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American Indian Adolescents' Ethnic Identity and School Identification: Relationships with Academic Achievement, Perceived Discrimination, and Educational Utility

By

Kelly Middlebrook

A dissertation submitted in partial satisfaction of the

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University of California, Berkeley

Committee in charge

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Abstract

American Indian Adolescents' Ethnic Identity and School Identification: Relationships with Academic Achievement, Perceived Discrimination, and Educational Utility

by

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Doctor of Philosophy in Education

University of California, Berkeley

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In this study, I examined relationship among social identity and attitudinal variables and academic achievement in a group of 128 American Indian (AI) high school students. Analyses were first conducted in order to explore whether AI students differed from European American (EA) students on measures of ethnic identity, school identification, perceived barriers, perceived discrimination, and abstract, concrete, and ambivalent educational utility. With the exception of school identification, statistically significant differences and large effect sizes between the AI and EA participants were found on all major variables, with the AI participants reporting higher scores on all measures except GPA. EA participants reported a higher GPA. Additional analyses explored the contribution of ethnic identity towards the variance of AI students' GPA and school identification beyond the contribution from perceived barriers, perceived discrimination, and abstract, concrete, and ambivalent educational utility. Ethnic identity was a significant predictor of school identification. None of the variables, including ethnic identity, was a significant predictor of GPA. Final analysis explored the existence of clusters of AI participants based on ethnic identity and school identification. Two groups of AI students who varied on their level of school identification were identified. These groups did not differ on all major variables. I suggest that many of the statistically in-significant findings are due to the ethnically homogeneous context in which the AI participants come from. I argue that ethnicity-related attitudinal and social identity variables are more important predictors of achievement in contexts in which ethnicity is more salient, and are less important in heterogeneous populations.

To my mother for inspiring me to achieve, guiding me through my most difficult times, and for sharing the highs and lows of this journey with me. To my Gnu for loving me, giving me perspective, and for keeping me happy and healthy throughout graduate school. I could not have made it through without both of your love, support, and humor.

American Indian Adolescents' Ethnic Identity and School Identification: Relationships with Academic Achievement, Perceived Discrimination, and Educational Utility

In 2005, the U.S. Department of Education and the National Center for Educational Statistics released a report, which detailed the current conditions and recent trends in American Indian (AI) education. The report contained alarming statistics indicating that AI students are among the lowest achieving ethnic minority groups in the country. In fact, AI people attain fewer years of formal education than members of other ethnic minority groups and European-Americans (Freeman & Fox, 2005). AI students are also more likely to receive special education services than other ethnic groups (Freeman & Fox, 2005). Though 4% of Asian students, 7.5% of Hispanic students, 8.4% of European American (EA) students, and 11.5% of Black students are served under the Individuals with Disabilities Education Act (Freeman & Fox, 2005), nationwide, 12% of AI students are served by special education, with some reservation communities reporting as many as 33% of students in special education classes (Dauphinais, 2000; Freeman & Fox, 2005).

AI student achievement in general education is equally alarming. By the time they reach 4th grade, nearly half of all AI students are performing below a basic level of proficiency in reading, mathematics, science, and history (Freeman & Fox, 2005). AI students' grade level achievement is comparable to that of African American and Hispanic students, and these students are commonly one to two years behind in elementary school and two to four years behind in secondary school (Demmert & Bell, 1992; Freeman & Fox, 2005). Thus, it is not surprising that AI youth have the second highest dropout rate of any ethnic group. In 2003, 15% of AI people ages 16-24 dropped out of school before receiving a high school diploma or General Educational Development test (GED), compared to 23% of Hispanics, 11% of African Americans, 6% of European-Americans, and 4% of Asians.

Though AI individuals are at particular risk for academic failure, the percentage of studies which have examined the reasons behind these educational disparities is very low compared to the preponderance of research which has focused on the achievement of other ethnic minority groups (Whitesell, Mitchell, & Spicer, 2009). There is a considerable body of literature which explores the disparities in achievement across other ethnic minority (i.e., African American, Asian, and Hispanic/Latino) groups in the US (e.g., Altschul, Oyserman, & Bybee, 2006; Ashmore, Deaux, & McLaughlin-Volpe, 2004; Fuligni, Witkow, & Garcia, 2005; Oyserman, Kemmelmeier, Fryberg, Brosh, & Hart-Johnson, 2003; Spencer, Noll, Stolzfus, & Harpalani, 2001; Wong, Eccles, & Sameroff, 2003; Worrell, 2007). Researchers have found a relationship between academic achievement and a number of social identity variables including ethnic identity, as well as a number of attitudinal variables including educational utility, school identification, perceived barriers, and perceived discrimination. It can be assumed that some experiences are likely shared across all ethnic minority groups; therefore, the findings with other ethnic groups can help to guide the investigation in this dissertation. However, it is important to note that substantial differences in culture, histories, and context exist, any of which can lead to a diversity of outcomes and responses. Thus, although important, the findings in other ethnic groups cannot necessarily explain the academic achievement outcomes in AI youth populations.

Rather than drawing conclusions about the low academic achievement of AI students based on findings with other ethnic minority students, more attention must be dedicated to understanding the factors that contribute to and impede the achievement of AI students by specifically studying these populations. Thus, the goal of the current study is to better understand the academic achievement of AI students by examining social identity and attitudinal

variables that have been linked to the achievement in other ethnic minority students. By examining AI students' ethnic identity, school identification, perceived discrimination, perceived barriers, and educational utility, it may be possible to begin drawing conclusions about the low achievement of AI students. In the proposed dissertation, I will examine the following questions: (a) are there differences between AI students' and EA students' ethnic identity, school identification, perceived barriers, perceived discrimination, and educational utility; (b) does ethnic identity contribute to the variance in AI's achievement and school identification beyond perceived barriers, perceived discrimination, and educational utility; (c) are there identifiable groups of students based on levels of ethnic identity and school identification in AI populations; and (d) do these groups differ on the basis of academic achievement, perceived discrimination, perceived barriers, and educational utility?

Before I answer these questions, it is important to first explicate the theoretical framework that will guide this investigation, and establish a number of key definitions and concepts. In order to do this, I will first highlight an early seminal study with AI high school dropouts, which examined the social and attitudinal variables that contribute to the high AI dropout rates. This study addresses all of the constructs that will be examined in the proposed dissertation, and thus, offers a nice illustration of how these constructs may relate to the academic achievement of AI students.

Next, I will establish a fundamental understanding of the terminology and concepts underlying the proposed dissertation. This discussion will include key concepts such as ethnicity, ethnic identity, and minority status and how they pertain to AI people. Following this, I will present a discussion on one of the leading theories of ethnic minority student achievement, Ogbu's (1978) cultural ecological theory, and will also discuss the contemporary research that has been based on this theory. After the theories of ethnic minority achievement are presented, I will discuss in depth some of the key constructs highlighted in these theories. Following this discussion, I will present my methods, results, and discussion.

AIs and Academic Achievement: An Early Study

As previously indicated, though AI students are among the lowest achieving minority groups in the country, a surprisingly small percentage of educational research is devoted to examining the reasons underlying the poor achievement of AI students. Though nearly 20 years old, Deyhle's (1992) study with Navajo and Ute students remains a seminal research effort, and offers some important insights into why AI students are underachieving and dropping out of school. The results of her study indicate that similar to other ethnic minority groups, AI students' experiences of discrimination and barriers, along with their sense of ethnic identity, school identification, and educational utility are factors which influence their academic achievement.

Deyhle (1992) conducted an ethnographic study over the course of seven years and investigated issues pertaining to dropping out of school, race relations, academic achievement, and culture within the context of Navajo and Ute students' schools and communities. At the time she began her research, the dropout rate of the AI students in these communities was 34% and 41%, respectively, which was higher than the State's, and nationally reported levels. Deyhle's data came from multiple sources, including (a) data from a master database from school records, (b) 168 questionnaires completed by dropouts, (c) several hundred ethnographic interviews with dropouts, graduates, parents, and school teachers/administrators, and (d) observations in schools and communities.

Beginning in the fall of 1984, Deyhle (1992) conducted her study in three communities and two high schools: (a) a small community, Border, on the edge of the Navajo reservation which contains Border High School (BHS); (b) a small community in the Ute reservation; and (c) the small town of Navajo Mesa, which contains Navajo High School (NHS). In total, Dehyle tracked 1,489 youth who attended one of the two high schools from the 1980-81 to the 1988-89 school year. Over the course of seven years, Dehyle interviewed and surveyed 168 Navajo and Ute who had dropped out of school before receiving a high school diploma or GED. Approximately half of this population was from BHS, and the other half was from NHS. The ages of the individuals interviewed fell evenly into three groups, 30% were younger than 21 (the youngest being 14), 27% were 22-26 years old, and 32% were 27 years or older.

The dropouts were asked to identify the reasons behind their decision to leave school by completing a questionnaire that contained 27 open-ended statements, all beginning with the statement "You left school because…" The statements covered several categories of reasons including (a) teacher student relationships, (b) content of schooling, (c) lack of parental support, (d) difficulty with classes, (e) difficulty with reading, (f) work needs at home or job, (g) distance from school, (h) unwanted at school, and (i) pregnancy.

Perceived discrimination, threatened ethnic identity, and low school identification. Several of the most common reasons cited by the participants were related to the relationship between the students and their teachers including the perception that their teachers do not care about them and do not help them enough with their work (Dehyle, 1992). When Dehyle interviewed these participants, she found experiences of prejudice and discrimination underlying these answers. Participants who spoke of teachers as *not good* told stories of teachers who attended little to individual AI students, and who expressed prejudice against them. Dehyle noted that in some cases, the students' feelings of rejection and discrimination were based on actual experiences, but "for others the stories of historic and current examples of discrimination were enough for them to 'feel' the discrimination" (p. 18). The experiences of discrimination led many students to develop a sense of mistrust in their teachers and alienation from school, which ultimately affected their school identification.

A former superintendent explained that low school identification and mistrust in teachers was often justified as some teachers harbored prejudice against the AI students and viewed education as a means of cultural assimilation: "Some of our older teachers hold traditional views of Indians [and] wiping the slate clean" (Dehyle, 1992, p. 7). Dehyle reported that some of the school personnel interviewed held the view that the only path to success for AI students was to compromise their ethnic identity and become *non-Indian*. AI students who maintained a strong ethnic identity by resisting assimilation and remaining on the reservation were described as failures by many of the EA school personnel interviewed. Dehyle concluded that for many of the dropouts, rejecting school was synonymous with maintaining their ethnic identity, and for others, leaving school was a statement of rejecting a system that had already rejected them.

In addition to experiencing discrimination from some teachers, the dropout participants also spoke of racial tension between the AI and EA students (Dehyle, 1992). Many participants reported experiencing racial hostility within the classroom setting, which for some, affected their school identification and deterred them from attending class or enrolling in predominantly EA classes. One Navajo participant spoke of her experience of alienation in a physics class, "They didn't want [me] in class so [I] gave up. I was the only Indian!" (p. 13). Interestingly, the hostility experienced by many of the dropouts was not only from their non-AI counterparts, as many participants noted the effects of peer and community pressure within their AI community

on influencing their decisions to drop out. Dehyle indicated that the students she interviewed who did well in school often faced ridicule from members of the community for adopting *White* ways, and compromising their AI ethnic identity in order to succeed in the *White* world.

Dehyle (1992) reported some findings with respect to the strength and content of the participants' ethnic identities, their social environment, and their responses toward discrimination and attitudes toward school. Deyhle found that the Navajo participants with strong ethnic identities, who came from the most culturally secure and traditional area of the reservation, expressed few feelings of discrimination and little resentment towards the often culturally irrelevant school curriculum. The Navajo students living in Border, whose cultural ties were weaker than their peers' on the reservation, expressed more feelings of discrimination, and the "pull of their community towards retaining an identity as 'Navajo' as they tried to succeed in Anglo society" (p. 20). The youth from the most disjointed and fractured culture, the Ute, were the most likely to perceive feelings of discrimination. They reported that school was irrelevant to their lives, and expressed concerns that school was a threat to their AI ethnic identity.

