**A Multiple Regression Analysis**

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**Chapter 4: Results**

The goal of this study was to better understand the role of native culture and its effect on the participation and the satisfaction of American Indian student’s college experience. Harrington and Harrington (2011) suggested that Native American students who are able to draw strength from their cultural identity while adapting to the demands of college life are more likely to succeed in their academic pursuits than either culturally assimilated students or those unable to establish a level of comfort within their campus environment. However, few studies have been conducted to explore the relationship between participation, satisfaction and acculturation. The focus of the present study was to determine any potential correlational relationships between participation, satisfaction and acculturation. To respond to these questions, an online survey was distributed that utilized and combined the two survey instruments: the College Student Experience Questionnaire (CSEQ) and the Native American Acculturation Scale (NAAS).

As discussed in Chapter 2, understanding the effects of acculturation of American Indian students is important for student affairs professionals to improve support services. To gain a better understanding of American Indian students on the college campus, the following questions that help drive this study were: (1) to what extent do students who self-identify as America Indians are connected to their culture? (2) to what extent do students who self-identify as America Indians participate in college activities? And (3) to what extent do students who self-identify as America Indians are satisfied in their academic, non-academic and overall college experience at their respective institutions?

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**Research Question One:** Are there significant differences in the demographics, levelof satisfaction, and the frequency of participation in campus experiences for college students who self-identify as American Indian?

**Research Question Two:** Are there relationships between the three variables ofacculturation, satisfaction, and the frequency of participation in campus experiences, for college students who self-identify as American Indian?

**Research Question Three:** Do relationships exist between or among the percentagesof satisfaction and the percentages of acculturation and participation in students who self-identify as American Indian.

To effectively answer the aforementioned questions, a quantitative research methodology was employed in the study to measure these relationships. This chapter has been organized into three sections. The first section describes the demographics of the participants in the study. In the second section, an independent T-test and ANOVA was used to compare

the means of two independent groups in order to determine whether there is statistical evidence that the associated population means are significantly different. The last section reports the data of

the Pearson Product Moment correlation coefficients and the Mulitple Regressions that addresses questions regarding possible correlations between participation, satisfaction, and acculturation. The chapter closes with a succinct summary of the findings of the study.

**User Demographics**

The researcher determined that demographic descriptive data would be helpful when trying to understand the background and current status of college students who self-identified as American Indian. This knowledge would be helpful in developing and targeting programs and services to certain groups of individuals based on the results of the study. Therefore, the

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first eighteen questions of the CSEQ asked demographic information. These independent variables include gender, age, ethnic identity, student status, class year, residence, parent’s education level, employment, and number of semesters completed by the participants in the study.

Table 2 provides the descriptive statistics for the sample population. Of the 139 respondents that completed the survey, 47 (33.8%) identified as male, 92 (66.1%) identified as females. The mean age of the participants was 23 years old with a range of 18-54 years of age. All of the participants (139) indicated that they self-identified as American Indian. Participants were also asked to check all that apply on ethnic identity and 101 (72%) indicated another ethnicity in addition to American Indian.

The report of student status indicated that 107 (76%) of the participants were full-time students, whereas 25 (18%) were part-time students. Twenty-five (17.99%) were freshmen, 26 (18.7%) sophomores, 44 (31.65%) juniors, 36 (25.90%) seniors, 6 (4.32%) graduate students and 2 (1.44%) unclassified. The participants responded that 73 (55.30%) started in the same college, while 59 (44.70%) transferred from another college. When asked if the participants expected to seek an advanced degree; 81(61.36%) answered yes, while 51 (36.64%) responded no.

The participants were also asked to report geographic location of their primary residence. Thirty-two (24.24%) reported residence hall or campus housing, 34 (25.78%) residence within walking distance of campus, 64(48.48%) residence within driving distance from campus.

Additional information was requested from participants including parent’s education and relationship status. Fifty-eight (43.94%) indicated neither parent graduated from college,

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27 (20.45%) yes, both parents graduated from college, 14 (10.61%) yes, father only, 33(25.00%) yes, mother only, and none reported not knowing. Marital status indicated that 113 (81%) of the participants were single, 20 (14.3%) married, and 6 (4.32%) divorced. Survey respondents were asked about their employment and the effect on their school work. Ninety-two students reported yes they are employed (70.23%) and 39 (29.77%) reported no. Seventy-five (79.79%) work off campus and 19 (20.21%) work on campus. Thirty-one students reported that their employment does not interfere with their school work, while 42 (46.15%) stated some interference, and 18 (19.78%) stated a lot of interference with their school work.

Table 2.

*Descriptive Statistics for Participants*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Variable |  | n | % of sample |
|  | Gender | Female | 92 | 66.19 |
|  |  | Male | 47 | 33.81 |
|  |  |  |  |  |
|  | Age | 18 | 5 | 3.59 |
|  |  | 19 | 10 | 7.19 |
|  |  | 20 | 7 | 5.03 |
|  |  | 21 | 11 | 7.91 |
|  |  | 22 | 2 | 1.43 |
|  |  | 23 | 2 | 1.43 |
|  |  | 27 | 2 | 1.43 |
|  |  |  |  |  |

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|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | 30 | 2 | 1.43 |
|  |  | 31 | 1 | .052 |
|  |  | 35 | 1 | .052 |
|  |  | 50 | 1 | .052 |
|  |  | 56 | 1 | .052 |
|  |  | Did not answer | 94 | 67.62 |
|  |  |  |  |  |
|  | Multiracial | Yes | 101 | 72.6 |
|  |  | No | 38 | 27.3 |
|  |  |  |  |  |
|  | Ethnic Identity | Only American Indian | 127 | 91.37 |
|  | American Indian and | Black or African American | 7 | 5.04 |
|  |  | Asian or Pacific Islander | 3 | 2.16 |
|  |  | Caucasian | 76 | 54.68 |
|  |  | Mexican-American | 4 | 2.88 |
|  |  | Other Hispanic | 4 | 2.88 |
|  |  | Other | 7 | 5.04 |
|  |  |  |  |  |
|  | Student Status | Full-time | 107 | 76.0 |
|  |  | Part-time | 25 | 18.0 |
|  |  |  |  |  |
|  | Class Year | Freshmen | 25 | 17.99 |
|  |  | Sophomore | 26 | 18.71 |
|  |  | Junior | 44 | 31.65 |
|  |  | Senior | 36 | 25.90 |

