to purchase materials that are not necessary is a serious sacrifice. Similarly, Ezio expressed frustration that professors would sometimes assume all students have access to resources that they may not. He recalled an instance when the calculator he was using was insufficient for a course, so he felt forced to purchase an expensive calculator at very short notice.

College professors who are mindful of the fact that not all of their students have access to the same financial resources have the power to help Diné students like Ezio to persist in their postsecondary education. By being clear at the beginning of a course what materials will be needed, and by only requiring materials that are important to the completion of the course, students can feel confident when they purchase books and materials.

Macrosystem. K-12 teachers who demonstrated interest and caring for their students were particularly valued by these participants. All of the participants in this research recalled teachers who took an interest in them or their culture as being particularly influential. One way that teachers can demonstrate caring for their Diné students is by integrating Diné topics into their curriculum. While not all teachers of Diné students are Diné or even American Indians themselves, the participants in this research appreciated it when their teachers took an interest in their culture. John recalled a white teacher who attempted to greet her class with a traditional Diné greeting. Although this teacher was not able to successfully deliver the greeting, John appreciated that this teacher made an effort. Jane, who attended school for most of her K-12 education in a suburban, off-reservation school, recalled the absence of American Indian-related topics

and curriculum as a negative experience. Jane also recalled feelings of isolation and conflict in relation to her identity as a Diné woman during her K-12 education. Teachers of Diné students who make an effort to integrate some of the principles of culturally responsive teaching by addressing Diné topics such as language, history, and culture may find that their students are more engaged (Estrin & Nelson-Barber, 1997; Gay, 2002; Nelson-Barber & Estrin, 1995; Oakes & Maday, 2009; Reyhner & Jacobs, 2002).

Chronosystem. One way that professors and teachers can maximize on Diné students' interest in chronosystem-level factors (such as ancestors, elders, and traditions) is by developing assignments that have to do with Diné history. For instance, writing assignments on historical Diné figures or family history may have the potential to engage and motivate students. These types of assignments can easily go hand-in-hand with cultural lessons as described in the macrosystem section above.

K-12 Administrators

K-12 administrators such as principals and counselors have the potential to help Diné students to access, enroll, and persist in college. While the number of interactions students have with these figures may be limited, the programs and policies they implement are important resources for these students.

Microsystem. School counselors were important resources to the participants in this research at the microsystem level. As four of the six participants did not have access to the Internet at home, they relied on school counselors to provide them with the resources needed to apply to college. Brochures handed out by counselors helped students to conduct valuable research. In Ben's case, his counselor was especially active

in letting students know about opportunities that would be helpful to them for enrolling in college. Counselors of Diné students have the potential to be instrumental in helping these students to develop an interest in college, formulate goals related to accessing college and what they'd like to do after college, and to help students to locate and apply for scholarship opportunities.

Since being a role model was important to each of the participants in this research, advisors and administrators may consider ways to allow their Diné students to support one another. Carol mentioned participating in National Honor Society, a student group that requires its members to provide tutoring assistance to other students.

Implementing programs such as National Honor Society would serve the dual purpose of offering tutoring to struggling students while also empowering the students who act as tutors.

Another consideration for administrators who have the ability to influence school and district policy is teacher retention. Teacher retention was an important consideration to three of the participants in this research who articulated the negative impact high teacher turnover had on their educational experience. Administrators might consider ways of incentivizing teachers to remain in their positions to reduce the likelihood of teachers leaving their positions after a short time or mid-year. Taking steps to learn more about the persistence intentions of teacher applicants may be another way to recruit staff who intend to remain in their positions

Mesosystem. Five of the six participants reported that they did not interact with their principals regularly. However, the extracurricular programs that their school

principals oversaw were important to five of the six participants in this research. Extracurricular programs helped these participants to develop confidence, to learn the value of hard work, and to prepare themselves for college. School principals have the power to nurture extracurricular programs, and to help Diné students to access them. By doing these things, principals give Diné students important resources that will help them to prepare for college and thus exert influence at the mesosystem level.

Finally, the parents of the participants in this research were interested and invested in how their students were performing in school as K-12 students. Some of the parents demonstrated this interest at the mesosystem level by attending parent teacher conferences, while others simply checked their students grades. Administrators could help to strengthen parent-school relationships at the mesosystem level by providing more opportunities and ways for parents to interact with the school. Sending out newsletters may be one way to help keep parents involved who are unable to come to parent teacher conferences. Hosting in-school events aside from conferences such as information sessions on how to prepare students for college is another way that administrators could give parents more opportunities to be involved in school.

Exosystem. The schools attended by these participants did an excellent job when it came to Internet connectivity. All of the students in this research were able to rely on their school libraries to access the Internet to complete homework and apply to colleges. Still, four of the participants reported that they needed to do this in the school building on their own time since they did not have Internet access at home. The requirement of coming in before school or staying late may be prohibitive to students who are unable or

not sufficiently motivated to do so. One way that schools could help in this regard is by making college and scholarship research and application a part of their school day, either as curriculum in an existing course or as an activity integrated into flex or advisory time. Giving students the opportunity to use the Internet to access and research college during the school day may inspire students who would not have spent their own time on this research to enroll in college. Not only would opportunities such as these address the lack of Internet connectivity among Diné students, scholarship-oriented research would help students to overcome barriers related to socioeconomic status, the other major exosystem-level factor.

Macrosystem. Each of the participants in this research enjoyed learning about Diné and American Indian topics both in their K-12 schools and in college. Administrators may find that integrating more cultural activities into their curricular or extracurricular activities may be one way to foster engagement among Diné students. Carol and Ben mentioned enjoying dance activities in particular. Integrating activities like this into schools might help to generate excitement about the school community.

Along these lines, ensuring that American Indian-related topics are included as part of the curriculum may be one way to foster motivation for Diné students. Working hand-in-hand with teachers to develop curriculum that centers around American Indian language, history, and culture may be one way to maximize on the enthusiasm the participants in this research demonstrated for these subjects.

Finally, giving back to the Diné community was important to each of the participants in this research. Elena in particular felt that it was the responsibility of Diné

youth to help resolve social problems that plague their communities. Many secondary schools have developed graduation requirements related to community service projects. Schools with a high number of Diné students may find that implementing such requirements along with an emphasis on how community service strengthens and betters the Diné community may lead to increased student motivation.

College Administrators and Advisors

For many college students, interactions with their college administrators is even less frequent than with their K-12 administrators. It can be difficult for college administrators to attend to each student's well-being when they have thousands of students to consider. Still, there are a few distinct ways that college administrators and advisors can help Diné students to persist in their postsecondary education.

