American Indian College Students’ Ethnic Identity and Beliefs about Education

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Sixty-seven American Indian and 96 European-American undergraduate students responded to questions about their educational and ethnic beliefs and their perceptions of their mother’s and father’s support for education. The American Indian participants completed some additional items regarding their ethnic beliefs and their perceptions of their parents’ cultural beliefs and practices. American Indian students placed greater value on the instrumental importance of education, more strongly affirmed their ethnic identity, and felt closer to their ethnic group than did European American students. For American Indian students, perceptions of mother’s socialization of cultural beliefs and practices were strongly related to students’ ratings of ethnic identity achievement, ethnic practices and belonging, and importance of ethnic identity. Belief in one’s bicultural efficacy was positively correlated with American Indian students’ ratings of academic identity and belief in the instrumental importance of school.

Of central importance in discussions of American Indian students’ success in college is the identification of factors that assist in understanding why some students persist and succeed in higher education coursework, whereas others do not. Although research has documented that American Indian students face significant challenges in preparing for and succeeding in higher education (Gilbert, 2000; Hoover & Jacobs, 1992; Lin, LaCounte, & Eder, 1988; Lundberg, 2007; Perry, 2002; Rampey, Lutkus, & Weiner, 2006), an increasing number of American Indian students are finding success in college and obtaining a college education (Freeman & Fox, 2005). Research on minority students suggests that in order for students to find success in school they must have positive beliefs about themselves as students and about the importance of education in their lives (Gloria & Ho, 2003; Gloria, Kurpius, Hamilton, & Willson, 1999; Okagaki, 2001), particularly in the pragmatic benefit that obtaining a college degree has on securing a good job (Steinberg, Dornbusch, & Brown, 1992; Wentzel, 1998). Less research, however, has examined how minority students’ ethnic identities and views of bicultural competence are linked to their school orientation and success. The purpose of the current study was to examine the beliefs, attitudes, and social support of one group of American Indian college students and identify factors associated with a positive orientation toward schooling. In particular, we were interested in how students’ sense of ethnic identity and biculturalness related to their orientation to and perceptions of schooling.

Orientation to Education

American Indian students constitute a unique minority group among the school population in the United States. Because the tribal nations are sovereign entities within the borders of

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the United States, American Indians are both citizens of their tribal nation and citizens of the United States. Partially as a result, some have argued that American Indians have been more isolated from mainstream society than most other ethnic minority groups in this country (e.g., Harjo, 1993). Some researchers have suggested that to the extent that formal schooling is associated with mainstream culture in the United States and not with a minority culture, doing well in school may be perceived by students from that minority culture as not being compatible with their cultural identity (e.g., Ogbu, 1992). In this study, we explored the relations between American Indian college students’ ethnic beliefs and their beliefs and attitudes toward education. We wanted to examine, as others have suggested (Huffman, 2001), if the cultural identities of American Indian students are tied to students’ commitment to and beliefs in the importance of education.

To examine American Indian college students’ orientation to education, we focused on their belief in the instrumental importance of school and their academic identity. Although researchers have found that most parents, regardless of race and ethnicity, believe that education is important (e.g., Okagaki & Frensch, 1998; Stevenson, Chen, & Uttal, 1990), several have argued that the critical belief is the degree to which individuals believe that education serves a concrete, pragmatic benefit in their own lives (e.g., Mickelson, 1990; Okagaki, 2001; Steinberg et al., 1992). For example, in a survey of White and Black high school seniors, Mickelson (1990) found that pragmatic beliefs about the direct benefits of education—not the abstract value of education—were related to school achievement. Similarly, in an ethnographic study of high and low achieving high school students of Mexican descent, successful students “expressed a strong belief in the linkage between doing well in school and in being a successful adult” (Matute-Bianchi, 1986; p. 243). Instrumental importance of education reflects the belief that education will serve an individual’s personal goals and interests.

In addition to examining students’ belief in the instrumental importance of education, we considered students’ academic identity—that is, the meaning that individuals place on their role as a student (e.g., being a good student or doing well in school is important to how the individual defines himself or herself). According to social identity theorists (e.g., Bernal, Saenz, & Knight, 1991; Herringer & Garza, 1987; Tajfel, 1981), human beings define themselves in multiple ways according to the groups they belong to by birth (e.g., gender, ethnic), choice (e.g., political, religious), or achievement (e.g., Olympic athlete, world-class musician). The salience and meaning of these social identities depend on the individual’s social environment and are not static—both individuals and their social contexts are continually developing and changing. Our interest was in learning how important the student role is to American Indian college students and identifying the relation between academic identity and ethnic and bicultural identities.

To date, limited research has explicitly examined American Indian college students’ beliefs in the instrumental importance of school or students’ academic identity. Rather, existing research primarily focuses on understanding students’ academic preparation beliefs and experiences (Jackson & Smith, 2001; Machamer & Gruber, 1998) study habits and skills (Hoover & Jacobs, 1992; Hulbur, Kroeker, & Gade, 1991) and factors that contribute to college retention and persistence (Benjamin, Chambers & Reiterman, 1993; Brown & Robinson Kupius, 1997; Cole & Denzine, 2002; Larimore & McClellan, 2005). These studies collectively describe a number of institutional, personal, and cultural factors that are related to Native
American students’ academic success and school engagement. For example, in a study that examined the college experiences of American Indian students, Dodd and colleagues (Dodd, Garcia, Meccage, & Nelson, 1995) found that successful students perceived that a college education was a way to reach a future goal and that the determination and ability to cope with both educational and cultural differences promoted student persistence. This research, along with the others cited above, suggest that one cannot study American Indian students’ educational orientation in isolation. Rather, one must consider multiple cultural and personal factors that may relate to students’ belief systems and experiences in higher education. In the next section, we consider how students’ orientation to school is related to their cultural experiences, their ethnic identity, and the development of bicultural efficacy.