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|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  | Graduate Student | 6 | 4.32 |
|  |  | Unclassified | 2 | 1.44 |
|  |  |  |  |  |
|  | Residence | On-campus | 32 | 24.24 |
|  |  | Within walking distance | 34 | 25.76 |
|  |  | Within driving distance | 64 | 48.48 |
|  |  |  |  |  |
|  | Parents Education | No College | 58 | 43.94 |
|  |  | Both Parents college graduates | 27 | 20.45 |
|  |  | Yes, Father only | 14 | 10.61 |
|  |  | Yes, Mother only | 33 | 25.00 |
|  |  |  |  |  |
|  | Employment | Yes | 92 | 70.23 |
|  |  | No | 39 | 29.77 |
|  |  |  |  |  |
|  | Work off campus | Yes | 75 | 79.79 |
|  |  | No | 19 | 20.21 |
|  |  |  |  |  |
|  | Affect school work | Employment does not interfere | 31 | 34.07 |
|  |  | Employment some interference | 42 | 46.15 |
|  |  | Employment interferes a lot | 18 | 19.78 |
|  |  |  |  |  |

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**Differences within the Groups (t-Tests)**

In an attempt to understand the differences and similarities of college students who identify as American Indian, Analysis of Variance (ANOVA) and t-tests were conducted on the survey data regarding the demographic variables of ethnic identity, age, gender, marital status, year in college, transfer student, campus location, residence, level of parent’s education, decision to seek an advance degree, credit hours, study hours, employment, job location, number of hours worked, and the effect of employment on school work. The variables used in this study to describe participation were: library use, computer and information technology, experiences with faculty, fine arts experience, campus facilities, clubs and organizations, personal experiences, student acquaintances, and scientific & quantitative experiences.

To respond to the first research question; “Are there group differences in the demographics, level of satisfaction, and the frequency of participation in campus experiences for college students who self-identify as American Indian?” this study employed the use of a quantitative descriptive research design, where the subjects were measured once with the aim to classify features, count them and conduct a model to explain what is observed. Multiple independent sample t-tests were used to compare the means of two different groups to measure if they are independent from one another.

The P value is used in statistical procedures, from [t-tests](http://blog.minitab.com/blog/statistics-and-quality-data-analysis/t-for-2-should-i-use-a-paired-t-or-a-2-sample-t) to [regression analysis.](http://blog.minitab.com/blog/adventures-in-statistics/how-to-interpret-regression-analysis-results-p-values-and-coefficients) P-values are used to determine statistical significance in a [hypothesis test.](http://support.minitab.com/en-us/minitab/17/topic-library/basic-statistics-and-graphs/hypothesis-tests/basics/what-is-a-hypothesis-test/) In the majority of analyses, an alpha of 0.05 is used as the cutoff for significance. If the p-value is less than 0.05, we reject the null hypothesis that there's no difference between the means and conclude that a significant difference does exist. P-values have been criticized because they are widely

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misunderstood and don't tell scientists what they want to know (Goodman, 2008). A p-value

means the probability of getting the results you did, given that the null hypothesis is true.

The null hypothesis is the hypothesis of no association. In this study, the null distribution is the distribution of outcomes from the variables when there is no effect. In this analysis, an alpha of 0.05 is used as the cutoff for significance. If the p-value is less than 0.05, we reject the [null hypothesis](http://blog.minitab.com/blog/understanding-statistics/things-statisticians-say-failure-to-reject-the-null-hypothesis) that there's no difference between the means and conclude that a significant difference does exist. If the p-value is larger than 0.05, we cannot conclude that a significant difference exists. If the p-value is higher than 0.05, the results were not statistically significant.

P value calculations incorporate the effect size, sample size, and variability of the data into a single number that states how consistent the data are with the null hypothesis. It is not expected that these results will be able to prove the hypothesis with a single study. Since a P value does not indicate the precision of the estimated effect size, the researcher must determine whether the effect size precisely estimated and large enough to be important.

**Equal Variance Assumptions.** To determine which t-test formula should be used,either the “equal variances assumed” formula or the “equal variances not assumed” formula, the Levene’s Test was conducted to ensure there is equal variance between populations being compared. A t-test for individual differences was compiled to compare means between groups. Equal variance must be established in order to run independent samples t-test, or risk breaking statistical rules of parametric analysis. Upon establishing equal variance, independent samples t-tests were performed on the CSEQ questions to test the significance of the means between the variables of acculturation, satisfaction and participation.

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The purpose of the demographic questions was to obtain a clearer understanding of the type of students who responded to the survey and who self-identified as American Indian. In Table 3 the data shows where there are significant differences between demographic variables as related to the variables of participation as measured by library use, computer and information technology, experiences with faculty, fine arts experience, campus facilities, personal experiences, and student acquaintances. The t-tests indicated significant differences of American Indian students regarding experiences in fine arts, use of campus facilities, technology, faculty, personal experiences, student acquaintances, and employment.

Table 3.