Microsystem. Each of the participants in this research viewed themselves as a good student. This strong view of one's self allowed the students to overcome some barriers, such as the discouragement they felt when receiving poor grades. Unsurprisingly, in the college environment, the participants reported that for the most part they did not share the close relationships with their professors that they had with their K-12 teachers. Advisors and administrators who find ways to recognize or reward Diné for their strong work ethic may find that this recognition helps to sustain these students' positive view of self in lieu of the close relationships with teachers they may have enjoyed as K-12 students. One way to accomplish this might be through advisers simply commenting on students' strong work ethic and demonstrating an interest in the complex material they are studying. All five of the students on the main campus

expressed feelings of isolation and developing a positive relationship with an adviser may be one way they could offset these feelings. Another way to help maintain students' positive view of self is to implement an academic honor roll, recognizing students who have achieved high grade point averages.

Mesosystem. Each of the participants in this research reported that their parents were proud that they were attending college. Yet because their campus was so far away from their homes, their parents had few ways to interact with the universities. While the parents kept in touch with their children through phone calls, the universities provided few ways for parents to engage with the school beyond campus tours. University administrators might consider an optional newsletter that could be sent to families of Diné students, letting them know about cultural events and activities on campus. Such communications would give parents a better idea of what campus life is like, and thus allow parents to better support their students.

Exosystem. One exosystem-level barrier for four of the participants in this research was accessing books and other materials. Diné college students are not the only students who are on a tight budget when they enter college. Given the barriers they must overcome as discussed in the results section, financial considerations can be extremely frustrating for these students.

The example given by Ezio in regards to books being assigned that are rarely, if ever, used is one type of barrier that college administrators could help to eliminate. Encouraging faculty to carefully review the books they will assign, and reminding them not to choose books arbitrarily, is one way that administrators could help to eliminate this

barrier. Another way to help students to overcome the high cost of books would be to ensure that the campus library stocks copies of required books so that students can check them out as they are needed. Establishing a textbook exchange in which students are encouraged to donate their textbooks once their class is completed so that other students can use them is another way that some students could avoid paying high prices for textbooks that will only be needed for a single class.

All of the participants in this research were comfortable with talking to their advisers and understood how to reach them. Although the burden of maintaining scholarships was a barrier for John and Ezio, they both relied a good deal on their own research and planning to help overcome this obstacle. All of the participants in this research relied on tribal scholarships to pay their tuition. College advisers might consider conducting research on tribal scholarships to help students who depend on the scholarships to understand to understand the requirements to maintain them. Developing information sessions or handouts related to maintaining tribal scholarships such as the Chief Manuelito Scholarship may be useful to the Diné students who rely on them.

Macrosystem. All of the participants in this research relied on traditional Diné spiritual practices to foster motivation and to overcome barriers. However, many university dorm regulations prohibit students from burning cedar, sage, and other plants that are an important part of Diné spiritual practices. Undoubtedly, these regulations are put in practice to prevent fire hazards. Yet for Diné students, such practices are an important way they find they strength to persist. Both Ezio and Jane mentioned being frustrated with these regulations that prevented them from taking part in important

spiritual practices such as burning cedar and sage. Jeanotte (1982) observed that at the University of North Dakota, policies allowing students to burn cedar and sage in dorms were already in place to help American Indian students feel comfortable in their dorms. College administrators may find that loosening the regulations around burning these substances in dorms is one way they can help the Diné students on their campuses to better persist by allowing them to exercise their macrosystem-level spiritual practices. It would be beneficial for college administrators to consider ways to help Diné students exercise spiritual practices on their campuses.

Another important way that college administrators can help Diné students to better persist is by supporting American Indian student groups. Racism and feelings of isolation are barriers to the persistence of Diné students in this research at the macrosystem level, and participation in their American Indian Student group is one way that five of these six participants overcame this barrier. Supporting American Indian student groups by helping them to secure funding and organizing events is one important way that administrators can help to ensure the sustainability of these groups. Furthermore, the presence of these groups may help to eradicate some of the racism these participants identified that stems from ignorance. On campuses that don't have an American Indian student group in place, administrators might benefit from conducting research with their American Indian students to gauge interest in establishing such a group.

Chronosystem. Chief Manuelito is an important Diné figure who is well-respected by each of the participants in this research. College campuses often host events

or dedicate memorials in which influential historical figures are recognized. Taking the opportunity to honor Chief Manuelito in this manner is one way that college administration can demonstrate that they value his legacy, and the positive impact he has had on the countless Diné scholars who have been inspired by his words and empowered to attend college through the scholarship that exists in his name.

Implications for Future Research

Huffman (2001) issued a call for further research that examines how the backgrounds of American Indian students ultimately influences their college persistence. This research provides a response to that call by contributing detailed information on how the backgrounds of the Diné students we interviewed influenced their ability to access, enroll, and persist in postsecondary education. This research, in turn, has revealed areas in need of more information.

Mentorship

A common goal of the participants in this research was to act as mentors to future generations of Diné students. The participants in this research also reflected on important individuals who acted as mentors to them, encouraging and supporting them in their pursuit to attain a college degree. Consistent with the review of the literature, parents and teachers were important role models in this respect (Archibald & Urion, 1995; Fore & Chaney, 1998; A. P. Jackson et al., 2003; McInerney, McInerney, Ardington, & DeRachelwitz, 1997; Reyhner & Dodd, 1995). It is clear that having positive role models is a facilitator to Diné access, enrollment, and persistence in postsecondary education.

More information on how schools and communities can help to provide positive role models to students could help to ensure that even more Diné students have access to these positive figures.

Teacher Turnover

For three of the participants in this research, teacher turnover negatively impacted their K-12 educational experience. When I asked John why he felt teacher turnover was such a problem at his school, he replied “I felt like maybe no one wanted to come to the reservation to teach....” John, Ben, and Ezio all had stories to share about the negative ways in which teacher turnover impacted them. While the literature review along with this research revealed the importance of teachers in helping Diné students to access, enroll, and persist in college, there is little research that addresses the impact of high teacher turnover on Diné students. One implication of this research is that high teacher turnover could act as a barrier to student persistence. More information on this phenomenon has the potential to be of use to schools that serve Diné students.

Transferability

Due to the exploratory nature of this study and the large amount of data collected, the number of participants was necessarily small. Now that a number of relevant themes have been established, future research could use the themes to develop a survey for use with a larger sample size. Conducting a larger-scale study could help to determine how transferable these themes are to the wider Diné student populations, and to the wider American Indian population. A better understanding of the transferability of these

findings could help inform stakeholders who work with American Indian students to make important decisions regarding the ways they work with these students.