Ethnic Identity and Cultural Orientation

To understand minority students’ school achievement, some behavioral scientists have posited that consideration must be given to the development of students’ ethnic identity as well as the development of their academic identity (e.g., LaFromboise, Coleman, & Gerton, 1993; Ogbu, 1992; Oyserman, Kemmelmeier, Fryberg, Brosh, & Hart-Johnson, 2003). In particular, for ethnic minority students to do well in school, their ethnic identity must be compatible with a positive academic identity. For example, LaFromboise and colleagues (1993) proposed that in order for minority students to do well in school they must develop a sense of bicultural efficacy—the belief that one can be true to one’s ethnic identity and still function effectively in the majority culture. Similarly, Ogbu has argued that minority youth must learn “that they can participate in two cultural or language frames of reference for different purposes without losing their own cultural and language identity or undermining their loyalty to the minority community” (p. 12).

Although little research has examined the construct of bicultural efficacy, one exception is research undertaken by Huffman (2001) to describe the experiences of 69 American Indian college students and their decisions to depart from or persist in college. After detailed interviews with college students, Huffman (2001) suggested that persistence in college appeared to relate to an interaction between students’ American Indian identity and their perceptions of the majority culture. For example, Huffman (2001) argued that culturally traditional American Indian students (i.e., students with a strong identification with traditional American Indian culture) experience college as either an estranged (i.e., strong identification with their culture and an aggressive rejection of assimilation to the majority culture) or transculturated (i.e., strong identification with their traditional culture and little to no desire for assimilation) cultural experience. According to Huffman (2001), transculturated students were able to successfully persist in college because they maintained the ability to interact on two cultural levels simultaneously. In essence, they were able to maintain a strong identification with their own culture while interacting with their college environment, which represented the mainstream culture. Although descriptive in nature, these findings appear to support the assertion made by others (LaFromboise et al., 1993, Ogbu, 1992) that in order for American Indian students to excel in school they must believe that they can be true to their ethnic identity while participating in the mainstream culture.

Broadly defined, beliefs, feelings, and behaviors contributing to one’s ethnic identity include knowledge about and attitudes toward one’s ethnic culture, feelings of commitment and belongingness to one’s ethnic group, and
participation in traditional cultural activities (Phinney, 1990). Because great diversity exists among American Indians who represent over 500 culturally, historically, and linguistically distinct tribal nations (LaFromboise & Low, 1998), there is “no such thing as a monolithic American Indian entity” when it comes to
discussions of American Indian ethnic identity (Horse, 2005, p. 67). Depending on their
tribal identification, linguistic experiences, and community participation, American
Indian youth differ in their exposure to the
mainstream culture and what they consider to be
important to their ethnic identity (Horse; LaFromboise, & Dizon, 2003; Phinney, 1996;
Rieckmann, Wadsworth, & Deyhle, 2004). For example, whether or not American Indian
youth grew up on a reservation or not may have
significant bearing on their development of
their ethnic identity experiences (LaFromboise & Low). However, regardless of where they
live, the ethnic identity of American Indian peoples is further complicated by the fact that
individuals must have some relation to their
tribal nation (Horse). As Horse explained,
American Indian identity not only involves
feelings and experiences of an individual with
one’s tribe, but is also a function of the fact
that “tribal governments, not individuals, determine one’s legal status as an American
Indian” (p. 64).

When considering how American Indian
young adults view their ethnic identity, one
should also examine their cultural orientation.
Cultural orientation comprises feelings toward
and participation in different cultures (Tsai,
Chentsova-Dutton, & Wong, 2002). In other
words, where ethnic identity refers to the way
an individual generally perceives and feels
about him/herself and experiences with his/
herself native culture, cultural orientation refers
to an individual’s view toward cultures that
are not traditionally his or her own. Although
studies have begun to document the role that
cultural and bicultural identity may play in
American Indian students’ engagement in
school (Huffman, 2001, 2003), very little
research has examined the cultural orientation
of American Indian college students. In this
study, we examined American Indian college
students’ ethnic beliefs—bicultural efficacy,
ethnic identity achievement, importance of
ethnic identity, ethnic affiliation, perceptions
of discrimination, and orientation to other
groups—and explored the relations between
students’ orientation to school and three of
these ethnic-related beliefs—bicultural efficacy,
perception of discrimination, and orientation
to other groups.

Although our measures of perception
discrimination and orientation to other
groups had been employed in other studies
e.g., Okagaki, Frensch, & Dodson, 1996;
Phinney, 1992), the measure of bicultural
efficacy was developed for this study based on
the work of LaFromboise and her colleagues
(1993). To obtain evidence of convergent and
divergent validity, we examined the relations
between bicultural efficacy and other measures
of ethnic identity and cultural orientation.
Reasoning that individuals who feel confident
that they can maintain their ethnic identity
while functioning effectively in the mainstream
culture must first have explored and understood
their ethnic identity, we hypothesized that
bicultural efficacy scores would be positively
correlated with ethnic identity achievement
scores. We hypothesized that bicultural efficacy
would be negatively correlated with perception
of discrimination (i.e., higher perceptions
of discrimination would likely lead individuals to
believe that they would be less able to function
effectively in mainstream society). We expected
bicultural efficacy to be positively correlated
with orientation to other groups (i.e., those
with higher bicultural efficacy scores would
feel more positively toward members of other
ethnic groups).
Next, we examined the relations between orientation to school and students’ bicultural efficacy, perception of discrimination, and orientation to other groups. First, we asked whether bicultural efficacy is positively correlated with their orientation to school.

Second, we examined the relation between perception of discrimination and orientation to school. Ogbu (1992) posited that for involuntary minority students (i.e., those minority groups that originally were incorporated into the United States through slavery or conquest) education has not been perceived as helping individuals succeed in life because discriminatory policies and practices have limited the upward mobility of these individuals. Perception of discrimination may discourage involuntary minority students from achieving in school because they do not see the instrumental effectiveness of education in their lives (Huffman, 1991). Okagaki and colleagues (1996) observed that perception of discrimination was negatively related to school engagement in a sample of fourth- and fifth-grade children of Mexican descent. We hypothesized that perception of discrimination would be negatively related to academic identity and belief in the instrumental importance of education.

Third, we examined the relation between orientation to other groups and orientation to education. Acceptance of people from all ethnic groups was positively correlated with intrinsic motivation to learn in a sample of elementary school aged children of Mexican descent (Okagaki et al., 1996). We expected that American Indian college students who were more open to interacting with other groups would have a stronger academic identity and believe more strongly in the instrumental importance of education.