*Significant differences of means between students who self-identify as American Indian.*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Students | N | Mean | Std. Deviation | P. value |
| Fine Arts | Male | 40 | 6.0500 | 4.67371 | .026 |
|  | Female | 86 | 8.2093 | 5.12919 |  |
| Campus Facilities | Non-transfer | 40 | 16.1250 | 6.64170 | .003 |
|  | Transfer | 86 | 18.2209 | 5.98508 |  |
| Computers/Technology | On-campus | 30 | 15.5000 | 5.69180 | .039 |
|  | Off-campus | 96 | 18.1979 | 6.30726 |  |
| Experience with | On-campus | 30 | 11.4333 | 5.90548 | .012 |
| Faculty | Off-campus | 96 | 15.0938 | 7.08605 |  |
|  |  |  |  |  |  |
| Experience with | Undergraduate degree only | 78 | 15.8077 | 6.77669 | .001 |
| Faculty | Continued education | 48 | 11.6458 | 6.58331 |  |
|  | Undergraduate degree only | 78 | 8.2692 | 5.53776 | .035 |
| Fine Arts | Continued education | 48 | 6.3125 | 3.96879 |  |
|  | Undergraduate degree only | 78 | 12.1282 | 5.81837 | .002 |
| Personal Experience | Continued education | 48 | 8.8750 | 5.37379 |  |
|  |  |  |  |  |  |
| Computers/Technology | Employed | 87 | 18.3218 | 6.09707 | .039 |
|  | Unemployed | 39 | 15.8462 | 6.33095 |  |
| Student Acquaintances | Employed | 87 | 16.0805 | 7.20823 | .033 |
|  | Unemployed | 39 | 13.2308 | 6.02391 |  |
| Library Use | Worked >15 hrs. Per wk. | 79 | 7.3544 | 5.75580 | .029 |
|  | Worked <15 hrs. Per wk. | 47 | 9.6596 | 5.49021 |  |

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In regards to gender, survey participants identified themselves either as male or female. Based on the results, we can state there was a significant difference in means between genders in the participation in Fine Arts (*t*124=-2.261, p=.026).

There was a significant difference reported in means for the use of campus facilities between non-transfer and transfer students (*t*124=3.067, p=.003). There was a significant difference of means between students living on or off campus in the use technology experience (*t*124=-2.091, p=.039), and in their experience with faculty (*t*124=-2.563, p=.012). Survey participants who responded yes to continuing their education, had a significant difference in means from students who stated no, in faculty experience (*t*124=3.384, p=.001), in Fine Arts experience (*t*124=2.133, p=.035), and in personal experience *t*124=3.136, p=.002).

When examining the survey responses on employment, significant differences were found in the scores for students with paid employment that indicated a more frequent experience in computer and information technology (*t*124)=2.082, p=.039), and in student acquaintances (*t*124=2.153, p=.033). This study examined the number of hours worked weekly and whether it affected their school work. The number of survey participants out of 139 who are employed were 94 (68%) and 60 of them (65.43%) reported their job interferes with their school work. Survey participants that worked more than 15 hours per week reported less experience and a significant difference in library use (*t*124=-2.211, p=.029).

**Differences within the Groups (ANOVA’s)**

Since t-tests are more sensitive and Anovas offer a broader approach and are used to compare three or more variables, a One-way Analysis of Variance (ANOVA) was used when there were three or more possible responses in each survey question. A One-way Analysis of

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Variance (ANOVA) measures whether the responses varied significantly across the groups. A

Tukey posttest was used when a significance was found to determine where the differences

existed. Various One-way ANOVAs tests were conducted with the variables of age, marital

status, year in college, campus location, level of parent’s education, and number of credits.

Table 4 below illustrates the significant differences found regarding age on library use and

campus facilities.

Table 4.

*Significant differences of Age*

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  |  | Sum of Squares | df | Mean Square | F | Sig. |
| Library Use | Between Groups | 310.552 | 4 | 77.638 | 2.451 | .050 |
|  | Within Groups | 3737.513 | 118 | 31.674 |  |  |
|  | Total | 4048.065 | 122 |  |  |  |
|  |  |  |  |  |  |  |
| Campus Facilities | Between Groups | 452.153 | 4 | 113.038 | 4.804 | .001 |
|  | Within Groups | 2776.644 | 118 | 23.531 |  |  |
|  | Total | 3228.797 | 122 |  |  |  |
|  |  |  |  |  |  |  |

This study examined the age of the survey participants and found significant differences in the quantitative experiences in 18 year-olds, 19 year-olds, 20 year-olds, 21 year-olds and 22 year-olds and older. There was a significant difference of age on library use at the p<.05 level for the five age groups [F (4,118) =2.451, p=.050]. Post hoc comparisons using Tukey HSD test indicated that the mean score 18 year-olds (M=8.9167, SD=4.98) was significantly different than the 21 year-olds (M=11.5882, SD=5.92). However, the mean score for 19 year-olds (M=9.0769, SD=5.36) 20 year-olds (M=6.0769, SD=3.98) and 22 year-olds

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and older (M=7.4265, SD=5.94) did not significantly differ from the 18 year-olds. Taken together, these results suggest that as college students age their use of the library increases.

There was a significant difference of age on experience with faculty at the p<.05 level for the five age groups [F (4,118) =2.059, p=.091]. Post hoc comparisons using Tukey HSD test indicated that the mean score 18 year-olds (M=9.1667, SD=5.90) was significantly different than the 19 year-olds (M=15.1538, SD=6.28), 21 year-olds (M=15.0000, SD=5.22), and 22 year-olds and older (M=15.0588, SD=7.50). However, the mean score for 20 year-olds (M=13.2308, SD=6.40) did not significantly differ from the 18 year-olds. Taken together, these results suggest that younger college students have less experience with faculty.

There was a significant difference of age on campus facilities at the p<.05 level for the five age groups [F (4,118) =4.804, p=.001]. Post hoc comparisons using Tukey HSD test indicated that the mean score 18 year-olds (M=9.8333, SD=5.07) was significantly different than the 19 year-olds (M=11.5385, SD=3.66), 20 year-olds (M=14.0769, SD=5.25), and 21 year-olds (M=11.6471, SD=4.99). However, the mean score for 22 year-olds and older (M=8.4706, SD=4.88) did not significantly differ from the 18 year-olds. Taken together, these results suggest that as college students age their use of the campus facilities increases until they reach over the age of 21.

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Table 5.

