

**Comparing the academic engagement of American Indian and White
college students**

James S. Cole, Gypsy M. Denzine

The purpose of the current study was to compare the dimensions of student academic engagement between American Indian and White college students. The conceptual framework underlying this research project were the Seven Principles for Good Practice in Undergraduate Education developed by Chickering and Gamson (1987). For the purpose of the present study, we limited our analyses to the items in the College Student Experience Questionnaire (Pace, 1998) that measure three of the seven principles related to student experiences and involvement in the college environment. These three principles include Active Learning Techniques, Student-Faculty Contact, and Cooperation Among Students. Overall, there were no significant differences between American Indian and White students and their academic engagement. In addition, both American Indian and White students report relatively high levels of satisfaction with their collegiate experience.

Introduction

College and university programs that purport to serve American Indian students can be traced back over three hundred years to the founding of the first colleges in the United States (Carney, 1999). However, it has only been the past couple of decades that many colleges and universities have developed programs and services specifically to serve American Indian students who are making the transition to the higher education

environment (Odell & Mock, 1989). Some of these programs and services include specialized recruitment efforts, American Indian student centers, academic degree programs, and academic and personal counseling services. In addition to the programs and services provided by “traditional” institutions of higher education, tribal colleges were established to provide American Indians with access to higher education, especially to those who live on the reservation. These tribal colleges, along with other federally funded institutions (e.g., Haskell Indian Nations University), were established to provide culturally relevant educational opportunities to American Indians. Today, these 33 institutions serve approximately 20% of all American Indians enrolled in higher education (American Indian Higher Education Consortium, 2000; Carney, 1999).

These efforts to make higher education available to American Indian students have had some degree of success. In 1976, there were approximately 76,000 American Indians enrolled in higher education (United States Department of Education, 2000). By 1999, there were over 145,000 American Indian students enrolled in the fall semester (The almanac of higher education, 2001). This represents an increase of approximately 90%, as compared to an increase of about 13% for White students for that same period. By these measures there certainly have been some successful efforts in providing affordable and accessible higher education to American Indians.

However, other indicators of success are not so positive. Although the number of American Indian students enrolled in a college or university has dramatically increased in the past years, the persistence, graduation rate, and overall academic success of these students is still of great concern (American Indian Higher Education Consortium, 1999). American Indian students typically have the lowest retention and graduation rates

of any ethnic minority group in the country (Huffman, 1990; Benjamin, Chambers, & Reiterman, 1993; American Indian Higher Education Consortium, 1999). For instance, in 1995 the six year graduation rate of American Indians at NCAA Division I universities was 36%, as compared to 56% for all students in Division I schools (United States Department of Education, 1998). The overall educational attainment of American Indians also falls below that of the national norms. In 1990, 65% of American Indians 25 and older were high school graduates, while 75% of the general population 25 years old and older graduated high school (American Indian Higher Education Consortium, 1999). Also American Indians are proportionately more likely to be found at two-year institutions than are other students enrolled in postsecondary education (Carney, 1999). Not surprisingly, American Indians account for a higher proportion of two-year degrees than other groups of students. However, in the past two decades this trend has been changing. By 1994, American Indian enrollments at four-year institutions had increased by approximately 75% since 1974, compared to an increase of approximately 60% at two-year colleges (United States Department of Education, 1998).

Efforts at providing American Indians with opportunities in higher education seem to have had some measures of success. However, the academic success and experiences of American Indian students is not on par with that of other students. Carney (1999) put forth one explanation for this academic disparity by claiming that:

Much of the difficulty experienced by American Indian college students seems to be traceable to cultural causes of two types. The first is the generally unsupportive situation in which such students find themselves. They tend to come from high schools that are poorly funded, lacking special programs and support services. Once at college, almost all American Indian students tend to feel isolated. . . The second cultural basis for American Indian college difficulties is much more deeply engrained. It stems not from the lack of collegiate experience in the American Indian community, but from the American

Indian cultural heritage itself. It goes directly to differences between the White and Native cultures (p. 147-148).