Perceptions of Parental Socialization

In addition to examining the relations between students’ ethnic beliefs and their orientation to school, we also asked students about their perceptions of their parents’ socialization with respect to students’ educational goals and cultural values. Very little research has addressed the role of parental influences in the school achievement of American Indian students. Indeed, there is little research in general on the childrearing beliefs and practices of American Indian peoples. In one study examining the academic success of Navajo college graduates, Rindone (1988) found that participants suggested that their family was the single most important factor contributing to their success. In a study more explicitly measuring the relation between American Indian adolescents’ school achievement and family socialization, adolescents’ perceptions of parental and family support were positively correlated with adolescents’ commitment to education (Machamer & Gruber, 1998). However, American Indian adolescents were more likely to report feeling less support from their family than were their non-Indian peers. They were more likely to indicate that their parents had very few rules for them and to report that their parents were unlikely to follow through with disciplinary consequences when they disobeyed. Descriptions of parenting practices among American Indian peoples suggest that parenting is child-oriented with parents supporting the child’s initiation of interests and activities (Harry, 1992; Joe & Malach, 1992; Yates, 1987). A second purpose of this study was to examine the relations between college students’ perceptions of their parents’ socialization and students’ beliefs. We hypothesized that perception of parental support for education would be positively correlated with students’ academic identity and belief in the instrumental importance of education and that perception of parents’ encouragement to develop and maintain tribal values and traditions would be positively correlated with students’ ethnic identity.
Comparisons of American Indian and European American Students’ Beliefs

Finally, to provide some context for understanding American Indian students’ beliefs, we compared American Indian and European American college students’ educational orientation, perceptions of parents’ support for education, and ethnic identity beliefs. Although this study was designed to primarily examine the cultural and academic experiences and orientation of American Indian college students, given that European American students’ achievement, school engagement, and degree completion is often used in the literature as one standard of comparison for ethnic minority students (Cole & Denzine, 2002; Freeman & Fox, 2005; Larimore & McClellan, 2005; Stancavage et al., 2006), we included a sample of European American college students in this study. This inclusion allowed us to remain consistent with previous research and provides a context for interpreting the cultural and academic orientation of American Indian college students.

Although previous research suggested that American Indian youth face challenges when pursuing a college education (Gilbert, 2000; Hoover & Jacobs, 1992; Rampey et al., 2006), recent research has suggested that many have positive attitudes toward seeking and obtaining a college degree (Stancavage et al., 2006). For example, in an examination of American Indian and European American undergraduate students, Cole and Denzine (2002) found that students did not differ on ratings of how often they engaged in active learning activities (e.g., contributing to class discussion, spending time revising papers), participated in student–faculty contact (e.g., talking to faculty about courses or working with faculty on a research project), or cooperated and interacted with other students (e.g., getting to know others from different cultures). Of course, one reason that no differences emerged when examining the academic engagement of American Indian and European American college students may have to do with the sample bias. College students in general are a self-selected group of individuals who have made a commitment to furthering their education. Consequently, for this study, we expected both American Indian and European American students to rate academic identity as being important to how they viewed themselves and to perceive education as being instrumentally important. We did not, however, have a specific hypothesis regarding the comparison of scores from American Indian and European American students.

In comparisons of ethnic identity across ethnic groups, Phinney (1992) reported that the ethnic identity scores of high school and college minority students were higher than those of European American students. Hence, we hypothesized that scores for ethnic identity achievement and for ethnic practices and belonging would be higher for American Indian students in comparison to scores for European American students. However, we had no specific prediction with regard to attitudes toward other groups.

As noted above, previous descriptions of child-rearing in American Indian communities have emphasized that American Indian parents take their cues from the child’s intrinsic motivations and tend to support the child’s burgeoning interests rather than deciding to encourage the child in a particular area (Harry, 1992; Joe & Malach, 1992; Yates, 1987). Based on these reports, we hypothesized that European American students would have higher ratings on perceptions of parents’ support for education than would American Indian students.

Finally, it should be noted that our study contains both traditional and nontraditional American Indian and European American college students. As a large portion of American
Indian college students are considered non-traditional in nature (i.e., many are older than 24 years of age) (Bauman & Graf, 2003), we considered how students’ life experiences may relate to their perceptions of familial support (Freeman & Fox, 2005). For example, because older students presumably made the decision to enroll in college when they were no longer living with their parents, we assumed that their parents had less influence on that decision than did parents of the younger college students and expected that in comparison to the older students, the younger students would perceive their parents as having done more to encourage them to go to college.

**METHOD**

**Participants**

Sixty-seven American Indian and 95 European American college students participated in this study. The American Indian students were recruited from one state university and two tribal colleges. The European American students were recruited from the same state university and one additional state university. Because the students ranged in age from 18 to 62, we used the median of the American Indian sample to split the entire sample into younger and older students. Analyses of the data were essentially the same when younger and older students were divided at the median of the entire sample. We divided the sample at the median of the American Indian sample to keep the American Indian group, which was the focus of the study, more equally divided. Of the American Indian students, 30 were younger college students (18–24 years old; \( M = 20.3 \) years; \( SD = 1.8 \)); 37 were older students (25–59 years old; \( M = 36.2 \) years; \( SD = 10.2 \)). The European American sample consisted of 61 younger college students (19–24 years old; \( M = 21.1 \) years; \( SD = 1.1 \)) and 34 older students (25–62 years old; \( M = 33.4 \) years; \( SD = 8.8 \)). For both groups, the majority of the participants were female: 72% (\( n = 48 \)) of the American Indian students and 73% (\( n = 69 \)) of the European American students.

Fifty-three (79%) American Indian students were members of Sioux tribes; 5 participants (7%) indicated other tribal affiliations; and 10 (15%) of the students identified themselves as being “Native American.” The majority of the American Indian students (\( n = 44 \); 83%) were born on a reservation. Forty of those who were born on a reservation (91%) reported spending some time living off reservation lands (\( M = 12.3 \) years; range = 1–43 years). Sixteen students were born off reservation lands. Twelve of these students had spent some time living on a reservation (\( M = 19 \) years; range = 4–30 years). Table 1 summarizes the demographic information.