Significance of Findings

This study is unique because of its emphasis on Diné students and its use of the ecological systems theory framework. These findings contribute to the bodies of knowledge on American Indian students, Diné students, and ecological systems theory. These findings provide useful insights to the stakeholders who work with these students, and demonstrate the ways in which each level of a Diné student's environment contribute to their ability to access, enroll, and persist in postsecondary education. Stakeholders can identify themselves in each of these levels and can discern the actions taken by others in their position to help Diné students.

Other research has suggested that factors such as substance abuse (Fischer & Stoddard, 2013) and socioeconomic status and substance abuse (Willeto, 1999) makes it more difficult for American Indian students to persist in school. The results of this research show that a number of facilitators positioned throughout our participants' ecological systems helped them to overcome these and other barriers. Attention to these facilitators by stakeholders could help more Diné students to similarly persist in their educations.

While we acknowledge that there are many ways to find personal fulfilment and that college isn't necessarily the right path for everyone, this research works under the assumption that attaining postsecondary education is a worthwhile pursuit. Completing

high school helps all students to function as educated members of society. Completing postsecondary education, whether through vocational programs or colleges and universities, helps students to improve their communities, enrich their lives, and accomplish their goals. Sadly, in the 21st century, the rights of American Indian are still being threatened and violated- a fact that the participants in this research understood. Elena's frustration that many Diné do not have access to clean water is one example of this. Ben's interest in social justice issues including Standing Rock is another. The desire to address these social problems helped to motivate these participants to achieve college degrees. Helping Diné students to access, enroll, and persist in college are important methods towards empowering these students and other students to address these social problems and improve their communities with confidence.

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APPENDICES

Appendix A
Instrumentation

Instrumentation

I. Interview Questions

General

1. Please tell me about your decision to enroll in postsecondary education.
 - a. What things helped you to decide to enroll?
 - b. Were there things that made you question if you should enroll?
 - c. How old were you when you decided to enroll?

Part I: Microsystem

1. What was your favorite subject in school and why?
2. Tell me about your feelings towards homework throughout your education. Did you usually complete your homework? How much effort do you feel you put into homework? Did your attitude towards homework change at any point in your education? Explain why or why not.
3. Tell me about your family. What are your parents like? Do you have any siblings? When you were a K-12 student, what was an average day at home like?
4. Tell me about your K-12 teachers. Did you generally like them? Can you think of any interactions with teachers that stand out?
5. Now that you are a postsecondary student, tell me about your relationships with your professors.
6. Tell me about the administrators and counselors at your K-12 schools. How much did you interact with them? What kinds of things do you

remember talking about with them? Do you feel that you had positive, negative, or neutral relationships with each of them?

7. Now that you are a postsecondary student, tell me about your relationships with your campus administration. Do you feel supported by them?
8. Looking back on your K-12 education, what are some of the factors that you feel helped you graduate from high school? Which of these were most important? Similarly, what are the factors that allowed you to access and enroll in college? Which of these were most important?
9. Was your family religious or spiritual? How did the level of religiosity or spirituality in your home influence your academic success, if at all?

Part II: Mesosystem

1. During your K-12 education, what kinds of interactions did your parents have with your teachers?
2. During your K-12 education, what kinds of interactions did your parents have with your school administrators?
3. Were there ever times when the values of your family conflicted with the values of your school community? Please tell me about this.
4. Now that you are a postsecondary student, tell me about the interaction between your family and your education.

Part III: Exosystem

1. You have already given me information on your household income as a K-12 student. Tell me, how did your household income impact your K-12 education?

2. What jobs did your parents or immediate caregivers hold? How did these jobs influence your perceptions of academic success?
3. Now that you are a postsecondary student, describe the relationship between finances and your education.

Part IV. Macrosystem

1. Was your community religious or spiritual? How did the religiosity in your community influence your academic success?
2. Were politics important in your community? How did the role of politics in your community impact you? Could this have had any influence on your K-12 education?
3. What were some important cultural values in your community? How did the role of these cultural values impact you? Could this have had any influence on your K-12 education?
4. Describe the influence of ethnicity in your community. Did ethnicity influence your K-12 education in any way?
5. Now that you are a postsecondary student, how do religiosity or spirituality, politics, culture, and ethnicity influence your education?

Part V: Chronosystem

1. Can you think of any historical events that were important to your community? Explain what you know of the event and how it influenced your community. Did this in turn impact your education? If so, how?
2. Can you think of any historical events that played an important part in your family

life? Explain what you know of the event and how it influenced your family. Did this in turn impact your education? If so, how?

3. Did any historical events influence your education? Explain what you know of the event and how it influenced your education.
4. To your knowledge, did any members of your family attend an “Indian Boarding School?” Would you be willing to share what you know of that experience?
5. If any members of your family attended an Indian Boarding School, did the experience impact their or your own perceptions of education? Did these perceptions influence your K-12 education in any way? What about postsecondary education?

II. Demographic Questionnaire

Participant ID # to be recorded by researcher _____

Please answer the following questions to the best of your ability and return to the researcher before you are scheduled to be interviewed. Thank you for your participation!

1. Age:
2. Gender:
3. How far along are you in your program of study?
4. What is your program of study?
5. List any towns you lived in as a K-12 student, and indicate the grade(s) you were in when you lived there. For example, "Tuba City, K-6, Indian Wells, 7-12"
6. List any schools you attended as a K-12 student. If the school was a private school or a boarding school, please make a note of that information.
7. To the best of your knowledge, what was your family's annual income when you were a K-12 student? If you do not know, leave this question blank.

\$15,000 or less \$15,000-\$25,000 \$25,000-\$50,000 \$50,000 and
up

Appendix B
Supplemental Tables

Table B 1

Key Research On Student Motivation/Self-Efficacy and NA School Success at the Microsystem Level

Author/year	Sample size and information	Significant impact	No significant impact	Study type
Beck et al. (2014)	$n = 2,133$, non-American Indian $n = 67$, American Indian	Motivation to finish college is modestly correlated with persistence $t = 1.95, p = .051$		Quantitative
Coburn & Nelson, 1987	College $n = 123$, American Indian High school graduates	Many students who graduate from high school are involved in extracurricular activities. 50% are involved in sports, 35% in church, 25% in tribal activities, 15% in civic organizations. 50% of students ascribe their success to participation in extracurricular activities. 82% of students credit “[inspiring] and [challenging]” teachers with engaging them in school (p. 1). 68% of students indicated that their most helpful teachers held high expectations. High expectations of family is listed as an important motivator (no statistic given). 50% of students indicated that their experiences with rewarding experiences were motivators.	11% of students indicated that their most helpful teachers were “easy.” 5% of students indicated that their most helpful teachers did not enforce rules. 1% of students indicated the fear of future failure was a motivator.	

