



NORTHERN ARIZONA UNIVERSITY

**Northern Arizona University's
2007 National Survey of Student Engagement (NSSE)
Benchmark Report**

Fall 2007

Office of Planning and Institutional Research

<http://www4.nau.edu/pair/StatisticReport/SurveyReport.htm>

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The 2005 National Survey of Student Engagement Benchmark Report

Overview:

Each year the National Survey of Student Engagement (NSSE) collects information from undergraduates at four-year colleges and universities across the country to assess the extent to which students are engaged in a variety of educational practices. NSSE is grounded in the theoretical framework that student engagement, measured by the frequency with which students participate in activities that represent effective educational practices, is a meaningful proxy for measuring collegiate quality. Northern Arizona University (NAU) participated in the national NSSE administration in 2002, 2003, 2005, and 2007. This report focuses on the results from the 2007 administration and comparisons to the previous years' results.

This current report is a summary of selected results divided into two sections. The first section presents NAU's scores on the five NSSE benchmarks representing effective educational practice:

1. Level of Academic Challenge,
2. Active and Collaborative Learning,
3. Student Interactions with Faculty Members,
4. Enriching Educational Experiences, and
5. Supportive Campus Environment.

NAU's scores are compared to all institutions in the same Carnegie classification and a selection of peer institutions (refer to Appendix B for the list of Carnegie and "peer" institutions). Comparisons are also provided to two additional groups identified by NSSE for their high levels of student engagement: (a) those with benchmark scores placing them in the top 50% of all NSSE schools in 2007 and (b) those with benchmark scores in the top 10% for 2007. The second section compares NAU's results on the 2007 NSSE administration to NAU's previous results in 2002, 2003 and 2005.

Methodology:

Randomly selected first-year and senior students at NAU were sampled and given the opportunity to respond via the web. The survey sample was similar to the overall population of freshmen and seniors on most characteristics examined. Table A (in Appendix A) shows the background characteristics of the survey sample compared to the overall freshmen and senior populations at NAU. Six hundred ninety-one (n=691) first-year respondents and 840 senior respondents participated in the 2007 NSSE administration at NAU.

The NSSE asks participating students to report the frequency with which they engage in activities that represent good educational practices. Students also record their perceptions of the college environment and estimate their educational and personal growth while in college. Additional information about student background and demographics are also gathered.

Key Findings:

Section 1: Benchmark Mean Comparisons

- Overall, Northern Arizona University continues to score similar or higher when compared to other doctoral intensive institutions, the group of selected peers, and all participating NSSE institutions on all five benchmarks. NAU's strongest ratings were in Active and Collaborative Learning, Student-Faculty Interaction, and Enriching Educational Experiences. In order to excel

on all five benchmarks, NAU can continue to improve in the Level of Academic Challenge and providing a Supportive Campus Environment.

- First-year students at NAU rated the University higher than the comparison groups in Active and Collaborative Learning and Enriching Educational Experiences. For first-year students at NAU, two benchmarks stand out as areas that the University can continue to improve. These two areas are the Level of Academic Challenge and creating a Supportive Campus Environment.
- NAU scored well by senior ratings on all five benchmarks. In particular, the University excelled in Active and Collaborative Learning, Student-Faculty Interactions, and Enriching Educational Experiences.

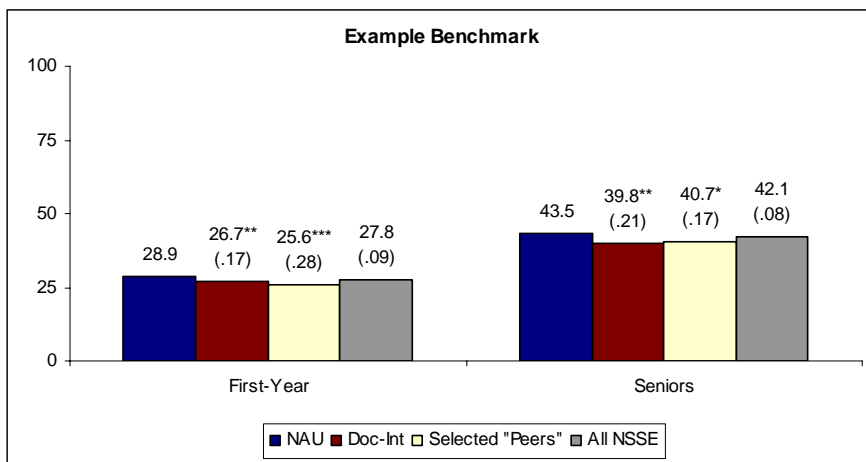
Section 2: Benchmarks for All Years of NAU's Participation in the NSSE