**Procedure**

American Indian and European American college students were recruited from undergraduate classes, primarily in child development and psychology departments. Participants responded to questions about their beliefs about education, their ethnic identity, and their perceptions of their mother’s and father’s orientation toward education. American Indian students completed additional items related to their ethnic identity and their perceptions of their parents’ socialization of cultural beliefs and practices.

**Measures**

The questionnaire that students completed comprised two parts. The first section comprised questions about students’ educational and cultural beliefs and attitudes and their perceptions of their parents’ beliefs and attitudes. For each of these items, students indicated their response on a 6-point Likert-type scale (1 = strongly disagree; 3 = slightly
disagree; 4 = slightly agree; 6 = strongly agree). All of the items in this section were reviewed by American Indian informants, and many were modified based on their feedback. In general, modifications made items more culturally inclusive to American Indian peoples. For example, the words “father” or “mother” were substituted with “father-figure” and “mother-figure,” and items containing language referring to one’s “cultural group” included references to “tribal heritage.” In the second section of the questionnaire, students provided demographic information. As noted below in the description of each measure, and using criteria established by Hulin, Netemeyer, and Cudeck (2001), all scales demonstrated adequate internal consistency.

**Instrumental Importance of School Scale** (adapted from Okagaki et al., 1996). Ten items assessed the individual’s belief in the practical relevance of education (e.g., “I need a college education in order to obtain a good job”; “Without a college education, it is hard for people to survive in the modern world”). The inter-item correlation for this scale was strong (α = .85).

**Academic Identity Scale** (adapted from Okagaki & Moore, 2000). This 5-item scale

### TABLE 1. Descriptive Statistics

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean (M)</th>
<th>Standard Deviation (SD)</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Younger Al</strong> (n = 30)</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>20.3</td>
<td>1.8</td>
<td>18–24</td>
</tr>
<tr>
<td>Mother’s education</td>
<td>5.8</td>
<td>1.4</td>
<td>2–8</td>
</tr>
<tr>
<td>Father’s education</td>
<td>5.4</td>
<td>1.4</td>
<td>2–8</td>
</tr>
<tr>
<td>Year in school</td>
<td>2.0</td>
<td>1.3</td>
<td>1–5</td>
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<tr>
<td><strong>Older Al</strong> (n = 37)</td>
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<td></td>
</tr>
<tr>
<td>Age</td>
<td>36.2</td>
<td>10.2</td>
<td>25–59</td>
</tr>
<tr>
<td>Mother’s education</td>
<td>5.4</td>
<td>2.2</td>
<td>1–8</td>
</tr>
<tr>
<td>Father’s education</td>
<td>5.2</td>
<td>2.2</td>
<td>1–8</td>
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<tr>
<td>Year in school</td>
<td>2.5</td>
<td>1.2</td>
<td>1–5</td>
</tr>
<tr>
<td><strong>Younger EA</strong> (n = 61)</td>
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<td></td>
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<tr>
<td>Age</td>
<td>21.1</td>
<td>1.1</td>
<td>19–24</td>
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<tr>
<td>Mother’s education</td>
<td>6.1</td>
<td>1.5</td>
<td>3–8</td>
</tr>
<tr>
<td>Father’s education</td>
<td>5.9</td>
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<td>Age</td>
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<td>2.8</td>
<td>1.4</td>
<td>1–6</td>
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</tbody>
</table>

**Notes:**
- Education: 5 = Went to a vocational school for job training after high school; 6 = Some college or associate degree.
- Year in School: 2 = second year of college; 3 = third year of college.
focused on how important doing well in school was to the individual (e.g., “Getting good grades [all A’s or A’s and B’s] is very important to who I think I am”; “Doing well in school and graduating from college are important to my view of myself”). As this scale was originally developed for middle school students, items were slightly modified to be more appropriate for college students (e.g., substituting graduating from high school to graduating from college). The inter-item correlation for this scale was satisfactory ($\alpha = .62$).

Mother’s Support for Education (adapted from Okagaki & Moore, 2000). The 5 items in this scale assessed the student’s perception of his or her mother’s attitudes about education (e.g., “My mother-figure believes that a college education is very important for obtaining a good job”) and the degree to which the mother encouraged the student to do well in school (e.g., “When I was growing up, my mother-figure encouraged me to do my school work”). The inter-item correlation for this scale was strong ($\alpha = .88$).

Father’s Support for Education (adapted from Okagaki & Moore, 2000). This scale was analogous to the previous scale but asked for the student’s perceptions about his or her father’s attitudes toward and encouragement of education (as in the previous scale, the word “father-figure” was used in each item). The inter-item correlation for this scale was also strong ($\alpha = .87$).

Multigroup Ethnic Identity Measure (MEIM, Phinney, 1992). Originally based on interviews on ethnic identity development and achievement of a large sample of ethnically diverse undergraduate students (Phinney, 1992), the current version of the MEIM comprises two scales: Ethnic Identity Search (e.g., “I have spent time trying to find out more about my ethnic group, such as its history, traditions, and customs”) and Affirmation, Belonging, and Commitment (e.g., “I have a strong sense of belonging to my own ethnic group”; Roberts et al., 1999). For the present study, the inter-item reliability for each of these scales was strong (Ethnic Identity Search: $\alpha = .81$; Affirmation, Belonging, and Commitment: $\alpha = .84$). We used these two scales along with the companion Other-Group Orientation Scale (e.g., “I often spend time with people from ethnic groups other than my own”; Phinney, 1992). The inter-item reliability for this scale was good ($\alpha = .79$). For the present study, some items were modified based on feedback from local informants (e.g., substituting “my tribe” for “my ethnic group”; including spirituality in lists of items reflecting dimensions of ethnic culture).

Perception of Discrimination Scale (adapted from Okagaki & Moore, 2000). In addition to the previous scales that all participants completed, the American Indian students completed five additional scales. The Perception of Discrimination Scale comprised 10 items that assessed the degree to which individuals perceived discrimination based on their ethnicity from people outside of their ethnic group (e.g., “Off reservations, Native Americans face barriers to their success because they are not White”; “Even with good grades, I will have a hard time getting a good job outside of a reservation because I am not White”). As these items were originally developed for Mexican American youth, as noted earlier, adaptations to language made them more appropriate for American Indian young adults. The inter-item correlation for this scale was strong ($\alpha = .81$).