Other researchers have also commented on the difficulties facing American Indian students due to cultural differences (Huffman, 1990; James, 1992; Scott, 1986; Tierney, 1995). It has been pointed out that cultural isolation, alienation by dominant cultures, and cultural conflict all work to hinder access and academic achievement for American Indian students. In particular, cultural conflict may be most problematic. Every institution has developed a culture that reflects the values, attitudes, and norms of its students. American Indian students who are unwilling or unable to give up their "Indianness" and adopt this new culture face many difficulties and often drop out (Huffman, 1990). Another form of cultural incompatibility is the relevance of the curriculum (Lippit & Romero, 1992). Some difficulties experienced by American Indian students can be traced to a curriculum that does not use examples or contexts that are relevant and meaningful to American Indian learners.

Clearly, American Indian students face many obstacles in the pursuit of an academic education. The extent to which a student is participating in academically related activities, however, is known to be related to academic achievement for American Indian and White students alike (Tierney, 1995; Chickering & Gamson, 1987). Therefore, the extent to which American Indian students are participating in these activities may help to further understand their overall academic experiences.

Though many factors contribute to the academic success of American Indians, the purpose of the current study was to compare the level of participation in academically related activities between American Indian and White college students. By doing so, this study hopes to provide further evidence of how these two groups differ

or are similar in the activities that are linked to academic success. In order to select the relevant variables for this study, the *Seven Principles for Good Practice in Undergraduate Education* developed by Chickering and Gamson (1987) was used as the conceptual and theoretical framework. By using this framework, this study will be able to focus in on the important variables of academic engagement that have been shown to be related to academic success.

Many educational researchers have used these principles to explore and better understand student success and the relationship with participation in educationally relevant activities (Gamson, 1991; Hatfield, 1995; Koljatic & Kuh, 2001). According to Sorcinelli (1991), "[t]he primary goal of the Principles authors was to identify practices, policies, and institutional conditions that would result in a powerful and enduring undergraduate education" (p. 13). The rationale for using these principles as the framework of this study is that they, "work for many different kinds of students - white, black, Hispanic, Asian, rich, poor, older, younger, male, female, well-prepared, and underprepared" (Chickering and Gamson, 1987, p.4). These principles are premised on the notion that behavioral involvement in academically related activities is key to academic success. Intuitively and empirically, this makes sense. Those students who spend more time involved with educationally related activities tend to achieve more. Chickering and Gamson (1987) grouped these activities into seven categories. The categories include teaching and learning activities that, 1) encourages contact between students and faculty; 2) develops reciprocity and cooperation among students; 3) uses active learning techniques; 4) gives prompt feedback; 5) emphasizes time on task; 6) communicates high expectations; and 7) respects diverse talents and ways of learning.

It is argued by Chickering and Gamon (1987), as well as others (Kuh, 2001; Pascarella, 2001), that an institution which encourages its students to participate in all these activities will facilitate academic achievement.

Unfortunately, there is no published or widely accepted instrument for measuring all seven of these principles. However, the *College Student Experience Questionnaire* (CSEQ) (Pace, 1998) does provide data that has been shown to reliably measure the first three principles (Koljatic & Kuh, 2001; Kuh & Vesper, 1997). Therefore, this study will use data from the CSEQ to compare the academic engagement as measured by these three principles of American Indian and White students at a public university located in the southwest.

Past research has shown that the concepts that underlie the first three principles are good indicators of American Indian success in higher education. With regard to the first principle, past studies have indicated that student-faculty contact is linked to positive undergraduate educational experiences among American Indians. For instance, Hoover and Jacobs (1992) found that American Indian students generally had a favorable perception towards instructional quality and therefore reinforcing the importance of “faculty support in some organized way for college students” (p. 28). Tate and Schwartz (1993) suggested that the persistence rates among American Indian college students can also be linked to the presence of faculty support. With regard to the second principle, Swisher (1990) reported that American Indian students tend to have a collaborative and cooperative style of learning, rather than competitive. A study by Huffman (1990) also suggested that academic success for many American Indians requires a cooperative learning environment and “the moral support necessary to

continue the educational process that still proves to be difficult” (p. 12). With regard to the third principle, it has been suggested that active, rather than passive learning is important for the academic success of American Indian students (Tierny, 1995).

Although researchers agree that active learning is important, our review of the literature reveals there is a lack of empirical research regarding the extent to which American Indian college students do in fact engage in active learning. The current study addresses this gap in the literature by investigating American Indian college students' uses of active learning techniques.