(table continues)

Author/year	Sample size and information	Significant impact	No significant impact	Study type
Garcia (1999)	$n = 12$, American Indian College graduates	Several participants credited programs such as TRIO, Upward Bound, and the McNair program with helping them develop an interest in attending college.		Qualitative
Gloria & Robinson Kurpius (2001)	$n = 83$, American Indian College	Self-efficacy negatively correlates with non-persistence, $r = -.29, p < .01$		Quantitative
House (2001)	$n = 121$, American Indian College	Self-rating of academic ability is positively correlated with expectation to graduate with a B.A., $r = .19, p < .05$		Quantitative
		Self-rating of drive to achieve is positively correlated with expectation to graduate with honors, $r = .39, p < .01$		
Huffman (2001)	$n = 69$, largely Lakotah College	American Indian students who were able to “relate at both cultural levels as demanded by the situation” were more successful in college, and did not experience the disengagement and disillusionment felt by students who identified as culturally estranged (p. 15).		Qualitative
A. P. Jackson et al. (2003)	$n = 20$, American Indian College	Students identified structured social support, such as programs like Upward Bound, as a factor that motivated them to attend college.		Qualitative

(table continues)

Author/year	Sample size and information	Significant impact	No significant impact	Study type
McInerney, Roche, McInerney, and Marsh (1997)	$n = 2,883$ Australia Anglo= 1,173 Aboriginal= 496 Immigrant = 487 Navajo= 529 Montagnais Betsiamite Indian = 198	Self-esteem is significantly correlated to GPA (beta = .298, $p < .001$) and attendance (beta = .246, $p < .001$) among Navajo students. A sense of purpose is significantly correlated to GPA among Navajo students, beta = .183, $p < .001$.	The correlation between the promise of extrinsic rewards and GPA is close to a statistically significant level among Navajo students, beta = .125, $p > .05$. The promise of extrinsic rewards is not significantly correlated to attendance among Navajo students beta = .116, $p > .05$.	Quantitative
	Grades 7-12		A sense of purpose is not significantly correlated to attendance among Navajo students beta = .046, $p > .05$. Task-effort is correlated with neither GPA (-.065, $p > .05$) nor attendance (.016) among Navajo students.	Quantitative
K. M. Powers (2006)	$n = 240$, Ojibwe, Lakota, Dakota K-12	Motivation is correlated to school completion among American Indian students who are lesser affiliated and highly affiliated with their cultural identity. Lesser affiliated: $r = .33$, $p < .05$ Highly Affiliated: $r = .26$, $p < .05$		Quantitative

(table continues)

Author/year	Sample size and information	Significant impact	No significant impact	Study type
S. Powers & Rossman (1983)	$n = 211$ American Indian = 112 Anglo = 99 College	American Indian students attribute achievement to effort significantly more than do Anglo students, $t(209) = 2.74, p < .007$		Quantitative
Reyhner & Dodd (1995)	$n = 24$ Majority Crow, other tribes are not specified College	87.5% of participants consider themselves to be academically successful.		Qualitative
Thompson, Johnson-Jennings, & Nitzarim (2013)	$n = 156$ Southwest and Northern tribes College	Self-esteem positively correlates with persistence/voluntary dropout decisions $r = .33, p < .01$.		Quantitative
Wood & Clay (1996)	$n = 1,591$ American Indian = 352 Non-American Indian = 1,239 High school	Self-esteem positively correlates with GPA among American Indian students, $r = .108, p < .05$.		Quantitative

Table B2

Key Research On Family- and School-Related Factors for American Indian Students at the Microsystem Level

Author/year	Sample size and information	Findings were significant	Findings were insignificant	Study type
Archibald & Urion (1995)	$n = 67$, Canadian First Nations College graduates (University of British Columbia)	86.6% of participants indicated that family support was important in helping them persist in college		Mixed methods
Beck et al. (2014)	$n = 2,133$, non-American Indian $n = 67$, American Indian College		Family factors do not have a significant impact on student success, no statistic given.	Quantitative
Burack et al. (2013)	$n = 81$, Naskapi Grades 6-11	Relationships with friends are a significant predictor of student grades, $r = .47, p < .001$.		
Fore & Chaney (1998)	$n = 19$, American Indian Grade 12	A strong supportive figure correlates to college enrollment, $p < .01$.		Quantitative
Gloria & Robinson Kurpius (2001)	$n = 83$, American Indian College	Family support is significantly correlated with self-esteem $r = .3, p < .01$. Family support significantly correlated with cultural fit at school, $r = .26, p < .05$.	Family support is "not statistically correlated with academic non-persistence decisions" ($p = .97$). $r = .09, p > .05$	Quantitative

(table continues)

A. P. Jackson et al. (2003)	<i>n</i> = 20, American Indian College	Students identified family support as an important facilitator of their success.	Qualitative
McInerney, McInerney, & Ardington, & DeRachelwitz (1997)	<i>n</i> = 29, Navajo 20 students, 10 community members, 9 teachers. High school	“... a supportive family environment, one which espouses education as a worthwhile pursuit, is felt to provide a solid foundation on which to build future educational success” (p. 9).	Qualitative
McInerney, Roche, McInerney, & Marsh (1997)	<i>n</i> = 2,883 Australia Anglo= 1,173 Aboriginal= 496 Immigrant = 487 Navajo= 529 Montagnais Betsiamite Indian = 198 Grades 7-12	The desire for recognition and praise is a significant predictor of attendance among Navajo students, beta = .144, <i>p</i> < .05.	Quantitative
Reyhner & Dodd (1995)	<i>n</i> = 24, Majority Crow, other tribes are not specified College	83% of participants indicated that they would attribute their school success to family support.	Qualitative
Thompson et al. (2013)	<i>n</i> = 156, Southwest and Northern tribes represented College	A strong support system negatively correlated with feelings of separation and alienation on campus, <i>r</i> = -.45, <i>p</i> < .01	Quantitative

Table B3

Key Research On American Indian Family Related Factors at the Mesosystem Level

Author/year	Sample size and information	Significant impact	No significant impact	Study type
Bardhoshi et al. (2016)	$n = 482$ 50.2% White, 37.7% NA, 12.1% other High School	Parent education level has an impact on access to postsecondary education facilitators, $\beta = .16$, $p = .003$.		Quantitative
Brown & Robinson Kurpius, 1997	$n = 292$, American Indian College		There is no significant correlation between family encouragement to attend college and school persistence, $r = .059$, $p > .05$.	Quantitative
Falk & Aitken (1984)	$n = 125$, American Indian College	47% of American Indian students who persisted in school cited family support as a factor that promoted their success.		Mixed-method
Guillory (2009)	$n = 30$, Arapaho, Blackfeet, Chippewa/Cree, Colville, Coeur d' Alene, Cree, Crow, Fort Peck Assiniboin, Hidatsa/Chippewa, Hopi, Lakota, Lummi, Makah, Navajo, Nez Perce, Northern Cheyenne, Salish-Kootenai, Sioux, Walla Walla, Yup'ik. College	"For many students, a need to live up to family expectations and a fear of letting their families down by not graduating from college was a major factor in persistence" (p. 18).		Qualitative

