



**NORTHERN ARIZONA UNIVERSITY**

**NORTHERN ARIZONA UNIVERSITY'S  
2007 FACULTY SURVEY OF STUDENT ENGAGEMENT  
(FSSE) RESULTS**

**Planning and Institutional Research  
Spring 2008**



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## FSSE 2007 OVERVIEW

[The Faculty Survey of Student Engagement](#) (FSSE) is a project coordinated by the National Survey of Student Engagement ([NSSE](#)) at Indiana University Bloomington. FSSE (pronounced ‘fessie’) measures faculty members’ expectations of student engagement in educational practices that are empirically linked with high levels of learning and development. The survey also collects information about how faculty members spend their time related to professorial activities and the kinds of learning experiences their institution emphasizes.

In 2007, 24,450 faculty members at 162 baccalaureate degree-granting colleges and universities nationwide responded to the FSSE. Faculty members at participating institutions were sent an invitation e-mail and asked to respond to the online survey. In 2007, institutions chose between two survey options (“course-based” or “typical student” questions). Of the 2007 participating institutions, 62 percent (N=101) administered course-based questions to their faculties and 38 percent (N=61) administered typical student questions.

Nearly all (N=150) of these institutions also administered NSSE to their students in 2007; 12 used NSSE in 2006. Having recent data from NSSE allows participating schools to examine how faculty members and students respond to similar questions. Campuses receive a list of [participating institutions](#) along with the electronic copies of their reports and data files.

Northern Arizona University (NAU) uses the FSSE results to identify areas of institutional strength as well as aspects of the undergraduate experience that may warrant attention. This information is intended to be a catalyst for productive discussions related to teaching, learning, and the quality of students’ educational experiences while at NAU.

## Northern Arizona University’s Administration of the FSSE

### Methods and Analysis

The FSSE web survey was sent to all Mountain Campus faculty that taught in the 2007 academic year (N=1101). NAU administered the “[typical student](#)” questions. The Typical Student option of the FSSE survey asks faculty members to respond based on a typical first-year or senior student they teach across all of their courses. Five hundred and thirty (530) NAU faculty members participated in the online survey.

One way to gauge the representativeness of the 530 faculty members that did participate in the online survey is through sampling error, an estimate of the margin by which the “true” score for NAU on a given item could differ from the reported score for one or more reasons, such as differences in one or more important characteristics between the sample and the populations. For example, if 60 percent reply “very often” to a particular item and the sampling error is +/- 3



percent, there is a 95 percent chance that the population value is between 57 percent and 63 percent. The sampling error for NAU is 3.1 percent for the 2007 FSSE administration. It should be noted that the majority of the following analysis is completed on approximately 400 NAU faculty respondents as there was considerable attrition for the survey. This yields a sampling error of 3.9 percent.

This report focuses on two comparisons: NAU faculty results are compared to (1) the [national results](#) compiled using data from all participating FSSE institutions and (2) NAU student responses obtained from NAU’s NSSE administration, also completed 2007. Having recent data from NSSE allows NAU to examine how faculty members and students respond to similar questions. The analysis in this report is based in large part on SPSS syntax and national FSSE results as obtained from the FSSE website at: [http://fsse.iub.edu/html/FSSE\\_selected\\_results.cfm](http://fsse.iub.edu/html/FSSE_selected_results.cfm)

## Protecting Respondent Anonymity

*Protecting respondent anonymity is critical to ensure that faculty members answer the survey as honestly as possible.* The FSSE project takes several measures to ensure the anonymity of those who responded to the survey. For example:

- Institution data files *do not* include faculty members’ responses to demographic questions such as race/ethnicity, gender, age, number of years as a faculty member, appointment status, rank, and tenure status.
- To mask faculty members’ particular disciplines, FSSE has collapsed more than 80 disciplines into nine categories (see below table and Appendix B). Because a faculty members’ discipline has been collapsed into one of the below categories, college and discipline level analysis based upon NAU assignments are not possible.

### **Disciplinary area for FSSE analysis (not an NAU designation):**

Arts and Humanities
Biological science
Business
Education
Engineering
Physical science
Professional
Social science
Other



## Summary of Key Results

The results from this survey support the general finding across most institutional surveys that overall NAU faculty members and students are extremely similar to students and faculty nationwide. The general perception, whether positive or negative, that somehow NAU faculty and students are significantly different is not supported by this data. This report provides results in three broad areas: faculty time, teaching and learning, and comparison to student results (FSSE/NSSE comparisons):

### Faculty time:

Across all disciplines at NAU, full-time faculty respondents devote about 57 percent of their time to teaching-related activities (e.g. time in class, grading), 17 percent of their time to research and scholarly activities, and 26 percent of their time to other activities (e.g., advising, service). These NAU specific results closely mirror national results from the FSSE and the National Study of Postsecondary Faculty.