Bicultural Efficacy Scale (based on LaFromboise et al., 1993). The degree to which individuals believed that they can be true to their ethnic identity and participate effectively in the majority culture was assessed with this 6-item scale. Examples of items include “I believe I can maintain my tribal identity and
still participate in activities that are traditionally part of the White culture” and “I can be an honorable member of my tribe and do well in school.” The inter-item correlation for this scale was satisfactory ($\alpha = .60$). In addition to this scale, a categorical item asked students to indicate how they identified themselves from “very Native American” to “very American.”

**Importance of Ethnic Identity** (adapted from Okagaki & Moore, 2000). This 5-item scale assessed the degree to which the individual believed that his or her ethnic identity was important to the individual’s overall identity (e.g., “My tribal heritage is very important in defining who I am as a person”; “Tribal traditions and values are very important to me”). The inter-item correlation for this scale was good ($\alpha = .79$).

**Mother’s Socialization of Culture** (adapted from Okagaki & Moore, 2000). The 5 items in this scale assessed the student’s perception of his or her mother’s attitudes about the individual’s tribal heritage (e.g., “My mother-figure believes it is very important to maintain tribal beliefs, customs, and practices”) and the degree to which the mother encouraged the student to maintain their tribal values and traditions (e.g., “My mother-figure explained tribal cultural practices to me”). The inter-item correlation for this scale was strong ($\alpha = .91$).

**Father’s Socialization of Culture** (adapted from Okagaki & Moore, 2000). This scale was analogous to the previous scale but asked for the student’s perceptions about his or her father’s or father-figure’s attitudes toward and encouragement of their ethnic identity. The inter-item correlation for this scale was also strong ($\alpha = .97$).

**Data Analysis**

Data were analyzed based upon research questions specified in the literature review and are presented in three sections. First, descriptive statistics are employed to describe American Indian college students’ ethnic and academic beliefs. In the second section, we examine relations among American Indian students’ ethnic identity beliefs, their cultural orientation, and their orientation to school. In the final set of analyses, we undertake analyses to compare American Indian and European American college students’ beliefs about education, their perceptions of their parents’ support for education, and their ethnic identity. We used both multivariate analysis of variance (MANOVA) and multivariate analysis of covariance (MANCOVA) to make these comparisons. Consistent with statistical analytic techniques (Tabachnick & Fidell, 2006) MANOVA analyses are employed when the independent variables (IVs) in question are categorical in nature (e.g., ethnic group) and dependent variables (DV$s$) are likely to be related (e.g., instrumental importance of school, academic identity). In contrast, when comparing the two groups on IV$s$ that were both categorical (e.g., ethnic group) and continuous (e.g., perceptions of parental support for education) in nature, we utilized MANCOVA analyses (Tabachnick & Fidell). Each analysis is described in more detail below.

**RESULTS**

**American Indian College Students’ Beliefs**

We begin with a description of the American Indian college students’ beliefs. On average, the American Indian students believed in the instrumental value of education ($M = 5.08, SD = 0.65$). The students believed that education has a pragmatic purpose in helping them achieve their personal goals. On average, the students reported that doing well in school was important to their personal identity ($M = 5.06, SD = 0.70$). Mothers were perceived as being clearly supportive of their education ($M = 5.21, SD = 1.07$); fathers were perceived as being
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somewhat supportive of education ($M = 4.56, SD = 1.41$).

With respect to ethnic beliefs, American Indian students believed that they could do well in both their tribal community and in mainstream society (bicultural efficacy: $M = 5.07, SD = 0.69$), felt generally connected to their tribal community (MEIM Affiliation, Belonging, and Commitment scale: $M = 4.88, SD = 0.74$), perceived themselves as generally having developed their ethnic identity (MEIM Ethnic Identity Search: $M = 4.71, SD = 0.86$), and reported that their ethnic identity was important to their personal identity (Importance of Ethnic Identity: $M = 5.05, SD = 0.93$). The American Indian students, on average, somewhat agreed with statements that their mother had socialized them to develop and maintain their tribal values and traditions (Socialization of Culture: $M = 4.50, SD = 1.31$), but slightly disagreed with statements about their father actively encouraging them to maintain their tribal beliefs and practices ($M = 3.80, SD = 1.83$).

American Indian Students’ Ethnic Identity, Cultural Orientation, and Orientation to Education

This section focuses on the relations between American Indian students’ ethnic identity beliefs and cultural orientation and their orientation to school. Before we examined the relation between bicultural efficacy and students’ academic identity and instrumental importance of school, we checked for evidence of convergent and divergent validity for the bicultural efficacy scale. As hypothesized, bicultural efficacy was positively correlated with ethnic identity achievement ($r = .43, p < .001$) and positively correlated with orientation to other groups ($r = .30, p < .01$). Bicultural efficacy was not, however, significantly correlated with perception of discrimination.

Preliminary analyses were also conducted to determine if type of student (younger vs. older) had a significant effect on American Indian students’ scores for academic identity and instrumental importance of school; it did not. Because there was no significant effect of age and the American Indian sample was relatively small, this variable was dropped from the analysis.

To examine the relation between ethnic identity beliefs and students’ orientation to school, a MANCOVA was conducted with academic identity and instrumental importance of school as the DVs. The IVs were bicultural efficacy, perception of discrimination, and orientation to other groups. Overall main effects were obtained for bicultural efficacy, Wilks’s lambda = .82, $F(2, 60) = 6.39, p < .01$, and perception of discrimination, Wilks’s lambda = .91, $F(2, 60) = 3.08, p < .05$. As hypothesized, bicultural efficacy was positively correlated with academic identity ($\beta = .42, p < .001$) and with instrumental importance of school ($\beta = .25, p < .05$). Unexpectedly, perception of discrimination was positively correlated with instrumental importance of school ($\beta = .28, p < .05$). However, discrimination was not correlated with academic identity. Scores on the perception of discrimination scale ranged from 1.3 to 5.5, suggesting that there was great variability among the students in their perception of discrimination against American Indians. Hence, to explore this finding, we split the American Indian group at the median ($Mdn = 3.7$; where 3 = slightly disagree with statements about discrimination against American Indians; 4 = slightly agree). Among those who perceived less discrimination ($M = 2.96, SD = 0.56$), the simple correlation between discrimination and instrumental importance of school was 0 ($r = -0.04, ns$). In contrast, for those who perceived discrimination against American Indians ($M = 4.34, SD = 0.46$), the correlation was positive ($r = .31, p < .10$).
Relations Between American Indian Students’ Perceptions of Parents’ Cultural Socialization and Students’ Ethnic Identity Beliefs