*Significant differences of Martial Status*

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  |  | Sum of Squares | df | Mean Square | F | Sig. |
| Fine Arts | Between Groups | 422.996 | 2 | 211.498 | 9.316 | .000 |
|  | Within Groups | 2792.432 | 123 | 22.703 |  |  |
|  | Total | 3215.429 | 125 |  |  |  |
|  |  |  |  |  |  |  |
| Personal Experiences | Between Groups | 402.440 | 2 | 201.220 | 6.385 | .002 |
|  | Within Groups | 3876.004 | 123 | 31.512 |  |  |
|  | Total | 4278.444 | 125 |  |  |  |
|  |  |  |  |  |  |  |
| Student Acquaintances | Between Groups | 598.178 | 2 | 299.089 | 6.728 | .002 |
|  | Within Groups | 5467.862 | 123 | 44.54 |  |  |
|  | Total | 6066.040 | 125 |  |  |  |
|  |  |  |  |  |  |  |
| Satisfaction | Between Groups | 16.299 | 2 | 8.150 | 5.011 | .008 |
|  | Within Groups | 200.026 | 123 | 1.626 |  |  |
|  | Total | 216.325 | 125 |  |  |  |
|  |  |  |  |  |  |  |

When considering marital status on the participation variables, there was a significant difference of marital status on technology use at the p<.05 level for the three marital groups [F (2,123) =5.176, p=.007]. Post hoc comparisons using Tukey HSD test indicated that the mean score for not married students (M=17.7451, SD=5.81) was significantly different than the divorced students (M=9.2000, SD=3.70). However, the mean score for not married students did not significantly differ from the married (M=18.7368, SD=7.59). Taken together, these results suggest that divorced students reported much less experience with technology.

There was a significant difference of marital status on Fine Arts experience at the p<.05 level for the three marital groups [F (2,123) =9.316, p=.000]. Post hoc comparisons using Tukey HSD test indicated that the mean score for not married students (M=8.4118, SD=4.91) was significantly different than both married (M=3.8421, SD=4.27) and the divorced students (M=3.4000, SD=2.30). However, the mean score for married students did

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not significantly differ from the divorced students. Taken together, these results suggest that

both married and divorced students reported much less experience with Fine Arts.

There was a significant difference of marital status on personal experience at the p<.05 level for the three marital groups [F (2,123) =6.385, p=.002]. Post hoc comparisons using Tukey HSD test indicated that the mean score for not married students (M=11.7451, SD=5.62) was significantly different than both married (M=7.5789, SD=5.94) and the divorced students (M=6.0000, SD=3.08). However, the mean score for married students did not significantly differ from the divorced students. Taken together, these results suggest that both married and divorced students reported much less experience with personal experience.

There was a significant difference of marital status on student acquaintances at the p<.05 level for the three marital groups [F (2,123) =6.728, p=.002]. Post hoc comparisons using Tukey HSD test indicated that the mean score for not married students (M=16.2451, SD=6.54) was significantly different than both married (M=11.1053, SD=7.67) and the divorced students (M=9.4000, SD=4.33). However, the mean score for married students did not significantly differ from the divorced students. Taken together, these results suggest that both married and divorced students reported much less experience with student acquaintances.

There was a significant difference of marital status on satisfaction at the p<.05 level for the three marital groups [F (2,123) =5.011, p=.008]. Post hoc comparisons using Tukey HSD test indicated that the mean score for not married students (M=8.5000, SD=1.31) was significantly different than both married (M=7.8421, SD=.958) and the divorced students (M=7.000, SD=1.55). However, the mean score for married students did not significantly differ from the divorced students. Taken together, these results suggest that both married and divorced students reported much less satisfaction.

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Table 6.

*Significant differences regarding Classification in College.*

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  |  | Sum of Squares | df | Mean Square | F | Sig. |
| Technology | Between Groups | 430.605 | 5 | 86.121 | 2.32 | .047 |
|  | Within Groups | 4454.506 | 120 | 37.121 | 0 |  |
|  | Total | 4885.111 | 125 |  |  |  |
|  |  |  |  |  |  |  |
| Experience with Faculty | Between Groups | 880.958 | 5 | 176.192 | 4.06 | .002 |
|  | Within Groups | 5206.820 | 120 | 43.390 | 1 |  |
|  | Total | 6087.778 | 125 |  |  |  |
|  |  |  |  |  |  |  |

This study examined the demographic variable of classification in college on the variables of participation, there was a significant difference of the student’s year in school on computer and informational technology at the p<.05 level for the six classification groups [F(5,120)=2.320, p=.047]. Post hoc comparisons using Tukey HSD test indicated that the mean score for freshman (M=16.0870, SD=5.80) was significantly different than Senior (M=20.5455, SD=4.86) and Graduate student (M=18.8000, SD=8.31). However, the mean score for sophomore (M=16.4545, SD=5.56) Junior (M=16.4878, SD=7.08) and the unclassified student (M=16.000, SD=4.24) did not significantly differ from the freshman students. Taken together, these results suggest that senior and graduate students reported much more experience with technology.

There was a significant difference of the student’s year in school with their experience with faculty at the p<.05 level for the six classification groups [F (5,120) =4.061, p=.002]. Post hoc comparisons using Tukey HSD test indicated that the mean score for freshman (M=12.0435, SD=7.37) was significantly different than Senior (M=18.4242, SD=7.31) and the unclassified student (M=8.000, SD=2.82). However, the mean score for sophomore (M=13.6364, SD=5.45) Junior (M=12.6341, SD=5.68), and Graduate student (M=14.6000,

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SD=9.65) did not significantly differ from the freshman students. Taken together, these results suggest that Senior students reported much more experience with faculty, while the unclassified student report less faculty experience than all other students.

There was a significant difference of the student’s year in school pertaining to campus facilities at the p<.05 level for the six classification groups [F (5,120) =2.103, p=.070]. Post hoc comparisons using Tukey HSD test indicated that the mean score for freshman (M=10.6957, SD=5.33) was significantly different than the unclassified student (M=4.5000, SD=.707) and Graduate student (M=5.8000, SD=4.08). However the mean score for sophomore (M=11.5909, SD=4.75), junior (M=9.0244, SD=4.87), and senior (M=10.5455, SD=5.29) did not significantly differ from the freshman students. Taken together, these results suggest that the unclassified student and Graduate students reported much less experience with campus facilities.