This pattern was observed at the high school level as well. Located on the Navajo reservation, NHS had very few EA students enrolled and was more successful at retaining and graduating AI students. Students who attended NHS reported less racial conflict, and the dropouts tended to leave school due to pregnancy and work needs. In contrast, BHS, which was located in Border (bordering the reservation), had a more diverse population, with EA students making up over 50% of the student population. AI students at BHS reported experiencing racial conflict at school and in the community on a daily basis. Interviews with these students revealed that many of them rejected school because these daily experiences of discrimination hurt their sense of school identification, and because they felt school was a threat to their AI ethnic identity (Dehyle, 1992).

Perceived barriers and educational utility. Another common reason cited by the participants was related to their beliefs about the utility of receiving an education and the relevance of the schools' curriculum (Dehyle, 1992). About half to two-thirds of the dropouts indicated that school was not important for what they wanted to do in life. When interviewed, many of the students indicated that they did not hold strong beliefs about the utility of education in helping them obtain future employment, in part because of perceived barriers. The dropouts spoke of institutional barriers, "Navajo jobs [and a] racially defined job ceiling" (p. 13). Dehyle reported that in the three participating communities, over 90% of official and managerial level jobs were held by European-Americans, while AIs held only 8% of these jobs. The AIs in these communities were typically employed in service maintenance and construction, and as laborers and para-professionals. Dehyle also reported that while AI high school graduates were twice as likely to be employed, there was little difference in the *types* of jobs held by graduates and non-graduates. Dehyle concluded that many of the dropouts questioned the relevance of completing school and the utility of a high school education, in light of the apparent barriers to better jobs experienced by the majority of the AI community.

Overall, Dehyle's (1992) ethnographic research showed that the Navajo and Ute students' performance in school, including their decision to leave school, involved culturally embedded factors, which Dehyle argued, "pointed toward larger sociocultural and political factors…[as] youth revealed the feelings they had of being 'pushed out' of schools and 'pulled into' their own Indian community" (p. 18). For the youth in this study, experiences of discrimination by their teachers and peers led to a sense of mistrust and weakened sense of school identification, which

ultimately became the pivotal reasons for rejecting school. In addition, many of the youth faced institutional barriers as evidenced by the racially defined job ceiling in their community. The participants questioned the utility of completing their education after witnessing generations of their family and peers fail to achieve higher job status despite having an education.

It is important to remember that not *every* Navajo and Ute student perceived such debilitating experiences of discrimination and barriers or rejected school as approximately 59% of the students over the seven years of the study graduated through either traditional or non-traditional means. Deyhle's (1992) findings among the dropouts from the two different high schools offer some insights into the individual differences between the dropouts and non-dropouts. Youths with stronger ethnic identities and connections to their cultural group reported being less affected by experiences of discrimination and institutional barriers and a greater connection to school. Those with more insecure ethnic identities and weaker cultural ties were more sensitive to experiences of discrimination and more were likely to reject school.

Though school dropouts are not examined in this dissertation, Dehyle's (1992) study provides a useful framework for understanding the achievement of AI students. In Dehyle's study, dropouts represent the culmination of years of experiencing discrimination and racially defined barriers, along with a poor sense of school identification. Experiences of discrimination and barriers compromised many of the youths school identification, and left them feeling alienated and rejected by school. Many of the youth reported weak ties to their ethnic group and a weakened ethnic identity, and in turn felt threatened by the prospect of being assimilated by the school's curriculum. These factors proved to be pivotal reasons that students left school. It is probable that these factors also affected the dropouts' achievement earlier in their school careers. Thus, by examining factors similar to those Dehyle reported including AI students' school identification, perceived discrimination, educational utility, perceived barriers, and ethnic identity, it is possible to develop hypotheses related to the achievement of all AI students.

Ethnicity, Ethnic Identity, and Minority Status

Overall, Dehyle's (1992) research showed that broad sociocultural issues related to ethnicity, including ethnic identity, and minority status, are at the core of the Navajo and Ute students' attitudes toward school, achievement in school, and decision to leave school. The dropouts expressed a strong desire to maintain their ethnic identity in the face of historic and contemporary pressures of assimilation, and experiences of ethnic discrimination and barriers. The theories and research that will be discussed later in this proposal, also center on these key concepts of ethnicity, ethnic identity, and minority status. Thus, before the discussion continues, it is necessary to establish a common understanding of the fundamental concepts underlying the primary theories and research highlighted in this dissertation.

Ethnicity. Before I define and discuss ethnic identity and minority status, it is first important to establish an understanding of what is meant by the broader term, *ethnicity*. The definition of ethnicity is widely debated in the literature and continues to change over time, context, and individuals. Yinger (1986) described ethnicity as closely related to both culture and race. Worrell (2007) pointed out that many definitions of ethnic identity and racial identity are distinguishable only by the adjective used to describe identity. Betancourt and Regeser Lopez (1993) pointed out that ethnicity, race, and culture are frequently and erroneously used interchangeably. They argued that though the constructs are related and influence each other, they must be separated for the purpose of understanding their effects on individuals' psychological outcomes. They suggested that in order to better define ethnicity and understand the relationship between ethnicity and psychological outcomes, specific ethnic-related

variables—which are assumed to be important in understanding psychological phenomena—must be identified and measured. Ethnic-related variables can include historic and contemporary experiences of discrimination, barriers, and minority status. Only after these variables are explored in relation to ethnicity, can researchers begin to draw conclusions about ethnicity and psychological outcomes such as academic attitudes and achievement.

Phinney (1996) responded to Bentacourt and Lopez' (1993) concerns and attempted to *unpack* ethnicity. She identified three aspects of ethnicity—culture, ethnic identity, and minority status—based on the assumption that these aspects of ethnicity are of psychological importance to ethnic minority individuals. Phinney (1996, p. 920) defined culture as the "norms, values, attitudes, and behaviors that are typical of an ethnic group and that stem from a common culture of origin transmitted across generations." Whereas other theorists who study ethnicity and culture (e.g., Betancourt & Lopez, 1993; Frisby, 1992, King, 2002; Trimble, 2000) have different definitions of culture, they all agree that ethnicity and culture are closely related and influence each other. They also agree that like ethnicity, culture is a complex, multifaceted variable that must be *unpacked* in order to understand its psychological implications. It is well beyond the scope of this dissertation to take on this task of examining and understanding the psychological impact of multiple aspects of culture. The questions posed in this dissertation are largely guided by Phinney's theoretical framework and definition of ethnicity, with a specific focus on the psychological implications of ethnic identity and minority status.

Ethnic identity. Like ethnicity, ethnic identity is a complex construct that has been conceptualized in a number of different ways in the literature. Phinney (1996; Phinney & Alipuria, 1990,) provided a definition of ethnic identity that encompasses social, self-identification, and cultural aspects of ethnic identity. She suggested that ethnic identity consists of "a commitment and sense of belonging to one's ethnic group, positive evaluation of the group, interest in and knowledge about the group, and involvement in activities and traditions of the group" (Phinney, 1996, p. 145). Phinney also maintained that like ethnicity, ethnic identity is not a categorical variable, but rather it is a multidimensional and complex construct that varies across group members.

In her earlier work (e.g., Phinney, 1989), Phinney argued that ethnic identity is a developmental process such that individuals move through identity stages from an unexamined ethnic identity to an achieved ethnic identity. More contemporary ethnic identity theorists (e.g., Gone, 2006; Trimble, 2000; Worrell & Gardner-Kitt, 2006) argue against the notion of ethnic identity as a developmental process. Trimble argued that ethnic identity is fluid and subject to individual social contexts. He suggested that a person may have multiple ethnic identities that emerge depending on the setting and interpersonal interactions. He provided an example of how an AI may have multiple ethnic identities that emerge in different social contexts: "within a tribe an AI may self-identify as a member of a clan, outside the tribe an AI may self-identify as a member of a particular tribe, among non-Indians as an Indian, and outside the country as an American" (Trimble, 2000, p. 199). Trimble used this example to argue that ethnic identity is not static, and as contexts change, ethnic identities change accordingly.

Minority status. Along with culture and ethnic identity, Phinney's (1996) definition of ethnicity includes individuals' experiences associated with their group's minority status as important in understanding the psychological implications of ethnicity. Minority status is defined as an ethnic group's social status and experiences within the larger society. For ethnic groups of color, such as AIs, these experiences may include historic patterns of exploitation,

experiences of discrimination and barriers, low representation in positions of power, and unequal socioeconomic status and educational opportunities.

Phinney argued that minority status is at the core of ethnic identity. She suggested that the psychological importance of ethnic identity is strongly associated with one's situations and experiences in society, which for minority groups of color, may include experiences of discrimination, stereotypes, and prejudice. She also argued that individuals' ethnic identity determine how they will respond to these experiences. Thus, individuals' minority status affects their ethnic identity, which in turn affects how they will respond to their minority status. Given the inextricably linked nature of ethnic identity and minority status, the term ethnic identity incorporates the concept of minority status throughout this dissertation unless otherwise stated.

AI Ethnicity and Ethnic Identity

AI as an ethnic group. To define AI people as one ethnic group based on the factors identified as contributing to ethnicity presents a challenge due to the heterogeneity of the population. Currently, there are more than 560 federally recognized tribes in the United States. Each tribe has its own distinct history, method of government, language, and culture. AI people also live in a diverse range of geographic settings. Approximately 40% of the total 4.1 million reported AI people in the United States continue to live in reservation communities, whereas the remaining 60% live in both urban and rural settings across the country (U.S. Department of Commerce, 2000). There are also varying degrees of *mixed blood* among tribes, as some tribes are historically known to accept the practice of interracial marriages whereas others remain relatively closed off to interracial mixing. Of the total population who reported AI on the 2000 Census, 1.6 million or 39% of the people reported being AI as well as one or more other racial/ethnic groups (U.S. Census Bureau, 2000). This demographic and cultural variation suggests that the definition of AI ethnicity varies across tribal groups and regions of the country.

However, AI people share a number of commonalities that transcend the differences between tribal populations to yield an underlying ethnicity. Trimble (2000) argued that while AI is an imposed and invented ethnic category, contemporary AI people have found some value in self-identifying with this broad category. Trimble cited Trosper (1981), who argued that AI people have "transformed themselves from a diverse people with little common identity into an ethnic group [and] have done so by mobilizing, with respect to a charter, the shared history of broken treaties" (Trosper, 1981, p. 257). Indeed, AI people share a history of European colonialism and the long battle with historic oppression by the U.S. government. The majority of tribes were relocated from their original lands and placed into designated territories and reservations. One outcome of this similar colonial experience is that AI tribes share a unique relationship with the Federal government. Tribes have been granted sovereignty—the power to manage and govern themselves. Thus, the U.S. Constitution recognizes AI tribes as distinct governments. Related to sovereignty is the concept of tribal enrollment, which was originally imposed by the Federal government and was used to determine who was eligible for treaty benefits such as sovereignty. Currently, the federal government through the Bureau of Indian Affairs, legally defines AI as a person whose AI blood quantum is at least one-quarter and who is registered or enrolled member of a federally recognized tribe. Tribal enrollment continues to be a tribal means of identification and allocation of resources.

AI ethnic identity. Contemporary researchers who study AI ethnic identity (e.g., Gone, 2006; Livesay, 2005; O'Nell, 1996; Trimble, 2000) argue that AIs construct their ethnic identities within the context of their biological backgrounds, and historical, sociopolitical, social, and cultural contexts. In this model, entitled the Gone Model (Gone, Miller, & Rappaport, 1999,

cited in Gone, 2006), Gone and his colleges contend that AI ethnic identity is the product of a "dynamic social process [between]…two or more persons engaged in unfolding interaction" (p. 64) within the individual's cultural context—which includes cultural history, traditions, and institutional relations. As such, they argue that possible ethnic identities are limited and bound by the particular tribal culture, and thus, are not infinite. In the Gone Model, AI ethnic identity is also bound by the individual's social context. That is to say that an individual's identity is subject to the identity declarations and judgments of others. Trimble speaks to this point and argued that at some point, an individual's identity declarations require external validation. Thus, the judgments of others play a key role in ethnic identity formation.