(table continues)

Author/year	Sample size and information	Significant impact	No significant impact	Study type
Huffman et al. (1986)	$n = 76$ 28 = Sioux 48 = White		Parental education level does not correlate to GPA. Mother, $r = .02, p > .05$ Father, $r = -.14, p > .05$	Quantitative
K. M. Powers (2006)	College $n = 240$, Ojibwe, Lakota, Dakota K-12	Family support for learning positively correlates with motivation: $r = .35, p < .05$ Highly culturally affiliated $r = .27, p < .05$ Home-school collaboration positively correlates to educational outcomes $r = .145, p < .05$	Home support for learning is not significantly correlated to educational outcomes, $r = .106, p > .05$.	Quantitative
Willeto (1999) ^a	$n = 469$, Navajo Grades 9-12	Parent educational aspirations are significantly correlated to student college aspirations $r = .51, p > .001$.	Parent support for education not significantly correlated to educational achievement. Grades: $r = .07, p > .1$ School commitment: $r = .06, p > .1$ College aspirations: $r = -.03, p > .1$	Quantitative

^a Willeto does not note what she considers an insignificant p level, and she does consider some findings above the .1 level to be significant.

Table B4

Key Research On Socioeconomic Status for American Indian Students at the Exosystem

Author/ year	Sample size and information	Significant impact	No significant impact	Study Type
Archibald & Urion (1995)	$n = 67$, Canadian First Nations College graduates (University of British Columbia)	67.7% of participants indicated that they had “barely enough” or “at subsistence level” funding. 19.5% of participants indicated that funding was a problem for them while in college.		Mixed methods
Falk & Aitken (1984)	$n = 125$, American Indian College	85% of American Indian students who left college indicated that lack of adequate financial support was a hindrance.		Quantitative
Flynn et al. (2012)	$n = 21$ Rosebud Sioux Tribe, Standing Rock Sioux Tribe, Cheyenne River Sioux Tribe, Sisseton Wahpeton Sioux Tribe, Lower Brule Sioux Tribe, Navajo Tribe, Crow Creek Sioux Tribe, Apache Tribe, Yankton Sioux Tribe, unspecified tribal affiliation	90% of participants indicated that finances were a source of considerable stress for them, citing examples such as not being sure where to find money to pay for classes, and being “[hounded] for money” by their university (p. 443).		Qualitative
Garcia (1999)	$n = 12$, NA College graduates	Participants indicated that a lack of financial resources made educational success difficult them, sometimes delaying their progress.	Qualitative	

(table continues)

Author/ year	Sample size and information	Significant impact	No significant impact	Study Type
Guillory (2009)	$n = 30$ Arapaho, Blackfeet, Chippewa/Cree, Colville, Coeur d' Alene, Cree, Crow, Fort Peck Assiniboin, Hidatsa/Chippewa, Hopi, Lakota, Lummi, Makah, Navajo, Nez Perce, Northern Cheyenne, Salish-Kootenai, Sioux, Walla Walla, Yup'ik.	Significant impact	“Students did agree with institution representatives that the lack of money was pervasive, but they simply did not see it as the most daunting barrier to overcome” (p. 18).	Qualitative
Huffman et al. (1986)	College $n = 76$ 48 = White 38 = Sioux		Family income weakly correlated to college achievement, $r = .22$, $p > .05$.	Quantitative
K. M. Powers (2006)	College $n = 240$, Ojibwe, Lakota, Dakota K-12	SES is positively correlated with underachievement in American Indian students. ^a Lower cultural affiliation: $r = .33$, $p < .05$ Highly culturally affiliated: $r = .27$, $p < .05$	SES is not significantly correlated to overall educational outcomes, $r = -.068$, $p > .05$.	Quantitative

(table continues)

Author/ year	Sample size and information	Significant impact	No significant impact	Study Type
Reyhner & Dodd (1995)	$n = 24$ Majority Crow, other tribes are not specified	33% of participants identified finances as a barrier to persistence		Qualitative
Taylor, 2001	College $n = 16$, American Indian	75% of students were living in poverty, a circumstance they identified as barrier to their school persistence.	Qualitative	Taylor, 2001
Willeto, 1999	$n = 469$, Navajo Grades 9-12	Students with a higher GPA come from higher SES families, $r = .25, p > .01$.	SES is not significantly correlated to school commitment, $r = -.01,$ $p > .05$. SES is not significantly correlated to college aspirations, $r = .03,$ $p > .05$.	Quantitative

^a Powers notes that this result was characterized by a poor internal reliability estimate, and thus may not be significant.

Table B5

Key Research On Cultural Factors and American Indian Students at the Macro-system Level

Author/year	Sample size and information	Findings	Study type
Ali et al. (2014)	$n = 2,285$ 1,482 = Navajo 803 = White	The difference between Navajo and White students when it comes to competitive outlooks is statistically significant, $F(1, 2283) = 7.84, p < .05$.	Quantitative
Bacon, Kidd and Seaberg (1982)	Grades 7-12 $n = 53$, Cherokee	Students who took part in The Cherokee Bilingual Education Program outperformed their peers who took part in English-only programs on the SRA Achievement Series standardized test, $F(9, 52) = 12.69, p < .05$	Quantitative
Burack et al. (2013)	Grade 8 $n = 81$, Naskapi Grades 6-11	Comfort with Aboriginal culture is not a predictor of student grades, $r = .2, p > .05$. Comfort with white culture is not a predictor of student grades, $r = -.04, p > .05$.	Quantitative
Emekauwa (2004)	$n = 18,982$ (90% of all rural Alaska Native Students) Alaska Native, non-native Grades 8 & 10	8 th grade AKSRI students improved 6.9% on the CAT-5 standardized test between 1995-1998. Non-AKSRI 8 th graders showed a 1 percentage point score increase during this time. 10 th grade AKSRI students improved 8.36% on Alaska's High School Qualifying Exam, compared to a 10.7% gain in non-AKSRI schools. This is considered an accomplishment due to the low performance of the AKSRI schools prior to implementation of the program. Between 1996-2001, more AKSRI students than non-AKSRI students enrolled in college.	Quantitative

(table continues)