- The 2005 administration was the third time Northern Arizona University has participated in the National Survey of Student Engagement (2002, 2003, and 2005). The mean values for first-year students from NAU on the four benchmarks that are available for trend analysis are all relatively consistent with no major departures from year to year or any notable increases or decreases in a benchmark value from 2002 to 2005.
- The mean values for senior students from NAU on three out of the four benchmarks have shown improvement, most notably in Student-Faculty Interaction.

Section 1: Benchmark Mean Comparisons

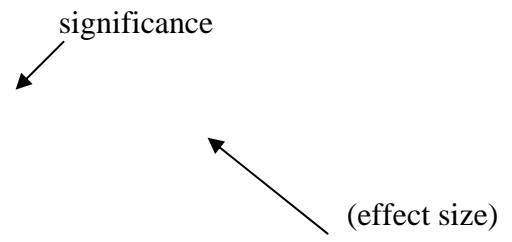
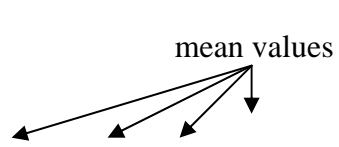
The NSSE staff provided the Office of Planning and Institutional Research with an Institutional Engagement Report for Northern Arizona University based upon the responses from NAU students to the NSSE 2007 survey. Students' responses were grouped into five categories representing effective educational practice: Level of Academic Challenge, Active and Collaborative Learning, Student Interactions with Faculty Members, Enriching Educational Experiences, and Supportive Campus Environment. NSSE responses were formed into five summative scales along these dimensions and the five institutional engagement scores for NAU students were compared to all institutions in the same Carnegie classification and a selection of peer institutions (refer to Appendix B for the list of Carnegie and “peer” institutions). Comparisons are also provided to two additional groups identified by NSSE for their high levels of student engagement¹: (a) those with benchmark scores placing them in the top 50% of all NSSE schools in 2007 and (b) those with benchmark scores in the top 10% for 2007². These additional comparisons allow NAU to determine if the engagement of their students differs in significant, meaningful ways from these high performing peer groups.

In the below charts, benchmark comparisons between NAU and a norm group with mean differences that are larger than would be expected by chance alone are noted with one, two, or three asterisks, denoting one of three significance levels (p,.05, p,.01, and p,.001). The smaller the significance level, the smaller the likelihood that the noted difference is due to chance alone. Because statistical significance does not guarantee that the result is substantively important, effect sizes are also provided (in parentheses). The effect size indicates the “practical significance” of the mean difference. Generally, an effective size of 0.20 is considered small, 0.50 moderate, and 0.80 large. A positive effect size indicates that NAU’s mean was greater. A negative size indicates that NAU lags behind the comparison group. The example benchmark graph below labels these various elements.



¹ NSSE does not publish the names of the top 50% and top 10% institutions because of our commitment not to release individual school results and because of issues raised in our policy against the ranking of institutions.