Though it is beyond the scope of this dissertation to examine the contextual nature of the participants' ethnic identity, the Gone model serves as a reminder that ethnic identity is not a static quality, nor is it conceptualized in the same manner across AI individuals. AIs are a vastly diverse group of people with different histories, cultures, and contemporary socioeconomic situations. Though the quantitative measure of ethnic identity used in this dissertation (Phinney & Ong, 2007) provides information about the extent of identity exploration and strength of identity commitment, the scores do not speak to specific identity content, nor can they account for contextual identity reformulations. Thus, when drawing conclusions about the role of ethnic identity in these participants' academic outcomes, one must be cognizant of the complexities underlying ethnic identity, and cautious about the breadth of the conclusions drawn.

Ethnic Identity and Academic Achievement

Although several identity constructs (e.g., academic self-efficacy, academic self-concept, motivation) have been identified as being important in student achievement, Worrell (2007) pointed out that the most frequent constructs used to explain the achievement of minority students are social identity constructs including ethnic identity. Examining ethnic identity is important to the extent that ethnicity has salience and centrality for the individuals involved (Phinney, 1996). Research has shown that ethnicity—including ethnic identity, is a more salient component of the self-identity of minority individuals than for most European-Americans (Phinney & Alipuria, 1990). Thus, as a key part of the personal identity of minority individuals, ethnic identity is implicated in the overall adjustment of minority adolescents. Given that a large component of adjustment in adolescents relates to succeeding in school, ethnic identity has clear implications for the academic achievement of minority students.

Ogbu's cultural ecological theory. One of the most well known explanations for the relationship between ethnic identity and minority achievement is Ogbu's (1978; Ogbu & Simons, 1998) cultural ecological theory. Though not developed to specifically explain the achievement patterns of AI students, much of Ogbu's theory is relevant to the historic and contemporary circumstances faced by AI people. Ogbu drew a distinction between the different minority groups in the US based on their history of incorporation into U.S. society and subsequent treatment. He classified groups that were incorporated into U.S. society involuntarily either through slavery, colonization, or as refugees as *involuntary minorities* (e.g., AIs, African Americans, certain Latinos, and certain Asian refugee groups). These minority groups have a minority status that includes experiences of prejudice, discrimination, barriers, and powerlessness.

Ogbu (1978; Ogbu & Simons, 1998) classified other groups that opted to come to the U.S. as *voluntary minorities* (e.g., most Asian immigrants, and some Latino immigrants). Ogbu studied both the structural barriers that involuntary minorities face as well as the responses these groups have to such barriers. He argued that the differences in minority school performance are

not entirely attributable to structural, cultural, or linguistic differences because some groups manage to succeed academically despite facing similar structural barriers and cultural discontinuities. For example, Japanese and Korean immigrants traditionally do better in school than Hmong immigrants and refugees despite facing similar linguistic and cultural barriers at school. Ogbu concluded that the differences between the school performance of involuntary and voluntary minority students is related to the *history* and *treatment* of involuntary minority groups in society and in school, along with their *perceptions* and *responses* to this treatment.

Ogbu (1978; Ogbu & Simons, 1998) argued that because involuntary minorities have a longstanding history of unequal power dynamics and opportunities, discrimination, and structural barriers, they have developed *collective solutions* or *cultural models* as a way of responding to and coping with these structural forces. More specifically, Ogbu defined cultural models as the ways that members of a minority group interpret their world and which guide their actions. Ogbu identified four types of cultural models with respect to attitudes and beliefs about schooling: (a) dual frame of reference, (b) instrumental beliefs about schooling, (c) relational beliefs about schooling, and (d) symbolic beliefs about schooling. A dual frame of reference refers to the comparison a minority group may make about their educational opportunities versus the educational opportunities of other, more privileged groups. Instrumental beliefs about schooling refer to a minority groups' beliefs about the role of school in helping one to succeed or get ahead in society. Relational beliefs about schooling refer to the mistrust in the educational system and the belief that a goal of the U.S. educational system is to subordinate and control minorities. Symbolic beliefs about schooling refer to the idea that the U.S. educational systems' curriculum is a threat to the cultural identity of minorities.

Ogbu (1978; Ogbu & Simons, 1998) argued that the overall belief pattern that results from these cultural models is a general degree of mistrust in the U.S. educational system including administrators, teachers, and the curriculum. As such, involuntary minorities worry that learning the school curriculum is harmful to their cultural and linguistic identity, and view the adoption of *White* ways as a subtractive process that threatens their ethnic identity. These patterns of mistrust and concerns over maintaining their ethnic identity were observed in many of the dropouts in Dehyle's (1992) study. Ogbu also maintained that involuntary minorities develop an ambivalent attitude about education—though they acknowledge the role of schooling in getting ahead, their experiences with discrimination lead them to believe that hard work and education are not enough to overcome racism and discrimination. Ogbu suggested that in response to their treatment by European-Americans, involuntary minorities might also develop an oppositional collective or group identity. Oppositional identities are characterized by their differences from European-American society and their rejection of mainstream values. It is important to note that Ogbu (1989) suggested that there are many ways in which involuntary minority individuals respond to these cultural models in terms of their academic behaviors and beliefs. However, much of his work, and the work that is most relevant to this dissertation centers on the development of oppositional identities. Thus, this line of research is the primary one reviewed.

Ogbu's (1978; Ogbu & Simons, 1998) theory of oppositional identities has major implications for students' attitudes toward and success in school. Generally speaking, there are certain characteristics that are required for success in school, including mastering the school's curriculum, learning standard English, and exhibiting adaptive school behaviors. Ogbu argued that some involuntary minorities interpret these standards as European-American society's requirements that are designed to deprive minorities of their identities. Thus, many minorities

with an oppositional identity will view conforming to school requirements and succeeding in school as *acting White* and compromising their ethnic identity. These beliefs create a dilemma for involuntary minority students. They believe that conforming to school demands, exhibiting European-American behaviors, and mastering European-American standards (e.g., mastering standard English) comes at the expense of their ethnic identity, and community acceptance. Thus, Ogbu argues that these students are forced to choose between an instrumental interpretation of schooling as a route to future employment and upward social mobility, and their ethnic identity communities' acceptance. This dilemma was observed in Dehyle's (1992) study, in which participants reported they often experienced ridicule from the AI community for adopting European-American educational standards. Dehyle's participants also reported concerns that their ethnic identity was compromised when they conformed to the school's demands.

Ogbu (1978; Ogbu & Simons, 1998) argued that the dilemmas students face when confronted by their communities' ambivalence are reflected in their attitudes and behaviors in school. Ogbu suggested that students develop mixed feelings about school. These ambivalent feelings can lead to a number of detrimental behaviors including reduced efforts, inattentive classroom behavior, poor homework completion, and poor school attendance. These ambivalent feelings can also lead to maladaptive attitudes towards school such as claims that the work is uninteresting, boring, and irrelevant, as well as beliefs that it is appropriate to disrespect and challenge teachers' authority. These behaviors and belief patterns were observed in the dropouts in Dehlye's (1992) ethnographic study. Many of the dropouts interviewed reported pressures of assimilation, feelings of alienation, experiences of discrimination, and the *Navajo job ceiling*. These experiences reportedly shaped their trust and views about education and led them to reject formal schooling.

Ogbu's (1978; Ogbu & Simons, 1998) cultural ecological theory is somewhat controversial in the research literature. Critics of Ogbu's theory (e.g., Fuligni et al., 2005; Spencer et al., 2001) argue that his theory does not adequately account for contextual and socializing factors (e.g., socioeconomic status, intelligence, family socialization etc.), cultural traditions, and individuals' developmental status, all of which may mitigate the development of an oppositional identity. Spencer et al. criticized the theory for its emphasis on the negative adaptive processes which Ogbu assumes unfold unilaterally across involuntary minority groups. Thus, Ogbu's critics argue that his theory does not provide an adequate explanation for the individual variation in attitudes and achievement that is seen among involuntary minority groups.

Contemporary views on ethnic identity and minority achievement. Contemporary scholars (e.g., Altschul et al., 2006; Oyserman et al., 2003b) have contributed a level of nuance to Ogbu's (1978; Ogbu & Simons, 1998) cultural ecological theory that provides a greater understanding of the individual responses to education, discrimination, and institutional barriers across minority groups. Oyserman et al. (2003b) argued that low minority status and the presence of structural barriers such as stereotypes do not academically debilitate all minorities equally. They further argued that minority individuals who are targets of stereotypes and low status do not merely incorporate stereotypes and negative attributes into their identity and behavior. Instead, they suggested that individuals develop strategies to handle situations in which stereotypes may occur. They further maintained that there are individual differences in choices of strategies; thus, members of the same minority group are likely to differ in their vulnerability and response to stereotypes.

Oyserman et al. (2003b) outlined a model for understanding the individual differences in response to stereotypes and focused on the relationship between engagement with school and content of ethnic identity (known in there study as *racial-ethnic self-schema [RES]*). They proposed that the content of individuals' ethnic identity or RES could either reduce engagement or promote engagement with school. The content of RES was defined by the individuals' level of awareness of their group's minority status, the meaning they assigned to this minority status, and the extent to which they feel connected to their ethnic group.

Oyserman et al., (2003b) defined four possible groups based on this model. The first group, *RES aschematic*, refers to individuals who have not formed an RES and have not integrated thoughts, feelings, and beliefs about their ethnic group membership. Oyserman and her colleagues hypothesized that these individuals would be vulnerable to negative stereotypes and academic disengagement because they have not developed an RES to process and fend off the negative self-relevant implications of these stereotypes. The second group, *in-group only RES*, refers to individuals who are schematic for race and ethnicity, and who have defined their RES in terms of their positive connection to their ethnic group. These individuals most closely represent Ogbu's (1978; Ogbu & Simons, 1998) characterization oppositional involuntary minorities. These individuals are hypothesized to be less engaged in school and more vulnerable to stereotypes because they define their RES in opposition to mainstream society. These individuals do not expect to succeed in school because the low status of their ethnic group defines success as incongruent with their minority group status.

The third group, *dual RES*, refers to individuals who focus their attention on their status as both members of their ethnic group and members of the larger society, and who focus on the positive consequences of this dual status. These individuals are hypothesized to be less vulnerable to stereotypes and academic disengagement because they are more able to connect and identify with positive, mainstream roles and values as well as to their in-group roles and values. The final group, *minority RES*, refers to individuals who focus their RES on their status as both members of their ethnic group and members of a group that is discriminated against by the larger society. These individuals are also more likely to fend off negative stereotypes and remain engaged in school because they focus on ways to prevent or avoid likely negative consequences of minority status in the larger society.

In a series of three studies involving African-American, Hispanic, AI, and Arab-Palestinian Israeli adolescents, Oyserman et al. (2003b) confirmed their hypotheses and demonstrated the positive effect of dual and minority RES on minority student achievement, and the negative effect of in-group only RES and RES aschematic. Dual and minority RES students had higher end of the year GPAs, and demonstrated greater academic engagement and task persistence in the face of negative stereotypes. RES aschematic and in-group only RES individuals had lower GPAs, and demonstrated a lower level of engagement and task persistence when confronted with negative stereotypes.

Oyserman et al.'s (2003b) study provides evidence for the mechanism of how ethnic identity can act as a buffer against stereotypes and school dis-identification, and can promote task engagement. The results indicate that the content of individuals' ethnic identity makes certain social roles (e.g., good student) self-relevant, along with the normative rules and behavior routines attached to those roles. This study is not in contradiction to Ogbu's (1978; Ogbu & Simons, 1998) cultural ecological theory, rather it adds a new understanding of the individual differences in response to structural barriers. Individuals who define themselves *only* with respect to their low status minority group can be likened to Ogbu's oppositional identity. These

individuals are more likely to question the utility of an education and dis-identify with school, and are more vulnerable to structural barriers and discrimination because they see academic success as incongruent with their groups' minority status. However, individuals who define themselves as members of their minority group and the larger society or who focus their in-group ethnic identity in terms of rejecting negative stereotypes are able to maintain their school identification and beliefs in the utility of education, persist in the face of systemic barriers, and succeed academically.

Subsequent studies, including Altschul et al. (2006), have continued to provide a level of nuance to Ogbu's (1978; Ogbu & Simons, 1998) cultural ecological theory and the relationship between ethnic identity and achievement. Altschul and her colleagues investigated the relationship between the content of ethnic identity (known in her study as *racial-ethnic identity [REI]*) and academic achievement in minority adolescents. They operationalized REI by defining three aspects of REI: (a) *REI connectedness*, which refers to feeling connected to one's ethnic group, (b) *REI awareness of racism*, which refers to the awareness that one's ethnic group may not be valued by mainstream society, and (c) *REI embedded achievement*, which refers to the feeling that one's ethnic group is characterized by academic attainment.