Author/year	Sample size and information	Findings	Study type
Flynn et al. (2012)	$n = 21$, Rosebud Sioux Tribe, Standing Rock Sioux Tribe, Cheyenne River Sioux Tribe, Sisseton Wahpeton Sioux Tribe, Lower Brule Sioux Tribe, Navajo Tribe, Crow Creek Sioux Tribe, Apache Tribe, Yankton Sioux Tribe, Unspecified tribal affiliation	<p>71% of participants note lack of institutional resources for American Indian students as barriers to their persistence in college.</p> <p>57% of participants relate feelings of difficulty adjusting to campus life having grown up on a reservation, noting general cultural differences as well as differences in teaching and learning.</p> <p>52% of participants report experiencing overt and covert racism on their college campuses. For instance, marginalizing comments from their peers such as “Gosh it’s great sitting here in class learning how the Indians get everything for free” (p. 444).</p>	Qualitative
Fore & Chaney (1998)	$n = 19$, American Indian Grade 12	“Two multivariate analysis of variance (MANOVA) were performed between those subjects who pursued further educational opportunities (ED group; $n = 7$) and those who did not (NED group; $n = 12$). The first MANOVA examined differences between indices of socioeconomic status, cultural identification, attributional style, perceived deprivation, and gender. None of these variables were significantly related to subjects’ decisions to pursue higher education” (p. 54).	Quantitative
Garcia (1999)	$n = 12$, American Indian College graduates	<p>While the participants were not willing to assimilate, Garcia indicates that they learned to acculturate, and to confidently navigate the dominant culture as well as their traditional American Indian culture.</p> <p>Traditional American Indian spiritual values were an important contributor to the success of these participants, even those who considered themselves to be more assimilated.</p> <p>A majority of the participants reported that experiences of first-hand and second-hand racism were a barrier to their school success, oftentimes discouraging them from persisting in school.</p>	Qualitative

(table continues)

Author/year	Sample size and information	Findings	Study type
Guillory (2008)	<p>$n = 30$, Arapaho, Blackfeet, Chippewa/Cree, Colville, Coeur d'Alene, Cree, Crow, Fort Peck Assiniboin, Hidatsa/Chippewa, Hopi, Lakota, Lummi, Makah, Navajo, Nez Perce, Northern Cheyenne, Salish-Kootenai, Sioux, Walla Walla, Yup'ik</p> <p>College</p>	<p>“On-campus social support (i.e., 11 out of 30 students) also turned out to be a critical factor in persistence. Support from family was crucial, but support from faculty and peers from within the university was also deemed essential. It fostered an environment where students could adjust psychologically and flourish academically” (p. 75).</p>	Qualitative
Huffman et al. (1986)	<p>$n = 76$ 28 = Sioux 48 = White</p> <p>College</p>	<p>Native American traditionalism is strongly correlated to GPA among “Sioux” students ($r = .33, p < .05$).</p>	Quantitative
A. P. Jackson et al. (2003)	<p>$n = 20$, college</p>	<p>Students identified spiritual resources as an important facilitator of their success, relying on traditional prayers and ceremonies to foster resilience and persistence.</p> <p>Students identified experiencing racism on campus as a barrier to their persistence. Examples included passive racism (e.g., not being asked to participate in class) and active racism (e.g., degrading remarks).</p>	Qualitative

(table continues)

Author/year	Sample size and information	Findings	Study type
Kanu (2006)	<p>$n = 31$, American Indian</p> <p>Integration classroom = 15</p> <p>Regular classroom = 16</p> <p>High school</p>	<p>Students in the integrated classroom averaged 72% on their exams and assignments. Students in the regular classroom averaged 48% on their exams and assignments.</p> <p>The integration classroom did not have a significant impact on retention. By the end of the program, 3 integration classroom and 5 regular classroom students had left school for varying reasons. The authors conclude "... factors other than culture discontinuity may account for attrition among Native students" (p. 129).</p> <p>The integration classroom did not have a significant impact on attendance, with the rates (10 students at 87%, 7 students at 83%, with the rest being sporadic) remaining very similar in each group.</p>	Mixed-methods
Lopez et al. (2013)	<p>$n = 5,800$, American Indian/Alaska Native (AIAN)</p> <p>Grades 4, 8</p>	<p>72% of teachers of predominantly AIAN students report relying on AIAN standards or content "not at all/unaware"; 80% of these teachers use heritage language of their students "not at all"; 77% of these teachers are white (p. 522).</p>	Quantitative
McInerney, McInerney, Ardington, & DeRachelwitz (1997)	<p>$n = 29$, Navajo</p> <p>20 students, 10 community members, 9 teachers.</p> <p>High school</p>	<p>"There is little evidence in these data to suggest that competition, as it is typically understood from a Western, American perspective, that is, a ruthless desire to win at all costs, is considered a primary goal or is actively sought among Navajo students" (p. 6).</p> <p>"Navajo community members, teachers and students believe that more Navajo history, culture, and language courses should be included into the curriculum to enhance the education of the students" (p. 11).</p>	Qualitative

(table continues)

Author/year	Sample size and information	Findings	Study type
McInerney, Roche, McInerney, & Marsh (1997)	$n = 2,883$ Australia Anglo = 1,173 Aboriginal = 496 Immigrant = 487 Navajo = 529 Montagnais Betsiamite = 198 Grades 7-12	The desire for power does not correlate with GPA ($\beta = .003, p > .05$) or attendance ($\beta = .047, p > .05$) among Navajo students. Desire for competition does not correlate with GPA ($\beta = .014, p > .05$) or attendance ($\beta = .066, p > .05$) among Navajo students.	Quantitative
Patton & Eddington (1973)	$n = 203$ 135 = University of New Mexico 68 = New Mexico State College	University of New Mexico: $f(1,135) = .26, p > .05$ Pueblo identity does not correlate to retention $f(1,135) = .82, p > .05$ Navajo identity does not predict retention. New Mexico State: $f(1,68) = .75, p > .05$, Pueblo identity does not predict retention, $f(1,68) = 5.42, p > .05$, Navajo identity does not predict retention.	Quantitative
K. M. Powers (2006)	$n = 240$, Ojibwe, Lakota, Dakota K-12	Observed correlation between cultural programs and presence and participation among American Indian students highly affiliated with their cultural identity $r = .23, p < .05$.	Quantitative
Reyhner & Dodd (1995)	$n = 24$, Majority Crow, other tribes not specified College	45% of participants indicated that prejudice on their college campus was a barrier they needed to overcome. 96% of participants indicated that prejudice exists on college campuses.	Qualitative
Rosier & Holm (1980)	$n = 11$ schools, Navajo Elementary grades	Raw scores in both reading and math standardized measures demonstrate that "Navajo students who had initially been taught to read in Navajo," and "been taught arithmetic in Navajo seem to" "read better in English" and "to do better in arithmetic than students who had been [taught] in only English" (p. 28).	Quantitative

(table continues)