We next examined the relations between American Indian students’ perceptions of their parents’ cultural socialization practices and students’ ethnic identity beliefs. The parents’ cultural socialization scales focused on students’ perceptions of (a) their parents’ efforts to explain tribal values, (b) the importance parents placed on maintaining tribal beliefs and practices, and (c) parents’ desire for the student to maintain tribal values. Consequently, we examined the relations between students’ perceptions of their parents’ cultural socialization and students’ ethnic identity achievement, ethnic affiliation, and importance of ethnic identity. A MANCOVA was conducted with perception of mother’s cultural socialization, perception of father’s cultural socialization, and age as the IVs. The DVs were scores on the ethnic identity achievement scale, the ethnic affiliation scale, and the importance of ethnic identity scale. An overall main effect was obtained for perception of mother’s cultural socialization, Wilks’s lambda = .61, $F(3, 59) = 12.41, p < .0001$. There was no significant effect for father’s cultural socialization or for type of student (i.e., age), but note that the moderately strong correlation between mother’s and father’s cultural socialization ($r = .63, p < .0001$) could explain why father’s cultural socialization did not make a unique contribution to the overall model. Follow-up univariate analyses revealed that mother’s cultural socialization was positively related to ethnic identity achievement ($\beta = .51, p < .0001$), ethnic affiliation ($\beta = .66, p < .0001$) and importance of ethnic identity ($\beta = .63, p < .0001$).

Comparison of American Indian and European American Students’ Beliefs

Three sets of analyses were conducted to
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compare American Indian and European American college students’ beliefs about education, their perceptions of their parents’ support for education, and their ethnic identity. First, we considered the strength of American Indian and European American students’ belief in their academic identity and in the instrumental importance of education. A MANOVA was conducted with academic identity and instrumental importance of education as the DVs. Ethnic group (American Indian vs. European American), age (younger vs. older), and ethnic group x age were the IVs. A significant overall effect of ethnic group was obtained, Wilks’s lambda = .92, $F(2, 158) = 6.7, p < .01$. Follow-up simultaneous regressions indicated that the overall model for instrumental importance of education was significant, $F(3, 159) = 5.31, p < .01$, $R^2 = .09$, with American Indian students expressing a stronger belief in the instrumental importance of education than European American students, $F(1, 159) = 12.57, p < .001$, ES = 0.56. The American Indian students clearly agreed with statements about the instrumental importance of education ($M = 5.08, SD = 0.65$); whereas European American students slightly agreed with statements about the instrumental importance of education ($M = 4.68, SD = 0.76$). There was no difference, however, between American Indian and European American students in their academic identity scores. Mean scores on the academic identity scale for both American Indian and European American students indicated that students agreed with statements about doing well in school being important to how the students viewed themselves (American Indian: $M = 5.06, SD = 0.70$; European American: $M = 4.98, SD = 0.76$).

To compare American Indian and European American students’ perceptions of parental support for education, a second MANOVA was conducted with perceptions of mother’s and father’s orientation to education as the DVs. The IVs were ethnic group, age, and ethnic group x age. In this analysis, there was no overall effect for age. There were, however, a significant main effect of ethnic group, Wilks’s lambda = .95, $F(2, 157) = 4.42, p < .01$, and a significant ethnic group x age interaction, Wilks’s lambda = .95, $F(2, 157) = 4.10, p < .02$. Follow-up simultaneous regressions obtained a significant overall model for perception of mother’s support, $F(3, 158) = 4.72, p < .01$, $R^2 = .08$, with significant interaction, $F(1, 158) = 6.12, p < .01$, ethnic group, $F(1, 158) = 4.57, p < .05$, ES = 0.34, and age group, $F(1, 158) = 4.03, p < .05$, ES = 0.32, effects. There was also a significant overall model for perception of father’s support, $F(3, 158) = 3.59, p < .05$, $R^2 = .06$, with a significant ethnic group by age group interaction, $F(1, 158) = 6.65, p < .01$. Among American Indian students, there was no difference between younger and older students’ scores for either mother’s or father’s support for education. In contrast, for the European American students, scores for mother’s and father’s support for education were higher for younger students than for older students: mothers: $F(1, 93) = 13.35, p < .001$, ES = 0.76; fathers: $F(1, 93) = 12.06, p < .001$, ES = 0.72. As can be seen in Table 2, younger European American students reported that their parents believed that education was important and encouraged them in school. On average, the older European American students only slightly agreed with statements concerning their parents’ support and encouragement of their schooling. Thus, only for the European-American students was our hypothesis that younger students would perceive more support from their parents confirmed.

A third MANOVA was conducted with the two scales from the MEIM and the Other-Group Orientation Scale as the DVs and ethnic group, age, and ethnic group x age as
the IVs. As hypothesized there was an overall effect of ethnic group, Wilks’s lambda = .64, $F(3, 156) = 29.51, p < .0001$. In addition, an overall effect of age was obtained, Wilks’s lambda = .95, $F(3, 156) = 2.70, p < .05$. Follow-up univariate analyses revealed that American Indian students more strongly affirmed their ethnic identity, $F(1, 158) = 79.79, p < .0001$, $ES = 1.49$, felt closer to their ethnic group $F(1, 158) = 42.89, p < .0001$, $ES = 1.09$, and were somewhat more open to other cultural groups, $F(1, 158) = 4.58, p < .05$, $ES = 0.38$, than European American students. Finally, there was a main effect of age for ethnic identity achievement, $F(1, 158) = 8.17, p < .01$, $ES = 0.45$, with older students expressing a stronger ethnic identity achievement than younger students (see Table 2).

Relations Between Students’ Perceptions of Parents’ Support for Education and Students’ Orientation to Education

Finally, we asked whether there was a difference in the relation between students’ perceptions of parents’ support for school and their own orientation to school for American Indian and European American college students. Preliminary analyses indicated that there were no significant interactions with age or ethnic group. Consequently, the interaction effects were eliminated from the following analysis.