In their two-year longitudinal study, Altschul et al. (2006) collected data from African American and Latino adolescents from three low-income, urban schools. Results from this study indicated that REI connectedness, REI awareness of racism, and REI embedded achievement were important predictors of grades for low-income minority youth. Specifically, they found that Latino and African American youth high in REI awareness of racism, high in REI connectedness, and high in REI embedded achievement attained better grades at each point in time. Additional studies using the same tripartite model of REI (e.g., Oyserman, Bybee, & Terry, 2003; Oyserman, Harrison, & Bybee, 2001) found a similar relationship between the three REI components and other indicators of academic success including school involvement, academic persistence, increased study time.

It is clear from these studies (e.g., Altschul et al., 2006; Ogbu, 1978; Ogbu & Simons, 1998; Oyserman et al., 2003b) that ethnic identity is indeed an important component of ethnic minority adolescents' identity, which must be considered in order to fully understand their academic outcomes. Though to some extent Ogbu, Oyserman et al. (2003b) and Altschul et al. disagree about the impact of ethnic identity on minority student achievement, all of their research points to the fact that ethnic identity provides a lens through which experiences, especially those that are ethnicity-related, are filtered. However, these studies, along with Dehyle's (1992) study, revealed that larger sociocultural experiences of discrimination and barriers, along with students' response these experiences, are equally important in understanding minority student achievement patterns. Taken together, these studies point to the importance of examining factors that are linked to ethnic identity and academic achievement, including attitudinal variables such as school identification, educational utility, perceived discrimination, and perceived barriers. These four constructs will be discussed in the following section.

Attitudinal Variables and Academic Achievement

School identification. School identification refers to students' sense of belonging, community, and personal relatedness to their school (Osterman, 2000). As was reported in Dehyle's (1992) study, AI students' sense of school identification—or lack there of—had major implications with respect to their decisions to complete their education. Extant literature (e.g., Faircloth & Hamm, 2005; Goodenow & Grady, 1993; Kenny, Blustein, Chaves, Grossman, & Gallagher, 2003) has linked students' experience of belongingness to a number of important

educational outcomes including academic attitudes and motivation, social and personal attitudes, engagement and participation, and academic achievement. This literature suggests that a positive identification and orientation towards school, class work, and teachers, leads to more adaptive academic and social outcomes, which in turn positively affects academic achievement.

A number of researchers have documented the differences in school identification among ethnic minority and European-American adolescents. Goodenow and Grady (1993) examined the relationship between school identification and academic motivation among African-American, European-American, and Hispanic students from two urban junior high schools. They found that the ethnic minority participants expressed weak beliefs that they belonged in their school. These school identification scores were significantly lower than scores reported in a similar study (Goodenow, 1993) involving suburban European-American students, and accounted for 21% of the variance in general school motivation. Students' expectations that their achievement related behavior would result in academic success and the value they attached to this success were also significantly associated with school identification. School identification scores accounted for 19% and 30% of the variance of these outcomes respectively.

In a more recent study, Faircloth and Hamm (2005) further examined the role of school identification in explaining the relationship between motivation and academic achievement in a study involving African-American, Asian-American, Latino, and European-American high school students. Faircloth and Hamm explored students' sense of school identification in four domains: bonding with teachers, having a place within the network of peer relationships, extracurricular involvement, and perceived ethnic-based discrimination. Most relevant to this dissertation are their findings with respect to school identification and perceived discrimination, which emerged as significant predictors of school identification for the ethnic minority participants. This literature suggests that ethnic minority students' perceptions of how their ethnic group is treated at school affects the bond they form with their school. This literature supports Ogbu's (1978; Ogbu & Simons, 1998) assertion that some minority students dis-identify with and devalue the role of schooling, because their experiences with discrimination lead them to believe that hard work and education do not necessarily translate to success in the future.

Perceived discrimination. In the context of the educational setting, perceived discrimination refers to individuals' experiences of racial/ethnic discrimination at school from teachers, administrators, and peers. Findings from qualitative (e.g., Dehyle, 1992; Fordham & Ogbu, 1986; Ogbu 1978; Ogbu & Simons, 1998), and quantitative research (e.g., Faircloth & Hamm, 2005) suggested that perceived discrimination influences students' identification with school, their educational expectations, motivation, and school performance and attainment. In their seminal study on ethnic discrimination and adolescents' academic and socioemotional adjustment, Wong et al. (2003) found that students' experiences of racial/ethnic discrimination predicted declines in grades, academic self-concepts, academic task values, and mental health. In addition, experiences of discrimination predicted increases in the association with academically disengaged and socioemotionally troubled peers.

Research on the effects of perceived discrimination does not unilaterally point to academic and socioemotional decline. Though they identified perceived discrimination as a risk factor that threatens academic achievement, Wong et al., (2003) also found that a strong, positive ethnic identity served as a protective factor that mitigated the effects of discriminatory experiences. Oyserman et al. (2003b), and Altschul et al. (2006) also reported findings that for some adolescents, a strong ethnic identity not only mitigated the effects of discrimination,

racism, and stereotypes, but also promoted academic achievement. Wong and her colleagues suggested that these seemingly contradictory findings represent different ways ethnic minority adolescents respond to ethnic discrimination. Though some students respond to discrimination by disengaging from school, others will respond by identifying with school and working to achieve in order to combat discrimination.

Perceived barriers. As previously discussed, researchers (e.g., Altschul et al., 2006; Dehyle, 1992; Goodenow, 1993; Ogbu 1978, Ogbu & Simons, 1998; Oyserman et al., 2003b) have argued that minority youth may dis-identify with school because they do not view their school experiences as relevant to their future education, or as vehicles to career mobility. Researchers (e.g., Ali & McWhirter, 2006; Kenny et al., 2003) argued that perceived barriers to postsecondary education and career access may be one factor that leads students to view their education as irrelevant, thereby leading them to disengage from academic and career development tasks. McWhirter (1997) defined perceived barriers as contextual factors, which influence individuals' development and implementation of educational goals and career choices. She argued that "larger social forces of racism, sexism, and classism form a context within which the career and educational attainment of women and people of color must be understood" (p. 142). As such, perceived barriers can be viewed as individuals' perception of obstacles within the context of pervasive social problems such as those listed above.

Extant literature (e.g. Constantine, Erikson, Banks, & Timberlake, 1998; Flores & O'Brien, 2002; McWhirter, 1997) has documented ethnic differences in perceived educational and career barriers. McWhirter (1997) was the first researcher to report these differences. In her seminal study with Mexican-American and European-American high school juniors and seniors, McWhirter reported that Mexican-American respondents were more likely to perceive problems and barriers to attaining a postsecondary education than the European-American participants. In addition, the Mexican-American participants were more likely to anticipate both sex and ethnic discrimination in their future careers, and were less confident than their European-American counterparts that they could overcome these barriers. Though this seminal study was important in documenting the ethnic differences in perceived educational and career barriers, it does not speak to how perceived barriers are actually linked to the achievement on minority students.

Kenny et al. (2003) conducted a seminal study which examined how perceived barriers may effect academic and career achievement by examining school engagement and career attitudes among urban minority high school students. Specifically they looked at behavioral and attitudinal indices of school engagement, as well as the aspirations for career success, expectations for attaining career goals, and the importance of work in one's future. Behavioral indices of school engagement included behaviors such as doing homework, attending classes, and paying attention in class. Attitudinal indices of school engagement included school identification, and educational utility. After controlling for the effects of gender and social support, perceived barriers remained a significant variable, which contributed unique variance to students' school identification and educational utility. Specifically, perceived barriers emerged as a negative predictor of behavioral and attitudinal indexes of school engagement, as well as with career attitudes, aspirations, and expectations.

Research on perceived barriers to educational and career attainment offers some understanding of how systemic factors such as discrimination and poverty may affect educational and career achievement at an individual level. Kenny et al.'s (2003) research supports previous researchers' (Dehyle, 1992; Faircloth & Hamm, 2005; Ogbu, 1978; Ogbu & Simons, 1998)

assertions, and indicates that the challenges posed by institutional barriers and discrimination affect students' attitudes and behaviors towards school as well as their career aspirations.

Educational utility. Educational utility refers to the value students place on doing well in school and getting a good education, as well as the beliefs that hard work and academic achievement are the keys to job mobility and success (Rowley, 2000). Research on educational utility in minority populations is frequently linked to individuals' perceptions of and experiences with discrimination and structural barriers, and sense of school identification. An examination of recent research suggests that minority students respond to discrimination and barriers in a number of ways, and thus hold a range of beliefs about the utility of education.

Ogbu (1978; Ogbu & Simons, 1998) suggested that though involuntary minorities acknowledge the role of schooling in getting ahead, their historic and contemporary experiences with discrimination lead them to believe that hard work and education are not enough to overcome these structural barriers. Mickelson's (1990) study with African American and European-American high school students supported Ogbu's (1978; Ogbu & Simons, 1998) assertion. Mickelson noted the apparent *attitude-achievement paradox* among African American adolescents, in which African American youth positively endorse the importance of education, but frequently exhibit poor academic achievement. In her model of attitudes toward educational utility, Mickelson defined two sets of attitudes toward education: (a) *abstract attitudes*, which refer to mainstream ethics and beliefs about the promise of schooling as a vehicle for upward mobility, and (b) *concrete attitudes*, which refer to the actual realities people experience with respect to returns on their educational success. Results from her study indicate that though African American and European-American students hold both types of attitudes toward education, only concrete attitudes are predictive of academic achievement among Black students. Mickelson concluded that the social context—which includes experiences of structural barriers and discrimination—shapes African American students beliefs about the utility of education, which in turn affects their academic behavior and achievement.

Perhaps another way of conceptualizing the attitude-achievement paradox is to consider the research on attitudinal ambivalence. Attitudinal ambivalence is defined as the coexistence of a positive and a negative evaluation of the same attitude (Jonas, Diehl, & Bromer, 1996). According Spencer-Rodgers, Peng, Wang, and Hou (2004), attitudinal ambivalence exists "when individuals endorse response alternatives that have contradictory implications and these alternatives are of equal value, significance, or strength" (p. 1419). Within the context of educational utility, ambivalent educational utility can be understood when individuals' endorse the abstract, mainstream idealistic views of education, but simultaneously acknowledge their concrete experiences with education. As Mickelson (1990) and Ogbu (Ogbu & Simons, 1998) argued, these concrete experiences with education may include a racially defined job ceiling and a low return on educational investment. Researchers (e.g., Conner, Sparks, Povey, James, & Shepherd, 1996; Jonas et al., 1996) have demonstrated that high ambivalence towards a given behavior or attitude is correlated with lower engagement in the behavior, and decreased confidence in the attitude toward the behavior. Translated to educational utility, high ambivalence may correlate to a decreased confidence in the utility of education, as well as a declined engagement in adaptive educational behavior.

Though Mickelson's (1990) findings, and the re-conceptualization of educational utility in terms of ambivalence are promising lines of inquiry, empirical research on the relationship between abstract and concrete attitudes, academic achievement, and experiences of discrimination continues to be debated (Rowley, 2000). In contrast to Ogbu (1978; Ogbu &

Simons, 1998) and Mickelson's (1990) assertions, other researchers (e.g., Altschul et al., 2006; Fuligni et al., 2005; Oyserman et al., 2003b; Rowley, 1999, 2000) have reported that for some minority adolescents, perceiving discrimination and barriers is a healthy part of development, which can actually help to foster academic motivation and adaptive beliefs about the utility of education. Unlike Ogbu and Mickelson, these researchers conceptualized the effects of perceived discrimination, barriers, and educational utility, within the context of adolescents' ethnic identity-related beliefs. Fuligni and his colleagues found that adolescents who reported having a strong and positive ethnic identity also indicated stronger beliefs in the utility of education and academic success. Altschul and her colleagues reported that adolescents who were aware of the historic and contemporary issues of discrimination, and who also had a strong, positive ethnic identity, were more likely to believe in the utility of education for their ethnic group.