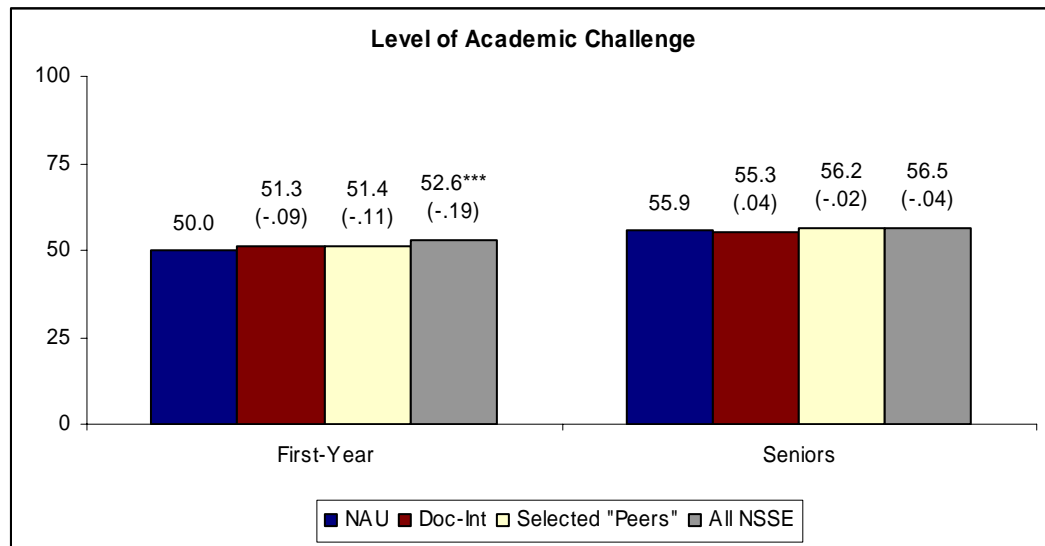
² Precision-weighted means (produced by Hierarchical Linear Modeling) were used to determine the top 50% and top 10% institutions for each benchmark, separately for first-year and senior students. Using this method, benchmark scores of institutions with relatively large standard errors are adjusted substantially toward the grand mean of all students, while those with smaller standard errors receive smaller corrections. Thus, schools with less stable data, though they may have high scores, may not be identified among the top scorers.



A. Level of Academic Challenge

Challenging intellectual and creative work is central to student learning and collegiate quality. Colleges and universities promote high levels of student achievement by emphasizing the importance of academic effort and setting high expectations for student performance.

For both the first-year and senior respondents, NAU performed the same when compared to other doctoral intensive universities, a group of selected peer institutions, and all NSSE participants. For first-year respondents, NAU scored statistically significantly lower than the All NSSE national norm group, but the effect size representing substantive significance was relatively small (-.19).



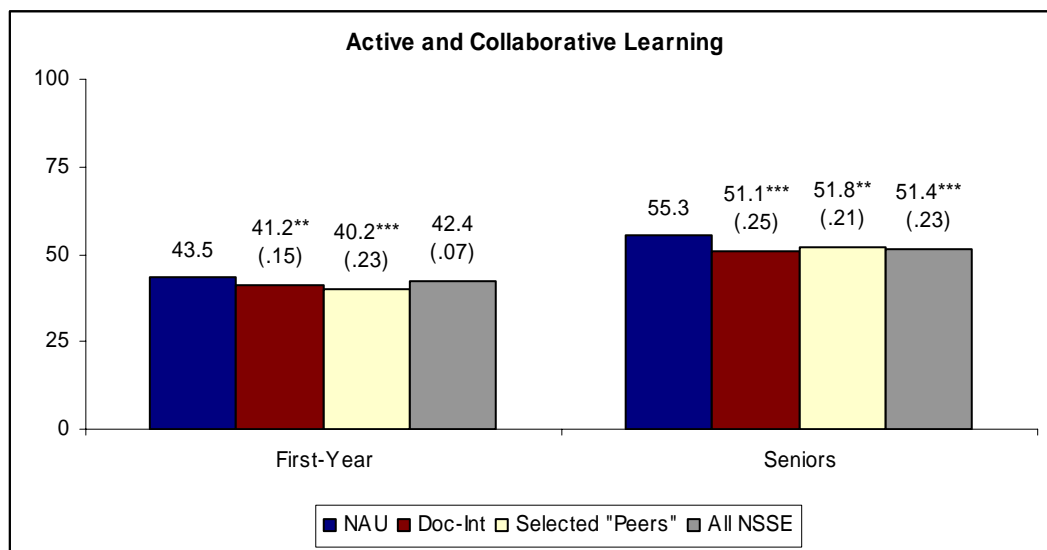
The individual items used in creating this benchmark are summarized below:

- Preparing for class (studying, reading, writing, rehearsing, etc. related to academic program)
- Number of assigned textbooks, books, or book-length packs of course readings
- Number of written papers or reports of 20 pages or more; number of written papers or reports of between 5 and 19 pages; and number of written papers or reports of fewer than 5 pages
- Coursework emphasizing analysis of the basic elements of an idea, experience or theory
- Coursework emphasizing synthesis and organizing of ideas, information, or experiences into new, more complex interpretations and relationships
- Coursework emphasizing the making of judgments about the value of information, arguments, or methods
- Coursework emphasizing application of theories or concepts to practical problems or in new situations
- Working harder than you thought you could to meet an instructor's standards or expectations
- Campus environment emphasizing time studying and on academic work

B. Active and Collaborative Learning

Students learn more when they are intensely involved in their education and asked to think about what they are learning in different settings. Collaborating with others in solving problems or mastering difficult material prepares students for the unscripted problems they will encounter daily during and after college.

Compared to other doctoral intensive universities, the group of selected “peer” institutions, and all participating NSSE institutions, NAU scored well on the Active and Collaborative Learning benchmark. First-year students at NAU scored significantly higher in Active and Collaborative Learning than students at other doctoral intensive institutions and the group of selected appears. Compared to other doctoral intensive institutions, the peer group, and all participating NSSE institutions, NAU’s seniors scored significantly higher on this benchmark.



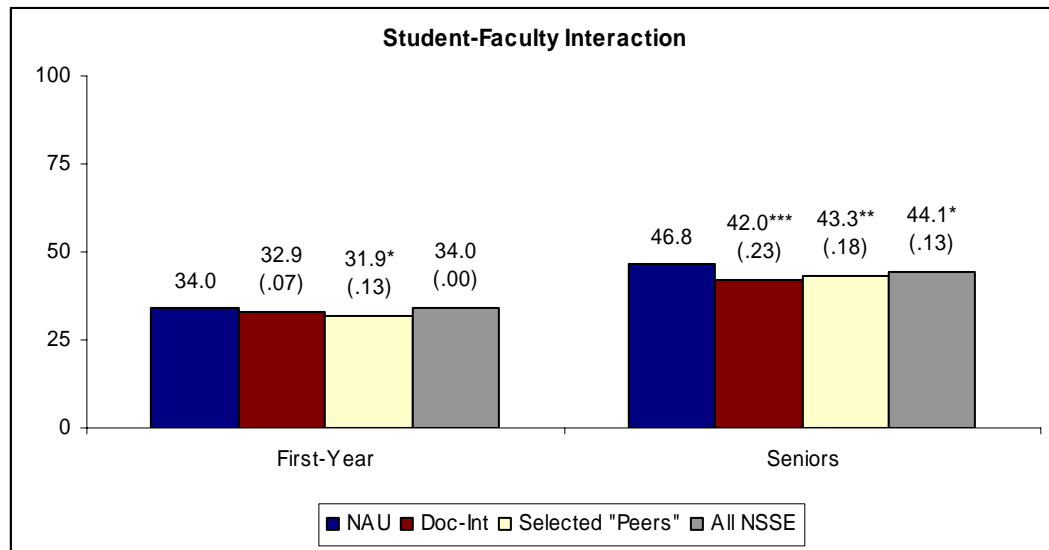
The individual items used in creating this benchmark are summarized below:

- Asked questions in class or contributed to class discussions
- Made a class presentation
- Worked with other students on projects during class
- Worked with classmates outside of class to prepare class assignments
- Tutored or taught other students
- Participated in a community-based project as part of a regular course
- Discussed ideas from your readings or classes with others outside of class (students, family members, co-workers, etc.)

C. Student-Faculty Interaction

Students learn firsthand how experts think about and solve practical problems by interacting with faculty members inside and outside the classroom. As a result, their teachers become role models, mentors, and guides for continuous, life-long learning.

Student satisfaction with the quality and availability of faculty is consistently rated very high in a variety of NAU surveys, including the Sophomore, Graduating Senior, and Alumni surveys. Faculty also rate their interaction and availability to students very high as evidenced in the most recent administration of the Higher Education Research Institute's Faculty Survey. NAU's first-year students scored similar to the three comparison groups for the benchmark Student-Faculty interaction. Seniors at NAU scored significantly higher than all three comparison groups on this benchmark.