A MANCOVA was conducted with academic identity and instrumental importance of school as the DVs. Ethnic group, age, perception of mother’s support for education, and perception of father’s support for education were the IVs. Overall main effects were obtained for ethnic group, Wilks’s lambda = .93, $F(2, 156) = 5.54, p < .01$, perception of mother’s support for education, Wilks’s lambda = .94, $F(2, 156) = 5.08, p < .01$, and perception of father’s support for education, Wilks’s lambda = .96, $F(2, 156) = 3.21$, $p < .05$. Follow-up univariate analyses revealed that American Indian students more strongly affirmed their belief in the instrumental importance of schooling than did European American students, $F(1, 157) = 10.73, p < .01$ (American Indian: $M = 5.08, SD = 0.65$; European American: $M = 4.68, SD = 0.76$) but there was no detectable difference in students’ perceptions of their academic identity (American Indian: $M = 5.06, SD = 0.70$; European American: $M = 4.98, SD = 0.76$). In addition, we found that for both groups, parental support for education was positively correlated with students’ academic identity and belief in the instrumental importance of school. Follow-up simultaneous regression analyses indicated that perception of father’s support for education was positively related to students’ academic identity ($\beta = .23, p < .05$). Perception of mother’s support for education was positively related to instrumental importance of school ($\beta = .28, p < .01$).

DISCUSSION

American Indian adults often walk in two worlds maintaining the traditions and values of their tribal community as well as living and working in the mainstream society. On average, the American Indian students in this study reported that doing well in school and obtaining a college education were important to how they viewed themselves. They believed that obtaining a good education was an important step toward obtaining a good job and gaining the skills to survive in the world today. On average, the American Indian students indicated that they had spent time learning about their cultural heritage and understood the role of their ethnicity in their life. They were proud of their American Indian heritage and participated in the cultural practices of their tribes. At the same time, the American Indian students reported being
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open to interacting with people from other ethnic groups.

Both the younger and older American Indian college students indicated that their parents valued education and encouraged them to do well in school. Previous descriptions of child-rearing among American Indian peoples have suggested that American Indian parents wait for their child to show interest in a particular endeavor before they encourage the child in that domain. It may be the case that the students in this study were intrinsically motivated to succeed in school prior to their parents’ encouragement of school and that parents, following the child’s lead, supported his/her interests (Pipes, Westby, & Inglebret, 1993). Consistent with findings from other studies (Dodd et al., 1995; Jackson & Smith, 2001; Rindone, 1988), students’ perceptions of parental support were a positive factor in their schooling as evidenced by positive relationships with students’ academic identity and belief in the instrumental importance of school. Given the role that students suggested their family members played in their orientation to education, additional research should examine how family commitments, socialization practices, and obligations may enhance or impede American Indian college students experience in higher education (Martin, 2005).

Examinations of American Indian and European American students’ ethnic and academic orientation revealed differences between groups. For example, compared to their European American counterparts, American Indian students placed greater value on the instrumental importance of education. Although the two groups of students did not differ in regards to their academic identities (i.e., doing well in school was important to all students), American Indian students saw college as having a more pragmatic benefit in their life than did European American students. Although researchers have suggested that positive beliefs about the importance of education in their lives is a key factor in minority students’ persistence and achievement (Gloria & Ho, 2003; Okagaki, 2001; Steinberg et al., 1992; Wentzel, 1998), little research exists that examines American Indian students’ beliefs in the instrumental importance of school. In addition, compared to European American students, American Indian students reported a stronger sense of ethnic identity, were more attuned to their ethnic group, and were more open to other cultural groups. Such differences are not surprising given that American Indian students, in order to engage in college, are frequently called upon to participate in the majority culture (e.g., Hoffman, 2001; LaFromboise et al., 1993; Ogbo, 1992). Finally, contrary to the findings of the Machamer and Gruber (1998) study, there was no difference between American Indian and European American students’ perceptions of their parents’ support for their schooling. Rather, both groups of students reported receiving support from their parents, with the highest scores being reported by traditional European American college students.

The primary purpose of the study was to examine beliefs theorized to be correlates of American Indian college students’ academic identity and belief in the instrumental importance of school. Orientation to other groups and perception of discrimination did not function as expected. Orientation to other groups was not significantly related to American Indian students’ orientation to school. Overall, the American Indian students gave fairly strong support to statements indicating that they were open to interacting with members of other ethnic groups ($M = 4.8$ on a 6-point scale). Being open to interaction with other groups may affect students’ engagement in school when they are required by law to go to school. When school attendance becomes a personal
choice, those who are less open to others may have already chosen not to be in school. In future research, it would be useful to examine the relations among these variables in a sample of college-bound and non-college bound American Indian high school students.

In contrast to theories in which perception of discrimination is posited to discourage minority students’ orientation to education (e.g., Ogbu, 1992), there was a small positive relation between perception of discrimination and instrumental importance of school. When we split the American Indian sample into two groups—those agreeing with statements about discrimination against American Indians and those who did not—the positive correlation between discrimination and instrumental importance of school remained only for those who perceived discrimination. We present this finding with caution because the analysis was exploratory in nature and the sample was small. One possible explanation is that education was viewed as a strategy for overcoming the perceived discrimination. Sue and Okazaki (1990) posited a similar rationale to explain Asian American educational achievement. They argued that because Asian Americans experienced barriers to their achievement in noneducational areas (e.g., politics, sports, entertainment, business), they used education as a means to economic and social mobility—as a way to circumvent restrictions imposed by discrimination. Perhaps a similar rationale was held by the American Indian students in our study. Further research is needed to explore this finding.

Consistent with theories positing the importance of bicultural efficacy (e.g., LaFromboise et al., 1993), bicultural efficacy was positively correlated with American Indian college students’ academic identity and belief in the instrumental importance of education. American Indian college students who believed more strongly in their ability to function effectively within the mainstream culture while being true to their American Indian identity also believed that being a good student was important to how they viewed themselves. Similarly, those who had higher bicultural efficacy scores were more committed to the belief that a college education would have a practical benefit in their lives—that a good education served a pragmatic purpose.