Rowley (2000) investigated the relationship between educational utility, academic achievement, and racial identity, and argued that this relationship is best represented as profiles of educational utility beliefs and GPA. Rowley clustered three variables including GPA, and the two utility variables based on Mickelson's abstract (known in this study as *idealistic*) and concrete beliefs about educational utility. Five GPA/utility profiles were identified: *low-utility achievers*, identified as students with good grades, and negative idealistic and concrete beliefs, *aware achievers*, identified as students with good grades, positive idealistic, and negative concrete beliefs, *nondiscrimination achievers*, identified as students with average grades, and average idealistic and concrete beliefs, *low-utility low achievers*, identified as low grades, and negative idealistic and concrete beliefs, and *idealistic low achievers*, identified as students with poor grades, but who maintain positive idealistic and concrete beliefs. Once the educational utility clusters were determined, they were related to racial ideology as measured by the Multidemensional Model for Racial Identity (MMRI; Sellers, Rowley, Shelton, Smith, & Chavous, 1997).

Rowley's (2000) study revealed a number of important points about educational utility, achievement, and racial/ethnic attitudes in minority students. First, her study suggested that there is more than one profile of high and low achieving African American students with regard to their educational utility. Theorists such as Ogbu (1978; Ogbu & Simons, 1998) argued that African American underachievers hold negative beliefs about the utility of education for their future. Though a profile of low-utility, low achieving students was identified, Rowley also identified low achievers with relatively high levels of idealistic utility and moderate levels of context-specific utility. These individuals did poorly in school despite having positive beliefs about the utility of education in career mobility.

With regard to racial ideology, Rowley identified several profiles that are discordant with Ogbu's (1989; Ogbu & Simons, 1998) theory. First, she found a profile of high achieving students with low levels of educational utility and strong nationalistic or Afrocentric ideals. These individuals hold racial ideologies that reject many mainstream values, including educational utility, however, they continue to do well in school. This profile contradicts Ogbu's theory of oppositional identity minority students who believe they must sacrifice their ethnic identity and adopt European-American norms and values in order to be academically successful. Rowley also found a profile of aware achievers, with good grades, idealistic views of education, and perceptions of discrimination, who held moderate stances on race. These individuals moderately subscribed to mainstream values, as well as African American cultural values, but also viewed themselves as part of the larger American culture. This profile supports findings

from other research (e.g., Altschul et al., 2006; Oyserman et al., 2003b), that have reported higher levels of achievement in minority adolescents who maintain a sense of ethnic identity, but who also view themselves as part of the larger American culture. These individuals are aware of structural inequalities, but maintain a positive view on the utility of education for their ethnic group. Finally, this study showed that beliefs in assimilation are not the only attitudes conducive to achievement in school. The profile with the lowest assimilation scores were doing well in school, whereas the profile with the highest assimilation scores—the idealistic low achievers, were not doing as well in school. These findings contradict Ogbu's assertion that minority students must assimilate to mainstream values, and compromise their ethnic identity in order to achieve in school.

Taken together, the research on ethnic identity, school identification, perceived discrimination, perceived barriers, educational utility, and academic achievement in minority populations reveals an interconnected, somewhat inconclusive, and complex relationship. Though researchers may disagree on the nature of the relationship of these variables, they do agree that these variables are important in understanding the academic outcomes of ethnic minority students. Thus, by exploring these variables in a population of AI adolescents, I hope to contribute to the research on their relationship with academic achievement within the understudied AI student population.

The Present Study

The goal of the current study is to further understand the nature of the relationship among social identity variables, attitudinal variables, and academic achievement of AI students. AI students are one of the lowest achieving ethnic minority groups who perform far below European-American students across all measures of achievement (Dauphinais, 2000; Dehyle, 1989; Freeman & Fox, 2005). Despite the apparent achievement gap, relatively few studies have examined the factors related to these educational disparities. A considerable body of research has examined a number of social identity and attitudinal variables, which have been implicated in the achievement gap between European-American and other ethnic minority students. Social scientists and educational researchers have long postulated that cultural variables are of particular importance in understanding overall adjustment and school functioning of ethnic minority adolescents (Phinney, 1996; Phinney & Alipuria, 1990; Worrell, 2007). The cultural identity and attitudinal variables which have been documented as being particularly important to the achievement ethnic minority students include ethnic identity (Altschul et al., 2006; Ogbu, 1978; Ogbu & Simons 1998; Oyserman et al. 2003b), school identification (Faircloth & Hamm, 2005; Goodenow, 1993; Goodenow & Grady, 1993), perceived discrimination (Altschul et al., 2006; Faircloth & Hamm, 2005; Fordham & Ogbu, 1986; Oyserman et al. 2003b; Wong et al., 2003), perceived barriers (Ali & McWhirter, 2006; Altschul et al., 2006; Kenny et al., 2003; McWhirter, 1997; Ogbu, 1978; Ogbu & Simons 1998), and educational utility (Mickelson, 1990; Ogbu, 1978; Ogbu & Simons 1998; Rowley, 2000). In order to confirm that these variables are important factors in the achievement of this sample of AI participants, I must first establish that there are differences between the AI and European-American participants' on measures of these variables. Thus, the first question that needs to be answered in this dissertation is, are there differences between AI students' and European-American students' ethnic identity, school identification, perceived barriers, perceived discrimination, and educational utility. Based on previous research, I hypothesize that there will be statistically significant differences between the two ethnic groups, with the AI sample reporting higher scores for ethnic identity, perceived

barriers, and perceived discrimination, and lower scores on school identification, and similar scores on educational utility.

Perceived barriers, perceived discrimination, and educational utility are three constructs that are linked in the literature on minority student achievement and school identification (Ogbu, 1978; Ogbu & Simons, 1998; Rowley, 2000). A number of studies (e.g., Ali & McWhirter, 2006; Faircloth & Hamm, 2005; McWhirter, 1997; Mickelson, 1990) have documented the negative relationship between these variables and a range of achievement outcomes. However, these studies often fail to consider the contribution adolescents' ethnic identity makes in influencing their response to these variables. Researchers (e.g., Altschul et al., 2006; Oyserman et al., 2003b; Rowley, 2000; Wong et al., 2003) have considered the relationship between ethnic identity, academic achievement, experiences with discrimination and barriers, school identification, and educational utility. They found that ethnic identity often positively mitigates minority adolescents' responses to experiences of discrimination and barriers, and also positively influence their educational utility beliefs, and school identification. These findings warrant additional research on the contribution of ethnic identity to minority adolescents' achievement and school identification. Thus, the second question to be answered in this dissertation is, does ethnic identity contribute to the variance in AI's achievement and school identification beyond perceived barriers, perceived discrimination, and perceived educational utility.

One of the premises of Ogbu's (1978; Ogbu & Simons, 1998) cultural ecological theory is that minority students' sense of school identification is dependent on their sense of ethnic identity. Ogbu argued that many involuntary minorities must choose between an instrumental interpretation of schooling and community acceptance. As such, Ogbu suggested that minority students are either forced to sacrifice their sense of ethnic identity in order to identify with school, or they have to sacrifice their identification with school in order to maintain a strong ethnic identity. Oyserman et al.'s (2003b) study suggested that though Ogbu's assertions may be partially correct, the relationship between ethnic identity and school identification is much more complicated. Oyserman and her colleagues found evidence that high scores on ethnic identity are associated with a greater identification with school. They also found evidence that suggested that low ethnic identity scores are associated with lower school identification and achievement. Altschul et al. (2006) also found evidence for this trend. By merging the findings from these three lines of research, four clusters based on ethnic identity and school identification can be conceptualized. These clusters are illustrated below in Table 1.

Table 1

The Four Hypothesized Clusters

Cluster 1:	Cluster 3:
[a]High Ethnic Identity, High School Identification	[b]Low Ethnic Identity, High School Identification
Cluster 2:	Cluster 4:
[a]Low Ethnic Identity, Low School Identification	[c]High Ethnic Identity, Low School Identification

[a]Is a profile that is supported by Altschul et al. (2006) and Oyserman et al. (2003b). [b]Is a profile that is supported by Ogbu (1978, 1998). [c]Is a profile that is supported by Altschul et al. (2006), Ogbu (1978, 1998), and Oyserman et al. (2003b).

Cluster 1 contains individuals with both a high sense of ethnic identity and a high sense of school identification. Individuals with this profile were identified in Altschul et al. (2006) as well as Oyserman et al. (2003b). Also identified in Altschul and Oyserman's research are the individuals in Cluster 2. These individuals have both a low sense of ethnic identity and a low

sense of school identification. Cluster 3 contains individuals with a low sense of ethnic identity and a high sense of school identification. These individuals were identified in Ogbu's (1978; Ogbu & Simons,1998) research, and are at the core of his cultural ecological theory, and theory of oppositional identities. Cluster 4 contains individuals with a high sense of ethnic identity and a low sense of school identification. These individuals were identified in all three researchers' (Altschul et al., Ogbu, and Oyserman et al.,) findings.

Research aimed at specifically identifying these theoretical clusters has not been done on AI adolescents. Thus, the third question that stems from this line of research, is do meaningful groups based on levels of ethnic identity and school identification in AI populations exist. Once one or more profiles are confirmed via cluster analysis, I can begin to examine how these profiles differ based on my other variables of interest. Thus, a second part to this third question is, do these clusters differ on the basis of academic achievement, perceived discrimination, perceived barriers, and educational utility.

Method

Participants

The total sample for this study consisted of 410 adolescents, in which 54% (n = 224) were female. The mean age of the total sample was M = 16.09 years (SD = 1.30), and the mean GPA of the total sample was M = 3.04 (SD = 0.81). The AI participants made up 31% (n = 128) of the total sample. The AI participants consisted of middle and high school students in ninth through twelfth grade and ranged in age from 14 to 19 years (M = 16.4 years). Fifty percent of the participants (n = 64) were female. The mean GPA of the AI sample was M = 2.66 (SD = 0.87). The European-American participants made up 69% (n = 282) of the total sample. The European-American participants consisted of middle and high school students in ninth through twelfth grade and ranged in age from 14 to 18 years (M = 15.9). Fifty-seven percent of the participants (n = 160) were female. The mean GPA of the European-American sample was M = 3.25 (SD = 0.69). The AI participants came entirely from a rural AI governed school on the reservation, and a rural school in a town which borders the reservation. The European-American participants came from the rural border town school in the Mountain state, as well as from urban schools in a Western state.

Measures

The measures utilized in this study are widely used and supported by theory and empirical research and the scores obtained from these instruments provide valid and reliable estimates of ethnic identity, school identification, perceived barriers, perceived discrimination, and perceived educational utility.

Academic achievement. Academic achievement is operationalized as self-reported GPA.

Ethnic identity. Ethnic identity was measured using a refined version of Multigroup Ethnic Identity Measure-Revised (MEIM-R; Phinney & Ong, 2007). The MEIM-R consists of a 6-item scale, which measures ethnic identity. Participants respond to items on a 4-point Likert scale that ranges from 1 (*Strongly Agree*) to 4 (*Strongly Disagree*). Examples of items found on the MEIM-R include "I have spent time trying to find out more about my ethnic group, such as its history, traditions, and customs," "I understand pretty well what my ethnic group membership means to me," and "I feel a strong attachment towards my own ethnic group." Phinney and Ong (2006) reported a strong reliability estimate of .81 in a study with an ethnically diverse group of college students. For the present study, three reliability coefficients were calculated—one for the total sample, one for the AI sample, and one for the European-American sample. Reliability for

the total sample was .89, reliability for the AI sample was .87, and reliability for the European-American sample was .86.

School identification. School identification was measured using a single item from Sidanius, Van Laar, and Sinclair's (2004) social identity attitudes subscale which measures students' sense of belonging or exclusion at school. Participants respond to the item on a 7-point Likert scale that ranges from 1 (*A Strong Sense of Exclusion*) to 7 (*A Strong Sense of Belonging*). The item's wording was modified to fit the current study's population from, "To what degree do you experience a sense of belonging or exclusion at UCLA?" to "To what extent do you experience a sense of exclusion or a sense of belonging at your school."