Table 7.

*Significant differences regarding the Campus the Participant Attends*

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | Sum of Squares | df | Mean | F | Sig. |  |
|  |  |  |  | Square |  |  |  |
| Library Use | Between | 504.847 | 4 | 126.212 | 4.216 | .003 |  |
| Groups | Within Groups | 3622.367 | 121 | 29.937 |  |  |  |
|  | 4127.214 | 125 |  |  |  |  |
|  | Total |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
| Student Acquaintances | Between | 496.117 | 4 | 124.029 | 2.694 | .034 |  |
| Groups | Within Groups | 5569.923 | 121 | 46.032 |  |  |  |
|  | 6066.040 | 125 |  |  |  |  |
|  | Total |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
| Campus Facilities | Between | 305.903 | 4 | 76.476 | 3.110 | .018 |  |
| Groups | Within Groups | 2975.025 | 121 | 24.587 |  |  |  |
|  | 3280.929 | 125 |  |  |  |  |
|  | Total |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  | 87 |  |
|  |  |  |  |  |  |  |  |
| Acculturation | Between | 4832.843 | 4 | 1208.211 | 8.174 | .000 |  |
| Groups | Within Groups | 17884.657 | 121 | 147.807 |  |  |  |
|  | 22717.500 | 125 |  |  |  |  |
|  | Total |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |

To understand the differences of the demographic variable regarding the individual campus on the participation variables, there was a significant difference regarding the campus the student attends to the use of the library at the p<.05 level for the five campus locations [F(4,121)=4.216, p=.003]. Post hoc comparisons using Tukey HSD test indicated that the mean score for St. Cloud State University students (M=9.5294, SD=5.67) was significantly different than Moorhead State University students (M=6.2353, SD=5.93) and Bemidji State University students (M=5.074, SD=4.47). However, the mean score for Mankato State University students (M=9.8000, SD=9.01) and the University of Minnesota-Morris students (M=9.7442, SD=5.23) did not significantly differ from the St. Cloud State University students. Taken together, these results suggest that the students at Mankato State University and the University of Minnesota-Morris reported much less use of the library.

There was a significant difference regarding the campus the student attends in reporting student acquaintances at the p<.05 level for the five campus locations [F (4,121) =2.694, p=.034]. Post hoc comparisons using Tukey HSD test indicated that the mean score for St. Cloud State University students (M=14.5588, SD=8.31) was significantly different than Mankato State University students (M=23.4000, SD=6.76) However, the mean score for the University of Minnesota-Morris students (M=15.5349, SD=5.25) Moorhead State University students (M=16.4706, SD=6.29) and Bemidji State University students (M=13.1481, SD=7.09) did not significantly differ from the St. Cloud State University

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students. Taken together, these results suggest that the students at Mankato State University reported student acquaintances experience at a higher level.

There was a significant difference regarding the campus the student attends in reporting use of campus facilities at the p<.05 level for the five campus locations [F (4,121) =3.110, p=.018]. Post hoc comparisons using Tukey HSD test indicated that the mean score for St. Cloud State University students (M=9.1176, SD=5.12) was significantly different than Bemidji State University students (M=7.8148, SD=5.17). However, the mean score for the University of Minnesota-Morris students (M=11.8605, SD=5.00), Moorhead State University students (M=10.2353, SD=4.54), and Mankato State University students (M=10.4000, SD=2.60) did not significantly differ from the St. Cloud State University students. Taken together, these results suggest that the students at Bemidji State University reported use of campus facilities at a lower level.

There was a significant difference regarding the campus the student attends in reporting acculturation at the p<.05 level for the five campus locations [F (4,121) =8.174, p=.000]. Post hoc comparisons using Tukey HSD test indicated that the mean score for St. Cloud State University students (M=20.6765, SD=8.57) was significantly different than Bemidji State University students (M=35.9630, SD=13.92), University of Minnesota-Morris students (M=26.8140, SD=14.24), and Moorhead State University students (M=35.9412, SD=9.75). However, the mean score for Mankato State University students (M=22.2000, SD=9.62) did not significantly differ from the St. Cloud State University students. Taken together, these results suggest that the students at Mankato State University and St. Cloud State University reported acculturation levels at about the same rate.

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Table 8.

*Significant differences regarding the Number of Credit Hours*

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | Sum of Squares | df | Mean Square | F | Sig. |  |
| Fine Arts Experience | Between | 256.104 | 4 | 97.008 | 2.618 | .038 |  |
| Groups | Within Groups | 2959.325 | 121 | 47.114 |  |  |  |
|  | 3215.429 | 125 |  |  |  |  |
|  | Total |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
| Personal Experience | Between | 426.200 | 4 | 106.550 | 3.347 | .012 |  |
| Groups | Within Groups | 3852.244 | 121 | 31.837 |  |  |  |
|  | 4278.444 | 125 |  |  |  |  |
|  | Total |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
| Campus Facilities | Between | 491.888 | 4 | 122.972 | 5.335 | .001 |  |
| Groups | Within Groups | 2789.041 | 121 | 23.050 |  |  |  |
|  | 3280.929 | 125 |  |  |  |  |
|  | Total |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |

Considering the demographic variable regarding number of credit hours on the variables of participation, there was a significant difference regarding number of credit hours in reporting Fine Arts experience at the p<.05 level for the five possible categories [F(4,121)=2.618, p=.038]. Post hoc comparisons using Tukey HSD test indicated that the mean score for 7-11 credits (M=4.6471, SD=3.74) was significantly different than 12-14 credits (M=8.8491, SD=5.79). However, the mean score for 6 or fewer credits (M=6.0000, SD=4.50) did not significantly differ from 15-16 credits (M=7.4250, SD=4.38) and 17 or more credits (M=6.8750, SD=3.72). Taken together, these results suggest that if the amount of credits that students take is 6 or less and any amount over 15 credits: students report their Fine Arts experience at about the same rate.