In summary, previous research has helped to further understand the dimensions of American Indian experiences in higher education. However, few have explored the differences and/or similarities between American Indian college students and White college students and their participation in educationally related activities. By doing so, it is hoped that this study will help to further explain differences in academic participation that may be due to cultural incompatibility. In a final analysis, we will also explore students' reported level of satisfaction with college as this may also account for some differences in participation.

Method

Research Setting

Data were collected at a doctoral I, coeducational public university located in the Southwest region of the United States. The participating institution self-identifies as a “residential campus” with a large on-campus population relative to its overall size (approximately 41% of the student population live on-campus). Several aspects of the institution under investigation have relevance for this study. First, the university is

located within 100 miles of several large American Indian reservations. Second, the campus has many support services designed to meet the needs of American Indian students (Native-American Student Support Services, Institute for American Indians, Department of Applied Indigenous Studies, and more). Finally, and perhaps most importantly, one of the goals connected to the university's mission statement is "to become a national leader in providing educational opportunities for American Indian students, in providing services to American Indian tribes, and in research in contemporary American Indian policy issues."

Sample

The sample includes 544 undergraduate students who completed the *College Student Experience Questionnaire* (CSEQ) and were enrolled in at least one three-credit course during the Spring 1999 semester. Seventy-four American Indian students completed the survey, which represents 13.6% of the sample and approximately 6.1% of the American Indian student population at the university.

In order to compare American Indian students to White students, we used the random case number function in SPSS to select 74 students who self-identified as "White/Caucasian/Not of Hispanic Origin" (SPSS Advanced Statistics 10.0.5, 1999) The demographics and characteristics of the American Indian and White samples are listed in Table 1.

Inspection of the values presented in Table 1 reveals several important characteristics of the two samples employed in this study. First, female participants over represent both the American Indian and White students. The greater number of female participants is especially true for the American Indian sample. Second, students in the

American Indian sample are slightly older. Twenty-two percent of the American Indian sample are 30 years of age or older, compared to 3% in the White sample. Also, the majority of both groups were enrolled full-time. Compared to the White sample, the American Indian sample contains more students who live on-campus in university owned residence halls.

Table 1

Demographic Characteristics of Participants

Characteristic	American Indian (n=74)	White (n=74)
Age		
19 or younger	16%	20%
20-23	39	62
24-29	23	15
30-39	10	0
40 or older	12	3
Gender		
Male	24	42
Female	76	58
College class		
Freshman	11	14

Sophomore	16	16
Junior	24	35
Senior	46	35
Transfer student	46	43
Number of credit hours currently enrolled		
6 or fewer	7	0
7-11	3	4
12-14	57	45
15-16	25	26
17 or more	8	25
Housing status (live on campus)	64	39
Parents graduate from college		
No	73	27
Yes, both parents	10	49
Yes, father only	3	15
Yes, mother only	15	9

A final and important difference is that the American Indian sample has many more first-generation college students. For the purpose of this study, first-generation students are those in which neither parent completed a four-year baccalaureate degree. Seventy-three percent of the American Indian sample are first-generation college

students, whereas, 27% of the White sample are classified as first-generation college students.

Instrument

The *College Student Experiences Questionnaire* (CSEQ) (Pace, 1998) assesses the effort college students expend in using the resources and opportunities provided by the university for their learning and development. As noted in the test manual, the CSEQ is based on the theoretical assumption that “what counts most in terms of college outcomes is what student do, not who they are or where they go to college” (CSEQ Research and Distribution Program, b, p. 1). The CSEQ was first introduced in 1979. The fourth edition is the latest version, which was developed after more than two decades of creating, testing, refining, and validating items. To date, over 240,000 students from more than 500 different colleges and universities have completed the survey. This national database on college student experiences is housed at the Center for Postsecondary Research & Planning at Indiana University.

The CSEQ is an 8-page survey containing 18 background items; 109 items related to college activities; 5 items about reading/writing experiences; 2 items about satisfaction with college; 10 items related to understanding and appreciation of human diversity; and 25 items that ask students to self-assess their personal and academic gains made in a variety of desirable outcomes of college. The majority of evidence supporting the psychometric properties of the CSEQ is based on students’ responses to the third edition. The reliability of the data collected by the CSEQ has proven to be reliable with Cronbach’s coefficients ranging from .81 to .91. Several researchers have reviewed the evidence for face, content, and construct validity of the CSEQ (based on

3rd edition) and concluded that the CSEQ scales are clear, well-defined, and have high validity (McCammon, 1989; Mitchell, 1983). In particular, evidence of construct validity has been determined by Pike (1995), Astin (1993), and Pascarella and Terenzini (1991), who found highly correlated CSEQ scale scores with grades and other general education outcomes. The fourth edition differs from the third edition in several ways. First, the number of Activities scales (also referred to as Quality of Effort scales) was reduced from 14 to 13. Second, after review of the factor analysis results and consultation with two dozen higher education scholars and assessment experts, the total number of items was reduced from 138 to 117 (CSEQ Research and Distribution Program, a).