Author/year	Sample size and information	Findings	Study type
Taylor (2001)	<i>n</i> = 16, American Indian College	<p>Many students reported difficulty adjusting to campus life due to cultural differences between the communities they grew up in and campus life (e.g., classroom behavior, faculty and social expectations).</p> <p>Microaggressions, “put downs,” and stereotypical American Indian school mascots were demoralizing barriers to school persistence.</p> <p>American Indian students sought out programs and classes that had to do with American Indian themes and subjects. Participants were sometimes disappointed when professors and students seemed closed-minded to American Indian perspectives.</p> <p>Students were more aware and appreciate of university support on a personal level, but not an institutional level. For instance, noting appreciation for a professor helping them to save money in the student powwow, but not noting appreciation for the large donation the university had made.</p>	Qualitative
Torres (2016) ^a	<i>n</i> = 3,597, American Indian/Alaska Native Grade 8	Grade 8 NAEP Reading Assessment revealed that cultural discontinuity was not significantly related to students’ mean achievement.	
Willeto (1999)	<i>n</i> = 469, Navajo Grades 9-12	Mean achievement score = 265.06 points (<i>SE</i> = 4.43). Cultural conventions do not predict grades (<i>r</i> = .12), or college aspirations (<i>r</i> = 0), but there is a modest correlation to school commitment (<i>r</i> = .08, <i>p</i> > .1).	Quantitative
Wood & Clay (1996)	<i>n</i> = 1,591 352 = American Indian 1,239 = non-American Indian High school	Attachment to American Indian culture does not correlate with GPA among American Indian students, <i>r</i> = -.011, <i>p</i> > .05.	Quantitative

^a Torres studied multiple samples in this study, but the sample reported was most relevant to the research at hand.

Table B6

Key Research On Parents' History with Education and Their Present Attitudes Towards Their Students' Education at the Chronosystem Level

Author/year	Sample size and information	Findings	Study type
Bisbee (2013)	<i>n</i> = 13, Nez Perce College graduates	“Colonization is endemic: In order for Native students to successfully navigate higher education, they must and under-preparedness due to institutional racism; however, they continue to survive the historical trauma their families have experienced due to the forced boarding school experience” (pp. 48-49).	Qualitative
Milne (2016)	<i>n</i> = 50 40=Indigenous (mainly Haudenosaunee, Anishinaabe, and M'etis) 10 = non-Indigenous 26 = educators 24 = parents	Parents and educators both observed that parents who had had negative school experiences themselves had difficulty participating in their students' schooling.	Qualitative
Wexler (2014)	<i>n</i> = 25, Inupiaq 11 = youth 7 = adults 7 = elders	Adults in this study reported that the boarding school experiences of their parents did have an impact on their parents' attitudes towards education. The youth in this study did not connect any of their educational difficulties with historical trauma or oppression.	Qualitative

CURRICULUM VITAE

CHRISTINA M. HARTMAN

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 Other Names Used: Christina M. Sias

EDUCATION AND TRAINING

- 2018** **Ph.D.:** Curriculum and Instruction
Utah State University — Logan, UT, USA
 Ph.D. Research & Presentation themes include:
- Native American student success
 - Engineering literacy and curriculum design
- 2010** **Master of Arts:** Teaching
Lewis & Clark College — Portland, OR
 A Masters of Teaching with an emphasis on Language Arts instruction
- 2008** **Bachelor of Arts:** English Literature
Portland State University — Portland, OR, USA
 Senior Capstone experience themes included:
- Availability of diverse reading materials in BIE school libraries
 - Native American perspectives in education

PUBLICATIONS**Peer Reviewed Publications**

- Hartman, C.** (2018). Facilitators of Diné student access, enrollment, and persistence in postsecondary education: An ecological systems perspective. Doctoral dissertation, Utah State University.
- Lund, E., Johnson, B., **Sias, C.**, Bouchard, L.M. (In Press). Asexuality: An Introduction for Questioning Clients. *The Therapist's Notebook for Sexual and Gender Identity Diverse Clients*. Harrington Park Press.
- Wilson-Lopez, A., **Sias, C.** (2017). Introduction to the Engineering Design Cycle. *Teach Engineering*. Retrieved from: <https://www.teachengineering.org/activities/view/usu-1961-everyday-problems-introduction-engineering-design>
- Wilson-Lopez, A., **Sias, C.**, Smithee, A., Hasbun, I.M. (In press). Forms of Science Capital Mobilized in Adolescents' Engineering Projects. *Journal of Research in Science Teaching*.
- Wilson-Lopez, A., Strong, K., & **Sias, C.M.** (accepted). Critical literacy, disciplinary literacy: Reading the engineering-designed world. *Theory into Practice*.

- Sias, C. M.**, Nadelson, L. S., Juth, S., & Seifert, A. (2016). The best laid plans: Education innovation in elementary teacher generated integrated STEM lesson plans. *Journal of Education Research* 110(3). Retrieve from: <http://www.tandfonline.com/doi/full/10.1080/00220671.2016.1253539>
- Lund, E. M., Thomas, K. B., **Sias, C. M.** & Bradley, A. R. (2016). Examining concordant and discordant sexual and romantic attraction in American adults: Implications for counselors. *Journal of LGBT Issues in Counseling*, 10, 211-226.
- Wilson, A. A. & **Sias, C.** (2016). Safety Engineering. *Teach Engineering*. Retrieved from: https://www.teachengineering.org/activities/view/usu_safety_activity1
- Nadelson, L. S., **Sias, C. M.**, Matyi, J., Morris, S. R., Cain, R., Cromwell, M., Lund, E. M., Furse, J., Johnson, M., Hofmannova, A., Seegmiller, J. & Xie, T. (2016) A world of information at Their fingertips: college student' motivations and practices in their self-determined information seeking. *International Journal of Higher Education*, 5(1), pp. 220-331.
- Nadelson, L. S., Seifert, A. L., & **Sias, C. M.** (2016). To change or not to change: Indicators of K-12 teacher engagement in innovative educational practices. *International Journal of Innovation in Education*, 3(1), 45-61.
- Sias, C.**, Wilson-Lopez, A., & Mejia, J. A. (2016). Connecting students' background experiences to engineering design. *The Technology and Engineering Teacher*, 76(1), 30-35.
- Wilson-Lopez, A., **Sias, C.**, & Mejia, J. A. (2015). Engineering ethics. *Teach Engineering*. Retrieved from: https://www.teachengineering.org/activities/view/usu_ethics_activity1
- Sias, C.**, Wilson-Lopez, A., Mejia, J. A. (2015). Considering trade-offs and maximizing efficiency in a fast food restaurant: A literacy-infused engineering unit. *Teach Engineering*. Retrieved from: https://www.teachengineering.org/activities/view/usu_fastfood_activity1

Research Publications Under Review

- Lund, E., Schultz, J., Thomas, K., Nadorff, M., Sias, C., Chowdhury, D., & Galbraith, K." I Honestly Would Not Have Known What to Do." An Exploratory Study of Perspectives on Client Suicide among Vocational Rehabilitation Support Staff. *OMEGA- Journal of Death and Dying*.