There was a significant difference regarding number of credit hours in reporting personal experience at the p<.05 level for the five possible categories [F (4,121) =3.347, p=.012]. Post hoc comparisons using Tukey HSD test indicated that the mean score for 7-11

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credits (M=7.0588, SD=5.30) was significantly different than 15-16 credits (M=11.2750, SD=5.04) and 12-14 credits (M=12.3774, SD=6.34). However, the mean score for 6 or fewer credits (M=9.1250, SD=4.45) did not significantly differ from and 17 or more credits (M=9.0000, SD=5.07). Taken together, these results suggest that if the amount of credits that students take is 11 or less and any amount over 17 credits: students report their personal experience at about the same rate.

There was a significant difference regarding number of credit hours in reporting use of campus facilities at the p<.05 level for the five possible categories [F (4,121) =5.335, p=.001]. Post hoc comparisons using Tukey HSD test indicated that the mean score for 7-11 credits (M=6.2353, SD=3.68) was significantly different than 12-14 credits (M=10.5472, SD=5.06), and 15-16 credits (M=11.7750, SD=4.92), and 17 or more credits (M=8.5000, SD=4.92). However, the mean score for 6 or fewer credits (M=6.6250, SD=4.17) did not significantly differ from 7-11 credits (M=6.2353, SD=3.68). Taken together, these results suggest that if the amount of credits that students take is 11 or less, students report their use of campus facilities at about the same rate. When students took 12 or more credits their use of campus facilities increased.

**Level of Satisfaction.**In order to determine a measure of satisfaction, five surveyquestions (see appendix D) were selected for the CSEQ instrument. On the CSEQ survey these questions regarding satisfaction were as follows: Participants were asked to rate their overall satisfaction with academic experience (coursework, lectures, grading, etc.), their overall satisfaction with non-academic experience (clubs, organizations, cultural events, etc.), and their overall satisfaction as a student at their respective university. There were two additional follow-up question asking; “What are reasons for your lack of satisfaction on this

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campus,” and “Why did they attend college?” Each question had four choices on a Likert scale to indicate their level of satisfaction: (a) very satisfied, (b) somewhat satisfied, (c) somewhat dissatisfied, and (d) not satisfied at all. Out of 139 survey respondents, 126 answered the satisfaction questions and 13 skipped the questions. An average mean score was given to the 13 missing respondents to provide a common value to the total group. A final question regarding satisfaction and retention was asked: “If you could start over again, would you go to the same institution you are now attending?” Overall, 93 (81%) survey participants indicated definitely yes or probably yes on attending the same institution, while 22 (19%) survey participants indicated no they would not attend the same institution.

On the level of satisfaction with their academic experience, 100 (85%) of survey participants identified as being satisfied, while the remaining 15 (15%) of the survey participants indicated somewhat dissatisfied or not satisfied at all. On the level of satisfaction with their non-academic experience, 94 (77%) of survey participants identified as being satisfied, while the remaining 21 (23%) of the survey participants indicated somewhat dissatisfied or not satisfied at all. On the level of satisfaction with their overall experience, 88 (70%) of survey participants identified as being satisfied, while the remaining 27 (30%) of the survey participants indicated somewhat dissatisfied or not satisfied at all.

There were 15 different responses given regarding satisfaction of the survey participants campus experience (Table 4). The highest level of dissatisfaction was attributed to “Lack of advising” (39.13%) and “Limited course availability” (39.13%). The least amount of satisfaction was reported as, “University too small” (4.35%) and “Classes were not challenging” (4.35%).

|  |  |  |
| --- | --- | --- |
|  |  | 92 |
| Table 9. |  |  |
| *Reasons for Lack of Satisfaction* |  |  |
| *Answer choices* | *n* | *% of responses* |
| Lack of advisement assistance | 9 | 39.13 |
| Limited course availability | 9 | 39.13 |
| Other | 8 | 34.78 |
| Could not get the assistance I needed | 7 | 30.43 |
| Faculty/staff were unfriendly | 7 | 30.43 |
| Students were unfriendly | 6 | 26.09 |
| Lack of financial aid/assistance | 6 | 26.09 |
| Too far from home | 5 | 21.74 |
| Classes were too hard | 3 | 13.04 |
| Lack of diversity | 3 | 13.04 |
| University too large | 2 | 8.70 |
| Roommate problems | 2 | 8.70 |
| Significant other does not want to live in the area | 2 | 8.70 |
| Classes were not challenging | 1 | 4.35 |
| University too small | 1 | 4.35 |

*\*Total responses 23*

To provide a greater understanding of the survey participants this study examined why

the students who identified as American Indian attended college. Out of the five choices to

select, 98 (85%) of the survey participants indicated “Personal goal” as the reason they

attended college. In addition, 79 (68%) indicated “Increased future earnings” with 47 (40%)

survey participants checking “Parent expectations.” The two least responses on why they

attended college was: “Rite of passage” selected by 19 (16%), and 16 (13%) survey

participants selected “To be with friends.”

**Level of Acculturation.** The CSEQ has allotted space to accept twenty additional

questions. The researcher added the twenty questions from the Native American

Acculturation Scale to ascertain a level of cultural identity of each participant (see appendix

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C). The mean score 3 serves as the cut-off point on the scale to differentiate those who are

culturally identified as Native American (i.e. Traditional) and those who are not culturally

identified as Native American (i.e., assimilated). Therefore, a mean score below 3 on the

NAAS indicates that the respondent culturally identifies him-or-herself as Native American

(the strength of this identification varies with the score). Likewise, a mean score above 3

indicates that the respondent identifies him-or-herself more with mainstream American

culture (assimilated).

Participants’ overall acculturation mean was 3.292 out of a total possible score of 5

which indicated acculturation closer to mainstream American than to American Indian

culture. Table 10 shows the overall aggregated data for the Mean score for each survey

question on the NAAS.

Table 10.