For the purpose of the present study, the items in the CSEQ that measure the first three principles will be used. By doing so, this study will explore differences between American Indian and White college students and their engagement in selected academic activities. The subscales in the CSEQ that measure three of the seven principles of good practice include Active Learning, Student-Faculty Contact, and Cooperation Among Students. The items measuring students' time and effort used a Likert-type scale ranging from: 1 (never) to 4 (very often), with higher scores indicating higher levels of involvement or greater amounts of effort. Examples of items measuring Active Learning include "Contributed to class discussion" and "Revised a paper or composition two or more times before you were satisfied with it." Items measuring Student-Faculty Interaction include "Discussed your academic program or course selection with a faculty member" and "Worked with a faculty member on a research project." Asking items such as "Became acquainted with students from another

country" and "Became acquainted with students whose interest were different from yours" assesses the Cooperation Among Students subscale. In total, twenty-three items were used to measure Active Learning, eleven items were included in Student-Faculty Contact, and sixteen items were included in Cooperation Among Students (see Table 2).

Table 2

Active Learning, Student-Faculty Contact, and Cooperation Among Students Subscales

Active Learning

Found something interesting while browsing in the library.

Read assigned material other than textbooks in the library.

Used an index or database to find material on some topic.

Developed a bibliography or reference list for a term paper or other report.

Went back to read a basic reference or document that other authors referred to.

Used a computer tutorial to learn material for a course or developmental or remedial program.

Participated in class discussions using an electronic medium (email, list serve, chat group, etc).

Searched the WWW or Internet for material related to a course.

Completed assigned readings for a class.

Took detailed notes during class.

Contributed to class discussions.

Developed a role play, case study, or simulation for a class.

Tried to see how different facts and ideas fit together.

Summarized major points and information from your class notes and readings.

Worked on a paper or project where you had to integrate ideas from various sources.

Applied material learned in a class to other areas.

Tried to explain material from a course to someone else.

Used information or experience from other areas of your life.

Used a dictionary or thesaurus to look up the proper meaning of words.

Thought about grammar, sentence structure, word choice, and sequence of ideas or points as you were writing.

Asked other people to read something you wrote to see if it was clear to them.

Referred to a book or manual about writing style, grammar, etc.

Revised a paper or composition two or more times before you were satisfied with it.

Student-Faculty Contact

Asked an instructor or staff member for advice and help to improve your writing.

Talked with you instructor about information related to a course you were taking.

Worked with a faculty member on a research project.

Discussed your academic program or course selection with a faculty member.

Discussed your career plans and ambitions with a faculty member.

Worked harder as a result of feedback from an instructor.

Socialized with a faculty member outside of class.

Participated with other students in a discussion with one or more faculty members outside of class.

Asked your instructor for comments and criticisms about your academic performance.

Worked harder than you thought you could to meet an instructor's expectations and standards.

Met with a faculty member or staff advisor to discuss the activities of a group or organization.

Cooperation Among Students

Worked on a class assignment, project, or presentation with other students.

Met with other students at some campus location for a discussion.

Attended a meeting of a campus club, organization, or student government group.

Worked on a campus committee, student organization, or project.

Worked on an off-campus committee, student organization, or project.

Met with a faculty member or staff advisor to discuss the activities of a group or organization.

Became acquainted with students whose interests were different from yours.

Had serious discussions with students from a country different from yours.

Became acquainted with students whose family background was different from yours.

Became acquainted with students whose age was different from yours.

Became acquainted with students whose race or ethnic background was different from yours.

Became acquainted with students from another country.

Had serious discussions with students whose philosophy of life or personal values were very different from yours.

Had serious discussions with students whose political opinions were very different from yours.

Had serious discussions with students whose religious beliefs were very different from yours.