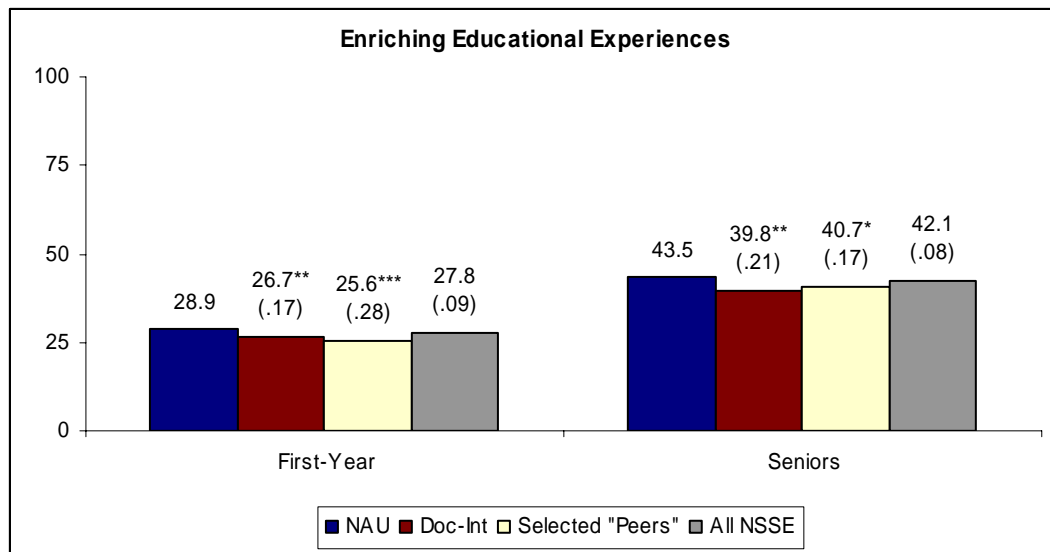
The individual items used in creating this benchmark are summarized below:

- Discussed grades or assignments with an instructor
- Talked about career plans with a faculty member or advisor
- Discussed ideas from your readings or classes with faculty members outside of class
- Worked with faculty members on activities other than coursework (committees, orientation, student-life activities, etc.)
- Received prompt feedback from faculty on your academic performance (written or oral)
- Worked with a faculty member on a research project outside of course or program requirements

D. Enriching Educational Experiences

Complementary learning opportunities in and out of class augment academic programs. Diversity experiences teach students valuable things about themselves and others. Technology facilities collaboration between peers and instructors. Internships, community service, and senior capstone courses program opportunities to integrate and apply knowledge.

The NAU community takes advantage of its location by being involved in the local community through internship and volunteer opportunities and extensive research projects with the Colorado Plateau. NAU also is committed to providing access to a quality education to all qualified students in the state of Arizona and is currently involved in various initiatives to diversity the campus community. These efforts are reflected in NAU's benchmark scores for Enriching Educational Experiences. NAU's first-year and senior students scored significantly higher on this benchmark than other doctoral intensive institutions and the group of selected peers.



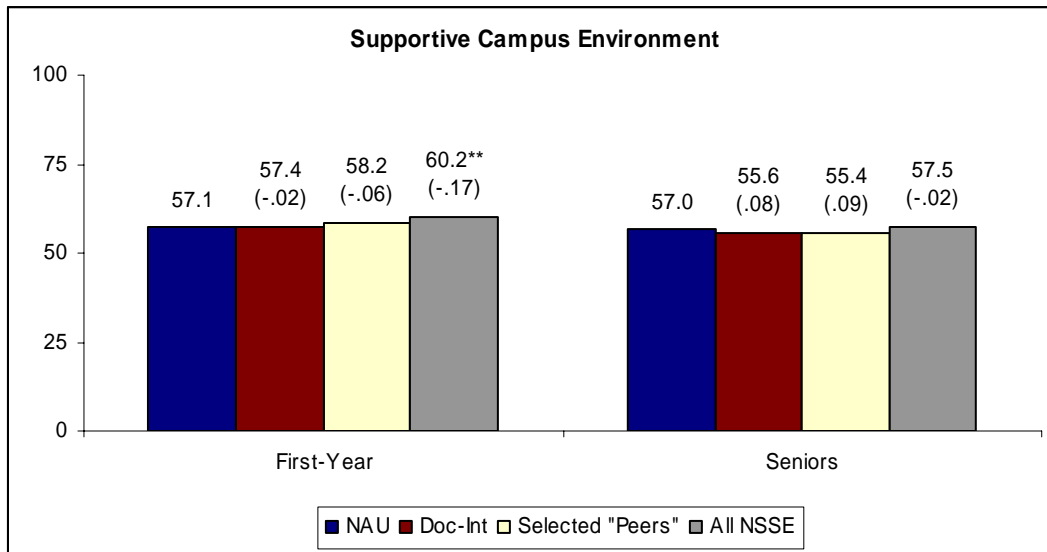
The individual items used in creating this benchmark are summarized below:

- Participating in co-curricular activities (organizations, publications, student government, sports, etc.)
- Practicum, internship, field experience, co-op experience, or clinical assignment
- Community service or volunteer work
- Foreign language coursework and study abroad
- Independent study or self-designed major
- Culminating senior experience (comprehensive exam, capstone course, thesis, project, etc.)
- Serious conversations with students of different religious beliefs, political opinions, or personal values
- Serious conversations with study of a different race or ethnicity
- Using electronic technology to discuss or complete an assignment
- Campus environment encouraging contact among students from different economic, social, and racial or ethnic backgrounds
- Participate in a learning community or some formal program where groups of students take two or more classes together

E. Supportive Campus Environment

Students perform better and are more satisfied at institutions that are committed to their success and cultivate positive working and social relations among different groups on campus. NAU provides numerous programs to help students succeed at the University including the learning assistance centers (LACs), supplemental instruction, peer tutors, living-learning communities, social programs like AfterHours, and opportunities for involvement through clubs and organizations.

According to first-year ratings of NAU, the University scored similar to first-year students at other doctoral intensive universities and the selection of peer institutions, but scored significantly lower than all participating NSSE institutions. The senior ratings of NAU were comparable to all three comparison groups for this benchmark.



The individual items used in creating this benchmark are summarized below:

- Campus environment provides the support you need to help you succeed academically
- Campus environment helps you cope with your non-academic responsibilities (work, family, etc.)
- Campus environment provides the support you need to thrive socially
- Quality of relationships with other students
- Quality of relationships with faculty members
- Quality of relationships with administrative personnel and offices

Section 2: Benchmarks for All Years of NAU's Participation in the NSSE

Northern Arizona University has participated in the National Survey of Student Engagement four times – 2002, 2003, 2005 and 2007. It is anticipated that the University will continue to participate in this national survey every other year. In comparing benchmark results from year to year it is important to keep in mind that drawing a random sample from a population results in a certain amount of sampling error – an estimate of the degree to which the characteristics of the sample do not match those of the population. Smaller samples relative to the size of the population risk larger sampling errors. Thus, relatively small benchmark differences could be attributed to random sampling fluctuation. As such, minor fluctuations between years are likely not indicative of substantive changes but rather are the result of sampling.

The mean values for first-year (FY) students from NAU on the four benchmarks³ that are available for trend analysis are all relatively consistent with no major departures from year to year or any notable increases or decreases in three of the four benchmark values from 2002 to 2007. Notable is an improvement in NAU's benchmark score for Supportive Campus Environment as evaluated by first-year respondents from 2002 to 2007 (56.1 to 60.3).

The mean values for senior students (SR) from NAU on the four benchmarks are all relatively consistent with no major departures from year to year or any notable increases or decreases in the four benchmark values.

Table 1
Recalculated Benchmarks for NSSE Participation since 2002

<i>Benchmark</i>	<i>Class</i>	<i>2002</i>	<i>2003</i>	<i>2005</i>	<i>2007</i>
Level of Academic Challenge	FY	52.7	52.2	50.0	50.4
	SR	56.9	55.4	55.9	56.4
Active and Collaborative Learning	FY	42.9	44.7	43.5	42.9
	SR	52.7	49.8	55.3	52.2
Student-Faculty Interaction⁴	FY	37.7	36.0	39.7	39.6
	SR	46.4	45.8	51.6	47.5
Supportive Campus Environment	FY	56.1	58.7	57.1	60.3
	SR	53.6	55.7	57.0	56.2

³ All items in question 7 on the 2004 instrument were rescaled in 2004. The old response set (NSSE 2000-2003) was 'yes,' 'no,' or 'undecided' whereas the new (NSSE 2004-2007) response set is 'done,' 'plan to do,' 'do not plan to do,' or 'have not decided.' Analysis completed by NSSE shows that these items are not comparable across years. Therefore, it is not possible to compare the 2004-2007 Enriching Educational Experiences benchmark with prior years (2001-2003).