*Aggregated Mean scores for the Native American Acculturation scale*

|  |  |  |
| --- | --- | --- |
|  | NAAS Questions | *Mean* |
|  | What language can you speak? | 4.178 |
|  | What language do you prefer? | 3.479 |
|  | **How do you identify yourself?** | **2.260\*** |
|  | **Which identification does (did) your mother use?** | **2.794\*** |
|  | **Which identification does (did) your father use?** | **2.780\*** |
|  | What was the ethnic origin of friends you had as a child to age 6? | 3.301 |
|  | What was the ethnic origin of friends you had as a child up to age 6 to 18? | 3.547 |
|  | Who do you associate with now in your community? | 3.137 |
|  | What music do you prefer? | 3.479 |
|  | What movies do you prefer? | 3.479 |
|  | Where were you born? | 3.835 |
|  | Where were you raised? | 3.452 |
|  | **What contact have you had with Native American communities?** | **2.411\*** |
|  | What foods do you prefer? | 3.150 |
|  | In what language do you think? | 4.479 |

|  |  |
| --- | --- |
|  | 94 |
|  |  |
| Do you read a tribal language? | 4.356 |
| Do you write a tribal language? | 4.534 |
| **How much pride do you have in Native American culture and heritage?** | **1.438\*** |
| **How would you rate yourself?** | **2.698\*** |
| Do you participate in Native American traditions, ceremonies, occasions, & so on | 3.054 |

\**mean scores below 3 indicate identification of traditional culture*

**Correlations**

This study examined any potential correlational relationships between participation, satisfaction, and acculturation. To respond to the second research question, is acculturation related to satisfaction, and the frequency of participation in campus experiences, for college students who self-identify as American Indian, a Pearson product-moment correlation coefficient was used to assess the relationship between the scores of the NAAS (acculturation) and the variables of the CSEQ survey that measured participation and satisfaction. The participation variables were: library use, computer and information technology, experiences with faculty, fine arts experience, campus facilities, clubs and organizations, personal experiences, student acquaintances, and scientific & quantitative experiences. The independent variable of satisfaction was established through the combination of three questions that measured their satisfaction with academic, non-academic and overall university experience.

As indicated in Table 11, all of the variables reported weak, non-significant correlations regarding acculturation, satisfaction, and participation. Six of the correlations were assessed as negative, while four were assessed as positive. Overall, there was a weak, negative, non-significant correlation between library use, CIT, Clubs & Organizations, personal experiences, satisfaction, campus facilities, and acculturation. In addition, there was

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a weak positive, non-significant correlation between experience with faculty, fine arts, student

acquaintances, scientific and quantitative experiences and acculturation.

Table 11.

*Correlations between Acculturation, Participation and Satisfaction*

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  | Library |  |  | CIT |  | ExperFac | FineArts | ClubsOrgs | Acculturation |
|  | Scientific | Pearson Correlation | .008 |  |  | .202\* |  | -.017 | -.027 | .046 | .011 |
|  |  | Sig. (2-tailed) | .929 |  |  | .023 |  | .853 | .761 | .606 | .903 |
|  |  | N | 126 |  |  | 126 |  | 126 | 126 | 126 | 126 |
|  |  | Pearson Correlation | -.131 |  |  | -.090 |  | .039 | .043 | -.082 | 1 |
| Acculturation | | Sig. (2-tailed) | .144 |  |  | .317 |  | .661 | .629 | .362 |  |
|  |  | N | 126 |  |  | 126 |  | 126 | 126 | 126 | 126 |
|  | Correlation is significant at the 0.05 level (2-tailed). | | | | |  |  |  |  |  |  |
|  | \*. Correlation is significant at the 0.01 level (2-tailed). | | | | |  |  |  |  |  |  |
|  |  |  |  | |  |  | |  |  |  |  |
|  |  |  | PersnalExpr | |  | Acquaint | | Satisfaction | CampusFac | Scientific | Acculturation |
|  | Scientific | Pearson Correlation | .161 | |  | .166 | | .013 | .099 | 1 | .011 |
|  |  | Sig. (2-tailed) | .073 |  |  | .060 | | .881 | .270 |  | .903 |
|  |  | N | 126 | |  | 126 | | 126 | 126 | 126 | 126 |
|  |  | Pearson Correlation | -.008 | |  | .123 | | -.021 | -.128 | .011 | 1 |
| Acculturation | | Sig. (2-tailed) | .933 | |  | .170 | | .817 | .155 | .903 |  |
|  |  | N | 126 | |  | 126 | | 126 | 126 | 126 | 126 |

Correlation is significant at the 0.05 level (2-tailed).

In addition, a Pearson product-moment correlation was conducted on a subset of respondents regarding CSEQ questions to compare “English only” participants to “tribal language” participants to measure for any significant difference between the two groups. A

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Pearson product-moment correlation coefficient was used to assess the relationship between the scores of the NAAS (acculturation) and the dependent variables of the CSEQ survey that measured participation and satisfaction. The dependent variables: library use, computer and information technology, experiences with faculty, fine arts experience, campus facilities, clubs and organizations, personal experiences, student acquaintances, and scientific & quantitative experiences. The independent variable of satisfaction was established through the combination of three questions that measured their satisfaction with academic, non-academic and overall university experience.

All of the variables reported weak, positive non-significant correlations regarding acculturation, satisfaction and participation, except one: library use reported a negative correlation (see Table 12). There was no significant difference between the two sets of correlations. The strength of the correlation for “English only” on library use and technology experience decreased, while the correlations for “English only” on experiences with faculty, fine arts experience, campus facilities, clubs and organizations, personal experiences, student acquaintances, and scientific & quantitative experiences, satisfaction increased in strength.

Table 12.

*Correlations for English Only*

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | Library | CIT | ExperFac | FineArts | ClubsOrgs | Acculturation |
|  | Pearson Correlation | -.046 | .057 | .115 | .164 | .096 | 1 |
| Acculturation Sig. (2-tailed) | | .699 | .630 | .334 | .165 | .417 |  |
|  | N | 73 | 73 | 73 | 73 | 73 | 73 |

Correlation is significant at the 0.05 level (2-tailed).