Had serious discussions with students whose race or ethnic background was different from yours.

Procedures

Early in the semester faculty were asked for approximately 45 minutes of class time for the questionnaire to be administered. The CSEQ was administered in a total of

twenty-two classes from a wide variety of colleges, schools, and departments. Some of these classes included, accounting, geology, educational psychology, Spanish, forestry, criminal justice, and hotel and resort management classes.

After classroom administration, the American Indian student sample included only 44 students. Therefore, a mailing data collection procedure was added to increase the total number of American Indian students in the sample. In early April 1999, a random sample of 100 American Indian undergraduate students was generated from the Office of Institutional Research. Students in this group were mailed a cover letter describing the nature of the study, a copy of the CSEQ, and a postage-paid self-addressed envelope. The cover letter mailed to students was co-signed by the Director of the Multicultural Student Center and the Director of American Indian Student Support Services. Thirty students returned the mailed survey, which resulted in a 30% response rate. All students in this study were informed that their participation was voluntary and their responses would be kept anonymous. Because the data was collected anonymously, it was not possible to remove the names of American Indian students who completed the survey in class from the random sample list used for the mailing procedure. Although extremely low, there is a chance that a American Indian participant completed the survey in class and then was later mailed a blank survey. Given the length and familiar look of the CSEQ, we doubted any student would complete the survey twice. Finally, no compensation was offered to students who participated in this study.

Results

The first step in our analyses was to assure that the CSEQ is an adequate measure for each of the subscales for both samples used in this study. Thus, we computed separate reliability coefficients for the American Indian and White samples. For the American Indian sample, Cronbach's alphas for the Active Learning, Student-Faculty Contact, and Cooperation Among Students subscales were .85, .90, and .91, respectively. For the White sample, Cronbach's alphas for the Active Learning, Student-Faculty Contact, and Cooperation Among Students subscales were .86, .91, and .87, respectively. For both samples, reliability of the CSEQ subscales are sufficient for group administration (Thorndike, Cunningham, Thorndike, & Hagen, 1991).

As shown in Table 3, there appeared to be little overall variation in the mean scores between each group for each subscale. The overall mean score for Active Learning for White students was 2.58, while for American Indian students the mean score was 2.63. For the Student-Faculty Contact subscale, American Indian student mean score was 2.15 and 2.18 for White students. For the Cooperation Among Students scale, the mean score for American Indian students was 2.37 and 2.54 for White students. In other words, American Indian and White students indicated that they "occasionally" to "often" had experiences and were involved in active learning, student-faculty contact, and cooperation among students

Table 3

Mean Scores and Standard Deviations for CSEQ Subscale Scores by Ethnic Group

Group	CSEQ Subscale								
	<u>Active Learning</u>			<u>Student-Faculty Interaction</u>			<u>Cooperation Among Students</u>		
	<u>n</u>	<u>M</u>	<u>SD</u>	<u>n</u>	<u>M</u>	<u>SD</u>	<u>n</u>	<u>M</u>	<u>SD</u>
American Indian	73	2.63	.43	71	2.15	.59	69	2.40	.61
White	69	2.58	.43	71	2.18	.63	70	2.54	.55

The primary objective for this study was to determine if there were any significant differences between American Indian and White students with regard to their participation to components of a quality learning environment. As shown in Table 4, correlation analysis found that the subscales for each group were correlated ($p < .001$).

Table 4

Correlation Coefficients for Relations Among Three CSEQ Subscales

Subscale	Student-Faculty			Cooperation
	Active Learning	Interaction	Among Students	Among Students
Active Learning	--	.52		.52
Student-Faculty Interaction	.68	--		.52

Cooperation Among Students	.63	.55	--
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Note. Intercorrelations for American Indian students ($n = 74$) are presented above the diagonal, and intercorrelations for White students ($n = 74$) are presented below the diagonal. All coefficients are significant at $p < .001$.