Although little research has examined bicultural efficacy in relation to American Indian college students’ orientation to schooling, our results appear to corroborate Huffman’s (2001) findings that students who have a strong identification for their American Indian culture and an openness (but not assimilationist view) to the majority culture appear to have positive education related beliefs and experiences. Huffman (2001) termed such students transculturated as a result of their ability to interact simultaneously with two cultures and found this to be important to college persistence. The findings from our study appear to support Huffman’s (2001) findings and suggest that students who believe that they can be true to their ethnic identity and draw strength from it while facing the challenges of campus life may be more likely to succeed in their academic pursuits than students who do not have a strong sense of bicultural efficacy. Because our findings are correlational in nature and the sample was relatively small, additional research is needed to further examine these relationships.

Implications
Understanding the interaction between American Indian students’ ethnic identity, bicultural efficacy and orientation to education may be an important step in identifying ways to encourage American Indian students to further their education or persist in current educational endeavors. This study demonstrates positive relations between students’ bicultural efficacy and their academic identity and belief in the
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Although our study is correlational in nature, helping students understand that they can maintain their cultural identity and affiliation with their tribal community while at the same time achieving in school and succeeding in the mainstream society may encourage American Indian students to seek the benefits of postsecondary education. Research on stereotype threat indicates that social identities can affect academic performance (e.g., Steele, 1997; Steele & Aronson, 1995). Stereotype threat is an event in which an individual’s performance on task is inhibited when a relevant negative stereotype about a group with which the individual identifies is evoked. For example, activating negative stereotypes in experimental settings has been shown to lower math performances of women (Spencer, Steele, & Quinn, 1999), to lower verbal scores of Black college students (Steele & Aronson), and to lower the math scores of Hispanic undergraduates (Gonzales, Blanton, & Williams, 2002). Our data suggest that it is important for students to understand that academic success does not detract from their cultural identity and indeed can be consistent with their cultural identity. Further, once students reach college, promoting bicultural efficacy through support programs or mentoring may help encourage college persistence.

Retaining American Indian students in U.S. colleges and universities is the focus of research and much debate (Larimore & McClellan, 2005; Lundberg, 2007). Although researchers have agreed that higher education institutional and policy changes, particularly the inclusion and availability of tribal colleges, are factors that heavily influence student retention and persistence (Kirkness & Barnhardt, 1991; Martin, 2005; McClellan, Fox, & Lowe, 2005), others have suggested that cultural processes need to be examined. For example, Huffman (2001, 2003) argued that American Indian students experience more success in college when they are able to draw strength from their cultural identity when meeting the demands of campus life. The findings from our study also appear to suggest that cultural factors are an important component in the academic lives of American Indian students.

One way that strong ethnic identity and a positive sense of bicultural efficacy may be sustained and encouraged on university campuses is through a commitment to diversity and through the availability of support programs for ethnic minority students (Kirkness & Barnhardt, 1991; Lundberg, 2007). For example, Brown and Robinson Kurpius (1997) found that American Indian youth who were actively involved in university social groups were more socially integrated and more likely to make it to their senior year than were students who were less involved. Although such findings suggest the positive benefits of social engagement on campus as a protective factor in college student persistence, in order to ensure that programs do not damage American Indian students’ ethnic identity or culture, others caution that such programs should foster student interaction with similar ethnic minority young adults and support students’ cultural orientation rather than concentrating on assimilating students to the dominant culture (Jackson, Smith, & Hill, 2003; Lundberg). One form of support service that has demonstrated success with American Indian young adults is college mentoring programs (Larimore & McClellan, 2005). Successful mentoring programs typically foster strong relationships between students and faculty members, and students and peers, and include opportunities to enhance students’ sense of family, community, and cultural cohesion (Jackson & Smith, 2001; LaFromboise, Hoyt, Oliver, Whitbeck, 2006; Shotton, Oosahwe, & Cintron, 2007). For example, Shotton...
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and colleagues found positive results for a peer-mentoring program that pairs American Indian undergraduate freshmen (mentee) with more advanced American Indian students (mentor). They noted that the success of the program and the ultimate formation of a strong peer-mentoring relationship depends on the peer mentor’s commitment to his/her mentee, on expressions of genuine caring, and on the mentee’s perception of the peer mentor as admirable. Although models of what content should be covered in mentoring programs vary across college environments (DuBois, Holloway, Valentine, & Cooper, 2002; Shotton et al.), the findings from our study suggest one important dimension of such programs is a way to help students develop and sustain a strong sense of bicultural efficacy.

Limitations

As noted earlier, one limitation of this study is that the American Indian students who participated were a select group of individuals who had already made a commitment to education and were attending college. Hence, caution should be taken when generalizing findings from this research to other populations (e.g., high school students who have not yet decided to attend college). Second, although we adapted the measures in this study to be culturally inclusive for American Indian populations (see Methods), some of our measures had genesis in Western psychological theories. For example, although we adapted our measure of parental or family support for American Indian students, based upon the role of extended family in American Indian culture, our measure may have failed to capture the influence of other important individuals in the lives of students. Finally, it should be noted that our self-report data are correlational in nature. Hence, although we postulate regarding the role that bicultural efficacy and ethnic identity play in students’ orientation to school, caution should be taken when speaking about results in causal terms.

CONCLUSION

Despite the limitations of the current study, the data presented here provide evidence that American students’ bicultural efficacy and cultural orientation should be examined when considering the educational orientation of American Indian college students. Given research demonstrating the difficulties that many American Indian students face once they get to college (Freeman & Fox, 2005; Jackson et al., 2003; Larimore & McClellan, 2005), understanding cultural factors that may enhance or impede American Indian students’ college experiences is crucial to ensuring academic success and persistence. Encouragingly, the American Indian students in this sample were clearly achieving in relation to the development of a positive ethnic identity and a sense of bicultural efficacy. In addition, students placed strong value on the instrumental importance of school, had strong academic identities, and generally felt positive support from family members. Given the results of this study, further research should be conducted to examine whether causal relations exist among American Indian students’ cultural and academic identities. These studies should focus on identifying mechanisms by which students develop bicultural efficacy and a positive orientation toward schooling; how to promote these through support services or mentoring programs; and how other factors, such as family support, may relate to engagement, success, and retention in institutions of higher education.

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