⁴ All items in question 7 on the current NSSE instrument were rescaled in 2004. One of these items, "Work on a research project with a faculty member outside of course or program requirements," contributes to the Student-Faculty Interaction benchmark. Therefore the Student-Faculty Interaction scores on this report do not include the 'research' item. This also means that the score on this report will not match benchmarks reported on previous year reports, or on NAU's 2007 Benchmark Comparisons report.

Appendix A: Sample and Population Characteristics

The survey sample was similar to the overall population of freshmen and seniors on most characteristics examined. Table A shows the background characteristics of the survey sample compared to the overall graduating senior population at NAU. In this survey administration, males were slightly overrepresented and Caucasian's slightly underrepresented. It is unclear how, if at all, these discrepancies in the sample population affect the overall generalizability of the study results.

Appendix B. Selected Peer Institutions

NAU's 2007 Selected Peer Institutions

This table displays the 2007 comparison institutions for Northern Arizona University.

The institutions listed below are represented in the 'Carnegie Peers' column of the Respondent Characteristics, Mean Comparisons, Frequency Distributions, and Benchmark Comparisons reports.

Institution Name	City	State
Auburn University	Auburn University	AL
Binghamton University	Binghamton	NY
Bowling Green State University	Bowling Green	OH
Brigham Young University	Provo	UT
Catholic University of America	Washington	DC
Clarkson University	Potsdam	NY
Clemson University	Clemson	SC
Florida Atlantic University	Boca Raton	FL
Florida Institute of Technology	Melbourne	FL
Fordham University	Bronx	NY
George Washington University	Washington	DC
Georgia State University	Atlanta	GA
Loyola University Chicago	Chicago	IL
Marquette University	Milwaukee	WI
Miami University-Oxford	Oxford	OH
New Mexico State University	Las Cruces	NM
North Dakota State University	Fargo	ND
Northeastern University	Boston	MA
Polytechnic University	Brooklyn	NY
Saint Louis University	St. Louis	MO
Stevens Institute of Technology	Hoboken	NJ
SUNY College of Environmental Science and Forestry	Syracuse	NY
Temple University	Philadelphia	PA
Texas Tech University	Lubbock	TX
The University of Akron	Akron	OH
The University of Alabama	Tuscaloosa	AL
The University of Texas at Arlington	Arlington	TX
The University of Texas at Dallas	Richardson	TX
The University of Texas at El Paso	El Paso	TX
University of Alabama in Huntsville	Huntsville	AL
University of Alaska Fairbanks	Fairbanks	AK
University of Arkansas	Fayetteville	AR
University of Dayton	Dayton	OH
University of Idaho	Moscow	ID
University of Louisiana at Lafayette	Lafayette	LA
University of Louisville	Louisville	KY
University of Maine	Orono	ME
University of Mississippi	University	MS
University of Missouri-Kansas City	Kansas City	MO
University of Missouri-St. Louis	St. Louis	MO
University of North Dakota	Grand Forks	ND
University of North Texas	Denton	TX
University of Rhode Island	Kingston	RI

University of Southern Mississippi	Hattiesburg	MS
University of Tulsa	Tulsa	OK
University of Wyoming	Laramie	WY
Virginia Commonwealth University	Richmond	VA
West Virginia University	Morgantown	WV
Wichita State University	Wichita	KS

The institutions listed below are represented in the 'Selected Peers' column of the Respondent Characteristics, Mean Comparisons, and Frequency Distributions reports.

Selected Peers

Institution Name	City	State
Ball State University	Muncie	IN
Bowling Green State University	Bowling Green	OH
Illinois State University	Normal	IL
The University of Texas at Arlington	Arlington	TX
University of Southern Mississippi	Hattiesburg	MS
University of Wyoming	Laramie	WY