Perceived barriers. Perceived barriers were measured using an *ethnic discrimination* subscale from McWhirter's (1997) Perceived Barriers measure which was developed to support the examination of the degree to which women and marginalized racial/ethnic groups perceive barriers to their educational and professional goals. The ethnic discrimination subscale consists of 4-items which refer to perceived barriers to a professional career due to ethnicity. Participants respond to the items on a 5-point Likert scale that ranges from 1 (*strongly agree*) to 5 (*strongly disagree*). Participants are asked to respond to each question using a single stem: "In my future job, I will probably…" Examples of items they respond to include, "Be treated differently because of my ethnicity," and "Have a harder time getting hired than people of other ethnicities." In a psychometric study with a large sample of Mexican-American and European-American students, McWhirter reported a strong reliability estimate of .89 for the ethnic discrimination items. Reliability estimates for the current study are equally strong, with a total sample reliability of .92, an AI sample reliability of .92, and a European-American sample reliability of .90.

Perceived discrimination. Perceived discrimination was measured using Whitbeck, Hoyt, McMorris, Chen, and Stubben's (2001) scale which measures perceived discrimination within the context of global discrimination, authority discrimination, and school discrimination. Whitbeck et al. studied the relationship between perceived discrimination and both internalizing and externalizing symptoms among Native American adolescents (grade 5 to 8). They developed a 10-item scale to measure perceived discrimination within the three contexts. Participants respond to the items on a 5-point Likert scale that ranges from 1 (*never*) to 5 (*often*). A non-Native American specific version of the scale was used for this study. Examples of items found on this scale include, "How often have other kids ignored you or excluded you from some activities because of your racial/ethnic group?" "How often has someone yelled a racial slur or racial insult at you?" and "How often have adults suspected you of doing something wrong because of your racial/ethnic group?" Whitbeck et al. reported a strong reliability coefficient of .80 in their study with AI students ages 9-16-years old. Reliability coefficients in the current study's population are comparable, with a total sample reliability of .91, an AI sample reliability of .86, and a European-American sample reliability of .92.

Educational utility. Educational utility was measured using Mickelson's (1990) Attitudes Scale. Mickelson (1990) hypothesized that the attitude-achievement paradox among African American adolescents was due to the multi-dimensionality of attitudes towards education. She developed the Attitudes Scales to measure both abstract and concrete attitudes toward education. The Attitudes scale consists of 14 items, including 8 Abstract Attitude items and 6 Concrete Attitude items. Participants respond to the items on a 4-point Likert scale that ranges from 1 (*strongly disagree*) to 4 (*strongly agree*). Abstract examples include "Education is key to success in the future" and "Getting a good education is a practical road to success for a

young man or woman like me." Concrete examples include "Based on their experiences, my parents say people like us are not always paid or promoted according to our education," and "People in my family haven't been treated fairly at work no matter how much education they have." In her exploratory, psychometric study with African-American and European American high school students, Mickelson reported moderate reliability estimates for each subscale, with a reliability of .71 for the Abstract subscale's scores, and .67 for the concrete subscale's scores. Mickelson did not report a reliability estimate for the entire scale. Reliability coefficients in the current study were initially not as strong as Mickelson's estimates, and thus required some additional psychometric analysis.

A reliability coefficient for the total sample was initially calculated for the entire 14-item Attitudes scale, known in this study as *combined educational utility*. The combined educational utility scale's scores had a low reliability coefficient of .52. Due to the low overall reliability, I decided to examine the reliability of each subscale, as was done in Mickelson's (1990) study. The 8-item Abstract Attitudes scale, known in this study as the *abstract educational utility* subscale initially had a modest reliability coefficient of .61. However, by removing item #5 from the subscale, the reliability of the new 7-item abstract subscale was improved to .81. This new 7-item abstract educational utility scale was used in all subsequent analyses throughout this study. The 6-item Concrete Attitudes scale, known in this study as the *concrete educational utility* subscale had a modest reliability coefficient of .58, and was not improved by the removal of any items. The reliability coefficients for the AI and European-American samples were comparable to the total sample. The AI sample had reliability coefficients of .49, .53 and .76 for the combined, concrete, and abstract educational utility subscales' scores respectively. The European-American sample had reliability coefficients of .41, .55, and .80 for the combined, concrete and abstract educational utility subscales' scores respectively.

Despite the modest reliability of the concrete educational utility subscale, the subscale was still included in all subsequent analysis in this study, because of the exploratory nature of this study. However, because the reliability of the combined educational utility scale was so low, the decision was made to exclude this scale from all subsequent analysis—with the exception of early descriptive statistics (e.g., mean, standard deviation). This decision is also supported by Mickelson's findings which indicate that examining the two educational utility attitudes separately is more useful than examining a combined profile because each attitude correlates very differently with measures of achievement.

Ambivalent educational utility. An additional variable named ambivalent educational utility was computed using the two subscales from Mickelson's (1990) Attitudes Scale. This new variable was computed using the Similarity-Intensity Model (SIM; Thompson, Zanna, & Griffin, 1995) for ambivalence. This model takes into account both the similarity and intensity of conflicting responses, and thus allows for the analysis of participants' ambivalence towards a given variable. The SIM formula is 3S – L where S is the smaller mean value and L is the larger mean value. Higher scores from the SIM formula correspond to higher ambivalence. In this study, both the AI and the EA participants reported higher mean values on the abstract educational utility subscale, thus the ambivalence variable was calculated by subtracting the abstract subscale from three times the concrete subscale.

Procedure

Data for this study are part of a larger data set collected for the Adolescent Time Perspective Project. Data were collected in urban schools in a Western state, and rural schools in a Mountain state. The questionnaires were mailed directly to the urban schools, and were

administered in the classroom by school personnel. For the rural schools, the questionnaires were mailed directly to the district's superintendent, who in turn delivered them to the participating schools. As with the urban schools, the questionnaires in the rural schools were administered in the classroom by school personnel. Participants were each compensated $10 for their completion of the questionnaire.

Results

Descriptive statistics were run for all of the major the variables. The means and standard deviations are presented in Table 2. Other descriptive statistics, including kurtosis and skewness, were also run. Scale distributions were neither substantially skewed (< 2.95) nor kurtotic (< 9.17). Table 2 also includes Cronbach's alpha reliability coefficients for scores on each scale. As illustrated in the table, reliability for the scales' scores ranged from .52 to .92.

Pearson's correlation coefficients were calculated among all of the major variables. The correlation coefficients are presented in Table 3. Five correlations were significant at the critical alpha of $p < .006$ (i.e., .05 divided 8) and larger than .30 (i.e., medium effect size). Significant, positive correlations were found between ethnic identity and perceived barriers, ethnic identity and perceived discrimination, and perceived discrimination and perceived barriers. Significant positive correlations were also found between abstract educational utility and ethnic identity, and concrete educational utility and ambivalence towards educational utility.

Differences Between AI and European-American Participants

Nine *t*-tests were conducted to examine the differences on the variables between the AI and EA participants. The critical alpha for each analysis was .006 (i.e., .05 divided 9). Cohen's *d* was also calculated in order to determine practical significance. These results are presented in Table 2. Significant differences with large effect sizes were found on eight of the nine variables. AI participants reported higher scores on measures of abstract, concrete, combined, and ambivalent educational utility, as well as on measures of ethnic identity, perceived barriers, and perceived discrimination. The EA participants had significantly higher GPAs. The EA participants also reported higher scores on the single item measure of school identification; however, the difference in scores were neither statistically, nor practically significant.

The Unique Contribution of Ethnic Identity

In order to see if ethnic identity contributed to the prediction of GPA and school identification in AI participants beyond the contributions of abstract, concrete, and ambivalent educational utility, perceived barriers, and perceived discrimination, four hierarchical linear regressions were conducted. The first regression included GPA as the dependent variable. The first block of this regression included perceived barriers, perceived discrimination, abstract educational utility, and concrete educational utility as the independent variables. Ethnic identity was added in the second block. Table 4 presents the results of this hierarchical regression. None of the variables was a significant predictor of GPA, as the first block accounted for only 1.3% of the variance in GPA, and the addition of ethnic identity only accounted for an additional .4% of the variance.

The second regression included GPA as the dependent variable, but this time the blocks contained ambivalent educational utility instead of concrete and abstract educational utility. The first block of this regression also included perceived barriers and perceived discrimination. Ethnic identity was added in the second block. Table 5 presents the results of this hierarchical regression. Similar to the first regression for GPA, none of the variables was a significant predictor of GPA, as the first block accounted for only 1.2% of the variance in GPA, and the addition of ethnic identity only accounted for an additional .4% of the variance.

The third regression included school identification as the dependent variable. Again, the first block of this regression included perceived barriers, perceived discrimination, abstract educational utility, and concrete educational utility as the independent variables, and ethnic identity was added in the second block. Table 6 presents the results of this hierarchical regression. The first block accounted for 8.8% of the variance in school identification, with abstract educational utility making a significant contribution at the .01 level. The addition of ethnic identity in the second block improved the model by 2.5%, though this was not a statistically significant improvement.

The fourth regression included school identification as the dependent variable. The first block of this regression included perceived barriers, perceived discrimination, and ambivalent educational utility. Ethnic identity was added in the second block. Table 7 presents the results of this hierarchical regression. The first block accounted for 5% of the variance in school identification. The addition of ethnic identity in the second block was significant at the $p < .01$ level, and improved the model by 4.4%.

Cluster Analysis of Ethnic Identity and School Identification

Cluster analysis was performed in order to see if meaningful groups of AI participants based on levels of ethnic identity and school identification could be identified. Initially, a hierarchical cluster analysis was conducted using Ward's method (Bergman, Magnusson, & El-Khouri, 2003) to group the AI participants based on ethnic identity and school identification. In this method of cluster analysis, each respondent is first considered to be their own cluster, and as the analysis proceeds, cases are added together to form larger clusters. The number of clusters was identified using the dendogram resulting from this analysis. Differences in coefficients as presented in the agglomeration schedule were also reviewed in order to help determine the total number of clusters. Results from the Ward's method identified two clusters. In order to cross-validate the results of the Ward's method cluster analysis, a k-means cluster analysis was also conducted. In this method, the total number of clusters is pre-specified. Given that two clusters were identified using the Ward's method cluster analysis, two clusters were also specified in the k-means analysis. A comparison of the two cluster analyses found a 100% match between cluster solutions. Overall, 42 participants, or 32.8% of the sample were placed in the first cluster, while 86 participants or 67.2% of the sample were placed in the second cluster.

A set of *t*-tests were conducted in order to verify that the two clusters of respondents did in fact significantly differ on the two variables used in the cluster analysis—ethnic identity and school identification. The mean, standard deviation, and results of the *t*-tests are presented in Table 8. The results indicate a significant difference in school identification at the .006 level (i.e., .05 divided 8 *t*-tests), with Cluster 1 reporting lower scores for school identification than Cluster 2. This difference was also practically significant with a very large effect size. With respect to ethnic identity, the results of the *t*-test indicate no statistically significant difference between the two groups. Based on these findings, Cluster 1 was named *Low School Identification* and cluster 2 was named *High School Identification*.

Six additional *t*-tests were conducted in order to see if the clusters differed on the basis of GPA, perceived discrimination, perceived barriers, and concrete, abstract, and ambivalent educational utility. Table 8 illustrates the results of these *t*-tests. No statistically significant differences were found between the two clusters on GPA, perceived discrimination, perceived barriers, or abstract, ambivalent, and concrete educational utility. Though not statistically significant, abstract educational utility had a medium effect size, with the Low School

Identification cluster reporting lower scores on abstract educational utility than the High School Identification cluster.

Discussion

The goal of this study was to examine the nature of the relationship among social identity and attitudinal variables and academic achievement of AI students. Analyses were first conducted in order to explore whether AI students differed from EA students on measures of ethnic identity, school identification, perceived barriers, perceived discrimination, and abstract, concrete, and ambivalent educational utility. With the exception of school identification, statistically significant differences and large effect sizes between the AI and EA participants were found on all major variables, with the AI participants reporting higher scores on all measures except GPA. EA participants reported a higher GPA. Additional analyses explored whether or not ethnic identity contributes to the variance of AI students' GPA and school identification beyond the contribution from perceived barriers, perceived discrimination, and abstract, concrete, and ambivalent educational utility. None of the variables, including ethnic identity, was a significant predictor of GPA. Ethnic identity was a significant predictor of school identification.