PRESENTATIONS

National Presentations

- Wilson-Lopez, A., & **Sias, C.** (2018, April). *Engineering literacy as civic engagement: Peril and empowerment in youth-driven projects for effecting change*. Poster accepted at the annual meeting of the American Educational Research Association, New York, NY.
- Wilson-Lopez, A., & **Sias, C.** (2018, April). *Features of engineering challenges that support linguistically diverse students' engineering design thinking and activity*. Paper accepted at the annual meeting of the American Educational Research Association, New York, NY.

- Wilson-Lopez, A., & **Sias, C.M.** (2016). Engineering 2.0: Meeting the Next Generation Science Standards through writing in engineers' notebooks. Interactive session at the annual meeting of the International Literacy Association (ILA). Boston, MA.
- Wilson-Lopez, A., & **Sias, C.M.** (2016). Engaging high school students in engineering ethics. Paper presentation at the annual meeting of the American Educational Research Association (AERA). Washington D.C.
- Wilson-Lopez, A., & **Sias, C.M.** (2016). Reading the Designed World: Critical Literacy in Engineering. Round table presentation at the annual meeting of the American Educational Research Association (AERA). Washington D.C.
- Sias, C.M.**, Nadelson, L.S., Juth, S.M., Seifert, A. (2016). The Best Laid Plans: Educational Innovation in Elementary Teacher Generated Integrated STEM Lesson Plans. Paper presentation at the annual meeting of the National Consortium for Instruction and Cognition (NCIC). Washington D.C.
- Sias, C.M.**, & Jones, C. (2015). Teaching Advanced Language & Composition Coursework to All Students. Poster Presentation at Association of Literacy Educators and Researchers (ALER), Costa Mesa, CA.
- Mohr, K. A. J., Brown, L., Flory, M., Jorgensen, A., Juth, S., Rose, G., & **Sias, C.M.** (2015). Doctoral Epiphanies: What We Thought We Knew, but Know Better Now. Oral presentation at ALER, Costa Mesa, CA.
- Wilson, A.A., **Sias, C.M.**, Mejia, A. (2015). Fundamental literacies in English learners' engineering design work. Poster presentation at the annual meeting of AERA, Chicago, IL.
- Jones, C., Brown, L., **Sias, C.M.** (2015). Enhancing alphabet knowledge instruction through design and curriculum planning. Oral Presentation at National Title I Conference, Salt Lake City, UT.

GRANTS AND AWARDS

TEAL Graduate Researcher of the Year.

Utah State University, 2018

This award was granted to me in recognition of my dissertation and the other research I've conducted as a doctoral student.

\$4,000. Principal Investigator.

Utah State University Student Enhancement Award, 2017

This award was granted to me to help defray costs of my dissertation, including travel, equipment, and participation incentives.

\$500. Principal Investigator.

Utah State University Travel Grant, 2015

Teaching Advanced Language & Composition Coursework to All Students. Poster Presentation at Association of Literacy Educators and Researchers (ALER), Costa Mesa, CA. Utah State University School of Teacher Education and Leadership graduate research grants program.

ONGOING RESEARCH COLLABORATIONS

Utah State University, Logan, UT

- Researching interdisciplinary literacy and Advanced Placement curriculum with Dr. Cindy Jones.
- Researching Native American school success with Dr. Cindy Jones.
- Researching engineering ethics curriculum, Latinx students in engineering, and engineering literacy with Dr. Amy A. Wilson-Lopez.

EDITORIAL

- *Journal of Literacy Research and Instruction*
Reviewer, 2016-Present
- *Journal of Adolescent and Adult Literacy*
Practitioner Advisory Board, 2016-2018
- American Society for Engineering Education
Reviewer, 2016-Present
- *Journal of STEM Education Research and Practice*
Editorial Assistant, 2015-2016

GRADUATE ASSISTANT RESPONSIBILITIES

Graduate Research Assistant

2014-Present

- Collaborate with Dr. Amy Wilson-Lopez and Dr. Louis Nadelson on their research projects.
- Responsible for collecting and organizing data, coding data, interpreting results, and writing up results.

Student Teacher Supervisor

2017

- Responsible for supervising student teachers enrolled in Utah State University's Teacher Education and Leadership Program in their respective classrooms. Provided feedback on their lesson plans, activities, and style. Reported back to the University on their progress.

UTAH STATE TEACHING EXPERIENCE

SCED 4210

Assessment Design

2016-2018

This course is designed for preservice secondary education teachers and aims to teach the basics of creating valid and reliable assessments for students in range of content areas. The course is also designed to help prepare the preservice teachers to pass general University requirements for preservice teachers, including Work Samples to reflect their understanding of best practices.

SCED 4200

Content Literacy

2016-2018

This course is designed for preservice secondary education teachers from a variety of content areas. The course seeks to demonstrate the importance of incorporating literacy into their curriculum, and teaches

them a range of strategies and resources that they can rely on in order to effectively and organically enhance their literacy instruction.

Dystopian Literature in the Classroom

2013

Lead a one-day workshop on using dystopian literature in the high school and college classroom. Participants were a group of Fulbright Scholars from Iraq.

HIGH SCHOOL TEACHING EXPERIENCE**InTech Collegiate High School, Logan, UT***English Teacher, Grades 9-12*

2011-2018

- Developed curriculum for and taught general, Advanced Placement, and Concurrent Enrollment English courses. Students worked to pass SAGE, CRT, AP, and ACT tests. Provided instructional coaching and curriculum design guidance to the faculty.
- As a college preparatory school, worked to develop accessible curriculum that exceeded the difficulty of the students' grade level and provided valuable college preparatory experience.

Bear Lake High School, Montpelier, ID*English and Drama Teacher, Grades 9-12*

2010-2011

- Taught general English courses to 9th grade students.
- Taught drama to students grades 9-12.

The College Board, Tampa, FL*AP Rater, English Language and Composition*

2016-2017

- Worked as a rater assessing student essays.

TEACHER ACCOMPLISHMENTS OF NOTE**SAGE English Language Arts Rankings**

2014-2015

- InTech maintained a state ranking of #1 or #2 on SAGE ELA performance (state standardized test).

CRT Pass Rate

2011-2013

- 99-100% of all InTech students passed the ELA CRT exam (state standardized test).

Idaho Education Association “Teacher Spotlight”

2010

- Recognized as February's Spotlight Teacher by the IEA due to work on education reform.