As a result, MANOVA was used to determine whether there were any significant differences between the groups within each subscale. Prior to conducting this inferential procedure, we first addressed the assumptions of the MANOVA. Two criteria were used to assess the assumption of multivariate normality. First, we explored the univariate normality of each CSEQ item and three subscales, which serve as the dependent variables in this study. The majority of items were normally distributed for the American Indian and White groups. However, seven items were found to be positively skewed and three items were negatively skewed for the American Indian sample. The two items with the largest skewness were “Gone back to read a basic reference or document that other authors referred to” (skewness = 1.73, kurtosis = 4.09) and “Socialized with a faculty member outside of class (had a snack or soft drink, etc.)” (skewness = 1.64, kurtosis = 1.68). The largest negatively skewed item was “Took detailed class notes” (skewness = -1.28, kurtosis = 1.62). Seven items were found to be positively skewed for the White sample. The two items with the largest skewness

were “Worked with a faculty member on a research project” (skewness = 2.00, kurtosis = 3.37) and “Met with faculty member or staff advisor to discuss to discuss the activities of a group or organization” (skewness = 1.72, kurtosis = 2.09). Of greatest importance was the finding that the three subscale scores for both groups were distributed normally. The second criteria of multivariate normality was addressed by visually inspecting the scatterplots for bivariate normality for each pair of dependent variables. All scatterplots for correlated variables (analyzed separately for the American Indian and White groups) were elliptical, which provides supporting evidence of multivariate normality.

The assumptions of homogeneity of variance and homogeneity of the covariance matrices were also explored. The variances for the three dependent variables were equal across the two groups (Bartlett-Box tests: Active Learning, $F = 1, 62208, = .07, p > .05$; Student Faculty Contact, $F = 1, 62208, = .23, p > .05$; and Cooperation Among Students, $F = 1, 62208, = .59, p > .05$). Results from the Box’s M (6.05) and Bartlett’s chi-square ($\chi^2_6 = 18.83, P > .05$) tests indicate the data satisfy the homogeneity of covariance matrices assumption.

As shown in Table 5, the Wilks multivariate F was significant ($p < .05$). However, the multivariate effect size (.056) reveals the mean differences are considered to be trivial according to Cohen’s (1988) classification of effect sizes. While the linear combination of the dependent variables showed statistical significance (although minimal practical significance), we next explored the effects of the dependent variables separately rather than as a whole. Results from individual univariate analyses showed that there were no significant differences between the groups for each subscale (Active Learning, $F = .82, p > .05, \eta^2 = .01$); Student Faculty Contact, $F = .11, p > .05,$

eta-square = .00; and Cooperation Among Students, $F = .2.92$, $p > .05$, eta-square = .02). In other words, there were no significant differences between American Indian and White students with regard to their participation in Active Learning, Student-Faculty Contact, and Cooperation Among Students.

Table 5

Multivariate and Univariate Analysis of Variance for CSEQ Subscales

Source	<u>Multivariate</u> F (3,142)	Active Learning F (1,144)	Student-Faculty Interaction F (1,144)	Cooperation Among Students F (1,144)
Ethnicity	2.80*	.83	2.92	.11
<u>MSE</u>		.18	.34	.37

Note. F ratio is Wilks's approximation of F. * $p < .05$.

Finally, we sought to explore students' level of satisfaction. Satisfaction with college was measured by asking students whether or not they liked college, and if they would attend the same institution again if given the choice. With regard to how well college is liked, 90% of American Indian students indicated that they "like it" or were "enthusiastic", compared to approximately 75% of White students. In addition, for both American Indian and White students, approximately 75% indicated that they would attend the same institution again. Overall, the majority of students in this study indicated

high levels of satisfaction with college and would most likely attend the same institution if they had to make decision again.

Table 6

College Satisfaction by Ethnic Group

Characteristic	American Indian (n=74)	White (n=74)
How well is college liked		
Do not like it	3%	1%
More or less neutral	7%	23%
Like it	65%	48%
Enthusiastic	25%	27%
Would attend same institution again		
No, definitely not	7%	4%
Probably not	15%	19%
Probably yes	40%	46%
Yes, definitely	31%	31%

Limitations

One possible limitation of the current findings is the small sample sizes of the American Indian and White groups. Future research with larger samples sizes is needed to support our findings relative to the lack of differences between the two groups. Also, larger samples sizes would enable researchers to explore potential tribal affiliation differences within the American Indian college student population.

Another potential limitation of this study might be that the three measures of Good Practice in Undergraduate Education were measured by only one scale. Although previous researchers have rated the CSEQ as a valid and reliable measure, we cannot assume it measures all of the important aspects of the three dependent variables.