The final series of analyses explored the existence of meaningful groups based on levels of ethnic identity and school identification in AI students, and how these groups differed on the measures of academic achievement, perceived discrimination, perceived barriers, and abstract, concrete, and ambivalent educational utility. Two clusters were identified which significantly differed on school identification scores. The groups did not significantly differ on any additional variables. A statistically non-signficant though practically significant difference in abstract educational utility was found, with the Low School Identification cluster reporting lower scores on abstract educational utility than High School Identification cluster.

Group Differences on Social Identity and Attitudinal Variables

GPA and school identification. Statistically and practically significant differences in GPA were found, with the EA participants reporting higher overall GPAs. Though the EA participants reported higher scores on the single item measure of school identification, this difference was neither practically, nor statistically significant. The non-significant finding with respect to school identification scores is somewhat surprising given past research (e.g., Dehyle, 1992; Faircloth & Hamm, 2005; Goodenow, 1993), which indicated that minority individuals express weaker beliefs that they belong to their school than EA students. This research suggested that the lower sense of identification with school was the result of discriminatory and unequal treatment towards ethnic minority students. A possible explanation for the non-significant findings may have to do with the context and homogeneous population of the AI participants school. The AI participants came from a nearly 100% AI attended, tribally operated public school on a reservation. Thus, it is likely that experiences of ethnic-based discrimination is lower in this school setting than it may be in a school with more diverse population, a school that is not on reservation, or a school that is not operated by an AI tribe.

Social identity variables. Statistically significant differences between AI and EA students were found on all of the social identity variables examined. AI students reported higher scores on ethnic identity, perceived discrimination, and perceived barriers. The results presented here lend support to previous lines of research, which have found that ethnicity is a more salient component of identity for ethnic minority individuals than for EA individuals (Phinney & Alipuria, 1990), and that ethnic minority individuals report more experiences with discrimination

and barriers than EA individuals because of their ethnic group membership (McWhirter, 1997; Wong et al., 2003).

Educational utility variables. Statistically significant differences between AI and EA students were found on all three educational utility variables, with the AI participants reporting higher scores on measures of abstract, ambivalent, and concrete educational utility. The higher scores on measures of abstract and concrete educational utility in the AI sample are not entirely surprising given past research (Mickelson, 1990; Rowley, 2000), which showed that minority students hold both types of educational utility beliefs. Whereas some individuals hold positive beliefs in both concrete and abstract educational utility, others hold negative beliefs in both types of educational utility, and others have differing beliefs towards each type (e.g., high abstract utility, low concrete utility, and visa versa).

Results regarding the academic correlates to these educational utility beliefs is mixed. Whereas Mickelson's (1990) findings indicated that only concrete educational utility is predictive of academic achievement, Rowley's (2000) findings demonstrated a number of GPA and educational utility profiles. Rowley found students with negative concrete and abstract educational utility beliefs and good grades, students with good grades, positive abstract, and negative concrete beliefs, students with average grades and average abstract and concrete beliefs, students with low grades and negative abstract and concrete beliefs, and students with poor grades and positive abstract and concrete beliefs. It is well beyond the scope of the results in this dissertation to draw a direct comparison to Rowley's profiles. However, the AI participants in this study most closely resemble Rowley's profile of students with average grades and average abstract and concrete beliefs.

Some comparisons can be made to Michelson's (1990) work, which situates educational utility within the social context of ethnicity, class, and discrimination. The present findings—that AI sample reported higher abstract and concrete educational utility scores, but also had significantly lower GPAs than the EA students in conjunction with higher experiences of barriers and discrimination—lends some support to Mickelson's findings that minority students' experiences with discrimination and barriers influences their concrete educational utility beliefs, which in turn is correlated with lower achievement.

Perhaps the most useful means of understanding the educational utility beliefs across the AI and EA participants is to examine their ambivalent educational utility scores. The AI participants reported significantly higher and stronger feelings of ambivalence towards educational utility than the EA participants. This suggests that the AI participants have more strongly conflicting feelings and decreased confidence in the utility of an education. It is possible that this ambivalence comes from what Rowley (2000) suggested is the historic and contemporary reality of their everyday experiences, which reflect the limiting role of their minority status. This assertion is supported by the finding that concrete and ambivalent educational utility are highly correlated in this sample, which suggests that much of the ambivalence variable overlaps with concrete experiences of barriers and limitations.

The AI participants in this study can be compared to those in Dehyle's (1992) sample of Navajo and Ute students. Both samples came from predominantly AI communities close to border towns with EA residents. Dehyle's participants expressed conflicting beliefs in the utility of education because of institutional barriers they faced in their daily lives. In Dehyle's sample, ambivalent feelings towards educational utility translated into decreased academic efforts and increased dropout rates. In the current sample, it is possible that the significantly lower GPA of the AI participants is in part due to ambivalent feelings towards education, and a subsequent

decreased engagement in adaptive educational behavior. Both concrete educational utility beliefs and ambivalent beliefs had modest negative correlations (i.e., in the .25 range) with GPA.

The Contribution of Ethnic Identity

Past research has detailed a complex and somewhat inconclusive relationship among ethnic identity, academic achievement, and school identification. Seminal research by Ogbu (1978; Ogbu & Simons, 1998) suggested that a strong sense of ethnic identity might be detrimental to the achievement of minority students. Ogbu argued that for some minorities, a strong ethnic identity is synonymous with the dis-identification with school, and a rejection of mainstream values such as conforming to school norms and succeeding in mainstream schools. Ogbu suggested that this oppositional identity and rejection of school norms is in response to experiences of discrimination and barriers.

Recent research provides a more nuanced interpretation, and suggests that students' reactions to these experiences of discrimination and barriers along with their beliefs about schooling are influenced by their ethnic identity. More contemporary research on the relationship between ethnic identity and academic achievement (e.g., Altschul et al., 2006; Oyserman et al., 2003b) suggests that the strength and content of ethnic identity in combination with other important variables such as one's awareness of racism, one's connection to other ethnic groups, or one's beliefs in their ethnic group's academic abilities, determines how they will perform academically. Oyserman et al. (2003b) demonstrated that minority students with strong ethnic identities, who viewed themselves as members of both their ethnic group and members of the larger society, performed better academically, and were more identified with school—even in the face of negative stereotypes. In contrast, students with strong ethnic identities, and no identification with other ethnic groups, or students with weak ethnic identities, performed worse academically, and were more susceptible to the effects of negative stereotypes. Altschul and her colleges showed that ethnic minority adolescents who had strong ethnic identities, a high awareness of racism, and strong beliefs in their ethnic group's academic abilities, achieved better grades than their peers who did not strongly endorse all three constructs simultaneously. These contemporary research findings suggest that ethnic identity, in conjunction with other variables, plays an important role in the achievement outcomes of ethnic minority students.

Based on this research, I hypothesized that ethnic identity would improve the model in explaining the academic achievement and school identification of the AI participants. Results from the first block of the first regression analysis, in which GPA was the dependent variable, and perceived discrimination, perceived barriers, and concrete and abstract educational utility were the independent variables, indicate that none of the independent variables predicted GPA. The second block of the first regression, which included ethnic identity, also did not predict GPA. A comparison of the two models indicates that the addition of ethnic identity did not significantly improve the predictive power of the model. A second regression was conducted with GPA as the dependent variable, but with ambivalent educational utility replacing concrete and abstract educational utility in the independent variables. Results from the first block of the regression indicate that none of the independent variables predicted GPA. The second block of the this regression, which included ethnic identity, also did not predict GPA.

A possible explanation for the reason why none of the independent variables predicted academic achievement may have to do with the limited nature of the single measure of academic achievement—GPA. Previous studies (e.g., Kenny et al., 2003; Oyserman et al., 2003; Wong et al., 2003) which looked at the relationship between the independent variables in this study and

academic achievement used multiple indices of academic achievement, including GPA and academic self-concept, and behavioral indices of school engagement such as homework completion, task persistence, class attendance, and paying attention in class. It is possible that a more comprehensive definition of academic achievement may have been a better representation of achievement and would have been related to the independent variables.

Results from the first block of the third regression analysis, in which school identification was the dependent variable, indicate that abstract educational utility significantly predicted school identification. Results from the second block of the second regression, which included ethnic identity, indicate that the addition of ethnic identity did not significantly improve the predictive power of the model. The finding that abstract educational utility accounted for some variance in school identification is not surprising given the fact that abstract educational utility refers to mainstream ethics and beliefs about the promise of schooling as a vehicle for upward mobility. Thus, it makes sense that the variance in individuals' sense of belonging to and identification with school is related to the extent to which they buy into the idealistic promise of education.

A fourth regression was conducted with school identification as the dependent variable, and ambivalent educational utility replacing concrete and abstract educational utility in the first and second blocks of independent variables. Results from the first block of the regression indicate that none of the variables predicted school identification. However, the addition of ethnic identity in the second block significantly improved the predictive power of the model. Overall, ethnic identity, ambivalent educational utility, perceived barriers, and perceived discrimination accounted for 9.3% of the variance in school identification, with ethnic identity accounting for 4.4% of the variance. These results lend some support to researchers (e.g., Altschul et al., 2006; Oyserman et al., 2003b), who argue against Ogbu's (1978; Ogbu & Simons, 1998) theory of oppositional identity, and suggest that a strong sense of ethnic identity and a strong sense of school identification can coexist.

A possible explanation for the overall low percentage of variance in GPA and school identification accounted for by the independent variables may have to do with the scales chosen to measure each variable. Perceived discrimination, perceived barriers, educational utility, and ethnic identity were identified as important variables that predict GPA and school identification based on Altschul et al. (2006), Ogbu (1989; Ogbu & Simons, 1998), and Oyserman et al.'s (2003b) work. Ogbu's work is entirely qualitative, and therefore, his conception of ethnic identity, school identification, perceived discrimination and barriers, and educational utility is not comparable to a single measure of each construct.

Altschul et al. (2006) and Oyserman et al. (2003b) conducted quantitative research and operationalized these variables using multiple measures. For example, Oyserman et al. (2003b) conceptualized ethnic identity by both the strength of identity (as done in this study), but also the content of identity. The content of ethnic identity was defined by the individuals' level of awareness of their group's minority status, the meaning they assigned to this minority status, and the extent to which they feel connected to their ethnic group. Altschul and her colleagues defined ethnic identity with respect to individuals' level of connectedness to their ethnic group, their awareness of racism, and the extent to they characterize their ethnic group as academically successful. In this study, I only used a single measure of ethnic identity, but did not measure the participants' beliefs about their ethnic group's achievement abilities, nor did I measure the extent to which they identify with other groups. It is possible, that a more nuanced definition of ethnic

identity may have provided more insight into the variance of achievement and school identification.

Clusters Based on Ethnic Identity and School Identification

One of the main premises of Ogbu's (1978; Ogbu & Simons, 1998) cultural ecological theory is that minority groups such as AIs are forced to choose between a strong sense of ethnic identity and a strong identification with school. More recent research (e.g., Altschul et al., 2006; Oyserman et al, 2003b) suggests that though Ogbu's assertions may be partially correct, the relationship between ethnic identity and school identification is much more complicated. These researchers contend that the content of individuals' ethnic identities, coupled with their experiences and interpretations of discrimination and barriers, determines how individuals will identify with school. Results from the regression analysis in the current study lend some support to Altschul and Oyserman's views, and indicate that an increased sense of ethnic identity contributes to an increased sense of school identification. Based on previous literature, I hypothesized that I would find four groups of AI participants with the following profiles: high ethnic identity and high school identification, high ethnic identity and low school identification, low ethnic identity and low school identification, and low ethnic identity and high school identification.

Results from this analysis do not support this hypothesis. Two groups that differed solely on levels of school identification were identified. The Low School Identification cluster had substantially lower scores on school identification than the High School Identification cluster, but the groups did not differ significantly on ethnic identity, GPA, perceived discrimination, perceived barriers, or abstract, concrete, and ambivalent educational utility. Though not statistically significant, the difference between the abstract educational utility scores had a medium effect size and suggests that the higher abstract educational utility scores in the High School Identification cluster is meaningful and should be examined in future studies. The finding that the two clusters did not significantly differ with respect to ethnic identity is not surprising in retrospect, given the homogeneous nature of this AI sample. It is likely that most individuals living in a mono-ethnic environment such as a reservation have an elevated and more stable sense of ethnic identity, given that they are immersed in their ethnic group's culture, and have fewer daily interactions with other ethnic groups.