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  | 97 | |
|  |  |  |  |  |  |  |  |
|  | PersnalExpr | Acquaint | Satisfaction | CampusFac | Scientific | Acculturation |  |
| Pearson Correlation | .070 | .172 | .106 | .192 | .040 | 1 |  |
| Acculturation Sig. (2-tailed) | .556 | .147 | .371 | .104 | .736 |  |  |
| N | 73 | 73 | 73 | 73 | 73 | 73 |  |

Correlation is significant at the 0.05 level (2-tailed).

**Multiple Regression Model**

In order to respond to research question three: Do relationships exist between or among the percentages of satisfaction and the percentages of acculturation and participation in students who self-identify as American Indian. a regression model was used to predit the DV by examining the set of IVs and using the most significant variable remaining in the list.. This study used a descriptive, correlational research design. The predictive variable was acculturation and the outcome variable was overall satisfaction. The covariates included were acculturation, age, gender, residence, employment, number of credits taken, year in school, marital status, library use, computer and information technology, experiences with faculty, fine arts experience, campus facilities, clubs and organizations, personal experiences, student acquaintances, and scientific & quantitative experiences. The final regression model showed that two independent variables ( marital status single and acculturation) were the only variables that significantly predicted overall satisfaction for students who self-identified as American Indian among the sample surveyed (F= 2.400, p<.05).

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Table 13.

*Coefficients for the Final Mulitple Regresson Model (N=124)*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Final Model | Standardized | *R Square* | *F* |  |  |
|  | Coefficients |  |  |  |  |
| Variable | Beta |  |  | *t* | *Sig* |
|  |  |  |  |  |  |
| (Constant) |  |  |  | 10.557 | .000 |
| Single | .230 | .054 | 2.400 | .056 | .037 |
| Acculturation | -.026 | .055 | 1.395 | -.158 | .875 |

1. Dependent Variable: Satisfaction p= <.05.

**Summary**

This exploratory quantitative study was designed to measure the relationship between the independent variable of acculturation and dependent variable of satisfaction. To gain a better understanding of American Indian students on the college campus, the following questions that help drive this study were: (1) to what extent do students who self-identify as America Indians are connected to their culture? (2) to what extent do students who self-identify as America Indians participate in college activities? And (3) to what extent do students who self-identify as America Indians are satisfied in their academic, non-academic and overall college experience at their respective institutions?

**Research Question One:** Are there group differences within the demographics, levelof satisfaction, and the frequency of participation in campus experiences for college students who self-identify as American Indian?

**Research Question Two:** Is acculturation related to satisfaction, and the frequency ofparticipation in campus experiences, for college students who self-identify as American Indian?

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**Research Question Three:** Do relationships exist between or among the percentagesof satisfaction and the percentages of acculturation and participation in students who self-identify as American Indian.

Ho: the model is not useful in predicting satisfaction

Ha: the model is useful in predicting satisfaction.

The study investigated the group differences within the demographic variables: ethnicity, gender, age, marital status, year in school, residence, employment, number of hours worked, work interference, parent’s college experience, seeking advance degree, and number of credits. The study also investigated the statistical differences within the participation variables: experiences with faculty, fine arts experience, campus facilities, clubs and organizations, personal experiences, student acquaintances, scientific and quantitative experiences, and the satisfaction variables.

This study examined any potential correlational relationships between participation, satisfaction, and acculturation. Overall, the data reported very weak correlations between the participation and satisfaction variables. Further investigations of the data showed one negative, non-significant correlations between the variables of acculturation and library use. All of the rest of the variables showed positive, non-significant correlations.

The data results indicate that both male and female American Indian students use the library, participated in experiences with faculty, participated in clubs and organizations, had interactions with student acquaintances, experienced overall satisfaction, participated in the use of campus facilities, and participated in scientific and quantitative experiences at about the same rate. The data shows that American Indian females reported a greater participation rate in personal experiences than American Indian males; American Indian females

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participated in more Fine Arts experiences than American Indian males, and American Indian

females used technology at a greater level of participation than their American Indian male

counterparts. When considering age of American Indians in this study the results suggest that

as college students age their use of the library increases and younger college students have

less experience with faculty, however, these results also suggest that as college students age

their use of the campus facilities increases until they reach over the age of 21.

Regarding marital status, the married and divorced American Indian students in this study reported less in overall satisfaction, engagement with other students, personal experiences, and attending Fine Arts events. The divorced students was the only group that reported less experience with technology.

In the classification results, seniors and graduate students reported more experience with technology and faculty. The unclassified students and graduate students had less experience with campus facilities. The unclassified students were the only group that had the least amount of experience with faculty.

The data shows that as American Indian students in this study increased their number of credits, they reported an increase in library and campus facilities use. Differences in experiences with faculty, fine arts experience, clubs and organizations, personal experiences, student acquaintances, scientific and quantitative experiences remained the same for all groups no matter how many credits were taken.

In regard to how satisfied American Indian students were in this study, they reported a 70% overall satisfaction level. The data also shows an 80% satisfaction level for academic experiences and a 77% satisfaction level for non-academic experiences.

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Participants’ overall acculturation mean was 3.292 out of a total possible score of 5 which indicated acculturation closer to mainstream American than to American Indian culture. Additionally, there was a significant finding in the aggregate data regarding the level of acculturation as reported by the survey participants who self-identify as American Indian students. On six of the twenty acculturation questions, the aggregated data indicated scores below a “3” on the scale. These scores below a “3” indicate an identification as American Indian (non-assimilated), while a mean score above 3 indicates that the respondent identifies him-or-herself more with mainstream American culture (assimilated). The overall responses by survey participants on these six questions indicated that they only consider themselves American Indian on 3% of the questions assessed by the Native American Acculturation scale. The aggregated data results indicated that the survey respondents as a group consider themselves connected mostly with the mainstream American culture.

To respond to the third research question,The regression model use in this study is not useful in predicting satisfaction in regards to the variables of participation and acculturation, except for one variable of marital status. The result shows 99% confidence that the model is very useful in predicting satisfaction, only if they were single.