We suggest that caution should be taken in generalizing the results of this study to other populations. Generalization may be limited due to the fact that a convenience sampling approach was employed and also the data is based on self-report information. Finally, it needs to be noted that the CSEQ is limited in that it measures student experiences rather than the specific nature of their experiences. For example, even though American Indian and White students did not differ in their amount of interaction with faculty, they may differ in the reasons why they seek contact with faculty members.

Discussion

Despite some meaningful differences between the two groups (age, first-generation college students, housing status, etc.) there are surprisingly few differences between the experiences of American Indian and White college students that participated in the study.

As stated previously, Tierney (1995) suggested the use of active learning strategies is important for American Indian college students. Yet, few empirical studies

have explored the extent to which American Indian college students use active learning techniques. This study found that American Indian students moderately (“occasionally” to “often”) utilized active learning techniques. Further, there were no significant differences between American Indian and White students in using these techniques. Though additional studies need to be conducted, the difference between American Indian and White students in the use of active learning techniques is insignificant.

This study also found that American Indian students indicated only a moderate (“occasional” to “often”) amount of participation in activities that demonstrated cooperation among students. Very similar results were also found with White students. Likewise, with regard to the level of student-faculty contact, there were no significant differences between American Indian and White students. Both groups reported only “occasional” interaction with faculty members.

These results seem to contradict previous studies that found that student-faculty contact and cooperative learning environments were very important to American Indian students. One explanation may be that many previous studies measured student’s attitudes (e.g., satisfaction) towards these types of activities and experiences, whereas the CSEQ measured the amount of effort students reported in each activity. For instance, Hoover and Jacobs (1992) measured the student’s positive and negative opinions regarding quality of college instruction, personal feelings toward attending college, and study skill abilities. Another study by Tate and Schwartz (1993) measured students’ agreement with various statements regarding their college experiences. The CSEQ, on the other hand, asks students to evaluate the amount of effort spent in various activities. Thus, the situation could exist for, example, where American Indian

students are interacting only “occasionally” with a faculty member, but may report a high level of satisfaction with that interaction. In fact, it is interesting to point out that the students that participated in this study were generally satisfied with their college experiences even though high levels of engagement were not reported for the three principles investigated.

Therefore, to better understand the importance of active learning, cooperation, and student-faculty contact in establishing quality educational environments for American Indian students, it is recommended that future studies address the distinction between the quantity (e.g., time spent in an activity) and the student’s attitude toward the activity. It may be found that there is not a high correlation between the student’s time spent in an activity and his or her attitude toward the activity.

Three other findings from this study are also of interest. First, the amount of within-group variation should be mentioned. For example, the standard deviations indicate that while many students reported interaction with faculty, many did not. Second, while there was no difference between American Indian and White scores on the Student-Faculty subscale, the means can still be considered somewhat low (2.15 and 2.18, for the American Indian and White groups, respectively). It cannot be determined from the present study if students did not put forth effort in this area or if they did not have the opportunity to interact with faculty. While Chickering and Gamson (1987) do not specify a critical value for evidence of good practice, performance just above the expected mean (2.00) for this subscale suggests the university under investigation may have room for improvement in this area.

Overall, there were no significant differences between American Indian and White students in their participation in academic activities as measured by the three subscales in CSEQ. These subscales are three of the seven principles identified by Chickering and Gamson (1987) as components of good practices in undergraduate education. These results seem to contradict previous studies, which reported that American Indian college students may desire different or unique types of educational environments and activities. These results could also indicate that this particular university is doing a good job at providing a quality educational environment for American Indians, or that American Indian students who did not adjust well to the culture of the university had already left and were therefore not sampled. However, for the American Indian students that were included in the study, there were no significant differences in their exposure to a quality learning environment as described by three of the Seven Principles of Good Practice in Undergraduate Education. Finally, both American Indian and White students report relatively high levels of satisfaction with their collegiate experience.

James S. Cole is a Senior Project Coordinator for the Assessment Resource Center at the University of Missouri, Columbia. Mr. Cole has been involved with assessment projects at a variety of institutions, including projects that focused on improving academic environments and student services for American Indian Students.

Gypsy M. Denzine is an Assistant Professor of Educational Psychology, Northern Arizona University. Dr. Denzine teaches courses in the M.Ed in Counseling: Student Affairs and Ed.D. in Educational Psychology: Learning and Cognition graduate programs at Northern Arizona University.

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