The findings that the two clusters did not differ on measures of educational utility, GPA, perceived barriers, or perceived discrimination calls into question the usefulness of clustering this AI sample based on their school identification. School identification was not correlated with GPA or any other of the major variables. It is possible that within the context of a homogeneous, tribally operated school, school identification has less of an relationship with attitudes and behaviors than it would in a more diverse school setting. Thus, future studies with AI participants in an ethnically homogeneous school context may benefit from clustering students based on a different attitudinal or behavioral measure.

Limitations

There are a number of limitations to this study. Perhaps the most important one is the ethnically homogeneous context in which the AI participants come from. Most of the literature which guided the research questions in this dissertation is based on minority students who attend urban, ethnically diverse schools. As such, it is likely that ethnicity and minority status are more salient aspects of these students' everyday academic lives as they negotiate ethnically diverse schools and encounter more experiences of ethnic barriers and discrimination within the school.

Thus, perhaps, ethnicity-related attitudinal and social identity variables are more important predictors of achievement in contexts in which ethnicity is more salient.

Though the AI participants in this study are still subject to the historic experiences of colonization and minority status, it is also important to note that individual tribes have faired differently from these experiences. Though all AI tribes have the legal right to educational sovereignty, many cannot exercise this right because their communities have not recovered from the devastating effects of colonization and therefore do not have the organizational, financial, human resources to operate a school district. The fact that the participants in this study attend a school on the reservation, which is tribally operated, speaks to an inherent organization and infrastructure within this tribe that many tribal communities do not have. Thus, the participants in this study may not experience the same dramatic, daily impact of their minority status as AI students in a lower functioning community. Therefore, the contribution of these experiences to their academic achievement may not be observed to the same degree as it is in other communities.

The second class of limitations in this study relates to the measures used for some of the major variables and the psychometric properties of some of the scales. As mentioned earlier in the discussion section, it is possible that the measures chosen are not sufficiently capturing the depth of the constructs examined in studies which guided this investigation. For example, using single item measures for school identification and academic achievement, and only a single measure for ethnic identity may limit the scope and interpretations of the findings. In addition to the number of measures chosen, the lower reliability for the scores on the combined and concrete educational utility subscales is also a limitation. The alpha for the combined educational utility scale's scores was 0.52, and the concrete scale's scores was 0.59; these alphas are quite low, and may have played a role in attenuating the relationships with other variables in the study.

Future Directions

Future research on the relationship between social identity and attitudinal variables and academic achievement in AI populations should be mindful of historic and contemporary context within which the participants live. The ethnically homogeneous and higher functioning context of my participants may have contributed to the non-significant results. Similar research should be conducted in a heterogeneous, urban AI school population and in AI tribal populations with non-tribally operated schools.

Future research should also conceptualize the relationship between ethnic identity and academic achievement in a less linear fashion. Scholars (e.g., Altschul et al., 2006; Gone, 2006; Oyserman et al., 2003b; Trimble, 2000) have argued that ethnic identity is a complex, multifaceted construct that should be operationalized beyond Phinney and Ong's (2007) conceptualization of ethnic identity in terms of exploration, and commitment. For example, as a facet of ethnic identity, Altschul and her colleagues measured students' *embedded achievement*, or the extent to which they characterized their ethnic group as achievement oriented. Oyserman and her colleagues (2003b) looked at individuals' sense of identification with other groups. Thus, future research on ethnic identity should focus on the content of individuals' ethnic identities in addition to identity strength, exploration, and commitment. Similarly, future research should operationalize academic achievement beyond a single measure of GPA and should include the measurement of academic behaviors such as homework completion, task persistence, class attendance, and paying attention in class.

Additional psychometric research on Mickelson's (1990) educational utility scale should be conducted. The low reliability of the combined educational utility scale's scores, as well as

the low reliability of the concrete educational utility scores suggests that the scales are not consistently measuring educational utility and should be modified. Once psychometrically sound, future research should be done to explore the behavioral correlates of ambivalence towards educational utility. Though the AI participants in this study had higher scores than the EA participants on abstract or concrete educational utility, the AI individuals also had significantly greater feelings of ambivalence towards educational utility. It would be useful to know how this ambivalence affects their academic behaviors and engagement with school.

Conclusion

AI students are consistently among the lowest achieving ethnic minority groups in the country by nearly every measure of achievement. Unfortunately, much of the research on minority achievement excludes AI participants. Using established research with other minority populations to guide the research questions, I aimed to further understand the relationship among social identity variables (ethnic identity, perceived discrimination, and perceived barriers), attitudinal variables (educational utility and school identification), and academic achievement in AI adolescent populations. The results of this study clearly document that AI students have different experiences with school than EA students and hold different attitudes about the value of school in their future lives. AI students report more experiences of discrimination and barriers at school, and also express a greater ambivalence towards the utility of education in helping them to achieve success in the future. However, no single variable explored provided an explanation for the achievement gap between AI and EA students. The AI participants' ethnic identity explained a small percentage of the variance in their sense of school identification, but differences in school identification did not correlate with differences in achievement.

Perhaps the most useful information to come from this study is that in this AI population, sense of school identification had no bearing on academic achievement or ethnic identity. The relationship between school identification, ethnic identity, and academic achievement is at the crux of Ogbu's (1978; Ogbu & Simons, 1998) cultural ecological theory. Ogbu argued that some minority students feel that identifying with school is subtractive and harmful to their ethnic identity, and view identifying with school as adopting *White* ways. This was not the case for the AI students in this study, as school identification had no relationship with ethnic identity or achievement. The two clusters based on school identification and ethnic identity largely differed on the measure of school identification, but were virtually identical on all other attitudinal and social identity measures as well as GPA. One explanation for this is that the participants in this study attended a tribally operated school. It is likely that much of the curriculum, though still meeting state standards, was congruent with the students' culture. Thus, the decision to identify, or not identify with school was not influenced by the concern of compromising one's sense of ethnic identity. This suggests that Ogbu's notion of oppositional identity may not be relevant in homogenous, culturally congruent, educational settings. This finding suggests that providing marginalized minority students with culturally relevant educational settings may help to foster a healthy, balanced profile of students with a strong identification with school and a continued connection to their ethnic group.

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Appendix

List of Tables

Table 2
Descriptive Statistics for Major Variables

	Participant Group								
	AI (n = 128)			EA (n = 282)			Total Sample α	Significance	Cohen's d
Variables	M	SD	α	M	SD	α	α	t	
Abstract Educational Utility	3.51	0.37	0.76	3.20	0.46	0.80	0.82	7.13*	-0.71
Concrete Educational Utility	2.56	0.47	0.53	2.21	0.49	0.55	0.59	6.83*	-0.72
Combined Educational Utility	3.01	0.27	0.49	2.75	0.27	0.41	0.52	9.30*	-0.96
Ambivalent Educational Utility	5.51	1.60	N/A	3.68	1.64	N/A	N/A	10.55*	-1.12
Ethnic Identity	3.09	0.60	0.87	2.35	0.70	0.86	0.89	10.37*	-1.10
Perceived Barriers	2.40	0.98	0.92	1.68	0.78	0.90	0.92	7.28*	-0.85
Perceived Discrimination	1.84	0.62	0.86	1.33	0.58	0.92	0.91	7.86*	-0.86
School Identification	5.32	1.64	N/A	5.62	1.50	N/A	N/A	1.79	0.19
GPA	2.66	0.87	N/A	3.25	0.69	N/A	N/A	7.39*	0.79

Note. AI = American Indian; EA = European American.
*p < .006.

Table 3
Intercorrelations Among Major Variables

Measure	1	2	3	4	5	6	7	8
1. Abstract Educational Utility	___	-0.050	-0.183	0.362*	0.005	0.019	-0.012	0.079
2. Concrete Educational Utility		___	0.940*	0.140	0.219	0.293	-0.258	-0.122
3. Ambivalent Educational Utility			___	0.063	0.219	0.283	-0.255	-0.142
4. Ethnic Identity				___	0.335*	0.334*	-0.162	0.080
5. Perceived Barriers					___	0.574*	-0.176	-0.134
6. Perceived Discrimination						___	-0.252	-0.107
7. GPA							___	0.020
8. School Identification								___

* $p < .006$

Table 4
Hierarchical Regression Analysis Summary for Predicting AI Participants' GPA

Step and predictor variable	*B*	*SE B*	β	Adj. R^2	ΔR^2
Step 1:				0.013	0.013
Abstract Educational Utility	0.011	0.215	0.005		
Concrete Educational Utility	-0.078	0.168	-0.041		
Perceived Barriers	0.106	0.945	0.119		
Perceived Discrimination	-0.081	0.139	-0.059		
Step 2:				0.017	0.004
Abstract Educational Utility	-0.044	0.228	-0.019		
Concrete Educational Utility	-0.076	0.169	-0.041		
Perceived Barriers	0.091	0.092	0.102		
Perceived Discrimination	-0.089	0.140	-0.065		
Ethnic Identity	0.104	0.142	0.072		

Note. AI = American Indian.

Table 5

Second Hierarchical Regression Analysis Summary for Predicting AI Participants' GPA

Step and predictor variable	*B*	*SE B*	β	Adj. R^2	ΔR^2
Step 1:				0.012	0.012
Ambivalent Educational Utility	-0.020	0.055	-0.032		
Perceived Barriers	0.105	0.089	0.119		
Perceived Discrimination	-0.080	0.138	-0.058		
Step 2:				0.016	0.004
Ambivalent Educational Utility	-0.015	0.056	-0.025		
Perceived Barriers	0.093	0.091	0.105		
Perceived Discrimination	-0.086	0.139	-0.062		
Ethnic Identity	0.092	0.134	0.064		

Note. AI = American Indian.

Table 6

Hierarchical Regression Analysis Summary for Predicting AI Participants' School Identification

Step and predictor variable	*B*	*SE B*	β	Adj. R^2	ΔR^2
Step 1:				0.088	0.088
Abstract Educational Utility	1.021	0.389	0.227*		
Concrete Educational Utility	-0.419	0.305	-0.119		
Perceived Barriers	-0.188	0.161	-0.112		
Perceived Discrimination	-0.042	0.251	-0.016		
Step 2:				0.113	0.025
Abstract Educational Utility	0.770	0.408	0.171		
Concrete Educational Utility	-0.413	0.302	-0.117		
Perceived Barriers	-0.258	0.164	-0.154		
Perceived Discrimination	-0.079	0.250	-0.030		
Ethnic Identity	0.471	0.254	0.174		

Note. AI = American Indian.

* $p < .01$

Table 7
Second Hierarchical Regression Analysis Summary for Predicting AI Participants' School Identification

Step and predictor variable	*B*	*SE B*	β	Adj. R^2	ΔR^2
Step 1:				0.050	0.050
Ambivalent Educational Utility	-0.201	0.102	-0.173		
Perceived Barriers	-0.214	0.164	-0.128		
Perceived Discrimination	-0.052	0.256	0.020		
Step 2:				0.093	0.044
Ambivalent Educational Utility	-0.172	0.101	-0.148		
Perceived Barriers	-0.294	0.164	-0.176		
Perceived Discrimination	-0.094	0.251	-0.036		
Ethnic Identity	0.591	0.243	0.218*		

Note. AI = American Indian.
* $p < .01$

Table 8

Descriptive Statistics and Group Differences by Cluster

	American Indian Participant Group					
	Low School Identification Cluster (n = 42)		High School Identification Cluster (n = 86)			
Variables	*M*	*SD*	*M*	*SD*	*t*	Cohen's *d*
Cluster Variables						
Ethnic Identity	2.96	0.55	3.15	0.62	1.75	0.31
School Identification	3.24	0.96	6.34	0.63	19.08*	4.12
Comparison Variables						
Abstract Educational Utility	3.40	0.36	3.56	0.36	2.60**	0.44
Ambivalent Educational Utility	4.48	1.34	3.95	1.42	2.02	-0.38
Concrete Educational Utility	2.65	0.45	2.52	0.47	1.57	-0.28
GPA	2.76	0.82	2.61	0.90	0.90	-0.17
Perceived Barriers	2.53	0.99	2.33	0.98	1.07	-0.20
Perceived Discrimination	1.85	0.67	1.83	0.61	0.19	-0.03

* $p < .006$