The average faculty member at NAU reports spending 40 percent of his or her class time lecturing, 15 percent on small group work, and 12 percent on experiential activities such as labs and field work. The remainder of his or her time is spent on a variety of other activities (e.g., instructor-led discussions, student presentations). The overall averages for all disciplines mirror the FSSE national norms exactly.

### Teaching and learning:

In 2007, the FSSE survey asked faculty members to select an undergraduate course they are teaching or have taught during the current academic year, and respond to items based on how inclusive they felt his or her course was of diversity related issues and teaching and learning practices. At NAU, overall one in five faculty members indicated that their selected course section fulfilled a diversity requirement. Overall, faculty respondents at NAU were nearly twice as likely to indicate that their course section fulfilled a diversity requirement when compared to the national FSSE results (19 versus 10 percent).

Emphasis on [Deep Learning](#) is a combination of three sub-scales (higher-order learning, integrative learning, and reflective learning) that measures the extent to which a particular course taught by a faculty member emphasized activities that promote higher level thinking, reflecting on one's own learning, and incorporating information and ideas from multiple sources into one's own thinking and work. The overall NAU results on the deep learning subscales mirror the national FSSE norms almost exactly.

### FSSE/NSSE comparisons:

On average, NAU faculty members expect a typical student across all their courses to spend nearly seven hours per week preparing for class (same as the national FSSE mean), whereas students report spending half that amount of time (3.4 hours per week), again the same as the



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NSSE mean.

Faculty members and student respondents were asked about expectations / experiences in preparing class work. Less than one-fifth of faculty who teach first-year students believe the typical student they teach frequently prepares two or more drafts of a paper before turning it in, whereas more than half of first-year students who responded to the same question on NSSE claim they do. A similar gap is found among the other two classroom practices: creating a paper or project that integrates ideas from various sources and working with classmates outside of class to prepare an assignment. These NAU specific results are nearly identical to the national FSSE/NSSE results.



## Results

### Faculty Time

#### Time spent on teaching, research, & other activities

Across all disciplines at NAU, full-time faculty respondents devote about 57 percent of their time to teaching-related activities (e.g. time in class, grading), 17 percent of their time to research and scholarly activities, and 26 percent of their time to other activities (e.g., advising, service). The NAU specific results shown in the below table (Table 1) closely mirror national results from the FSSE and the National Study of Postsecondary Faculty.

**Table 1. Full-time faculty time spent on teaching, research and other activities by disciplinary area**

Disciplinary Area	Teaching			Research			Other		
	NAU	FSSE	Natl	NAU	FSSE	Natl	NAU	FSSE	Natl
<b>Arts and Humanities</b> (NAU N=108)	59	64	64	19	14	17	22	23	19
<b>Biological science</b> (NAU N=40)	44	54	39	27	21	44	29	25	17
<b>Business</b> (NAU N=26)	63	57	60	9	16	22	29	27	19
<b>Educational</b> (NAU N=28)	59	57	58	12	11	15	29	41	27
<b>Engineering</b> (NAU N=18)	50	50	54	20	25	28	31	25	18
<b>Physical science</b> (NAU N=49)	61	60	58	18	17	26	21	22	16
<b>Professional</b> (NAU N=27)	57	57	47	10	12	21	32	41	32
<b>Social science</b> (NAU N=62)	58	55	54	16	19	27	26	26	20
<b>Other</b> (NAU N=41)	55	56	54	14	15	20	31	29	27
<i>All Disciplines</i> (NAU N=399)	<b>57</b>	<b>58</b>	<b>54</b>	<b>17</b>	<b>16</b>	<b>24</b>	<b>26</b>	<b>26</b>	<b>23</b>

Source: National percentages are based on the 2004 National Study of Postsecondary Faculty.

Notes: National percentages are based on faculty at U.S. public and private four-year institutions.

NAU specific results:

- On average, faculty members from across the disciplines are spending between 44 percent (biological science) and 63 percent (business) of their time on teaching.
- Biological/life science faculty members spend nearly a quarter of their time on research/scholarly activity (27 percent) while business and educational faculty spend considerably less time (9 percent and 12 percent, respectively).



## Faculty Time

### Class time allocated to teaching activities

The average faculty member at NAU reports spending 40 percent of his or her class time lecturing, 15 percent on small group work, and 12 percent on experiential activities such as labs and field work. The remainder of his or her time is spent on a variety of other activities (e.g., instructor-led discussions, student presentations). The overall averages for all disciplines mirror the FSSE national norms exactly.

**Table 2. Class time allocated to teaching activities by disciplinary area**

Disciplinary Area	Small Group Work		Lecturing		Experiential Activities	
	NAU	FSSE	NAU	FSSE	NAU	FSSE
Arts and Humanities	17	16	32	4	8	8
Biological science	18	12	44	55	27	24
Business	11	14	48	42	1	4
Education	22	25	21	23	8	16
Engineering	17	13	56	57	24	16
Physical science	10	11	63	57	10	12
Professional	17	15	21	39	28	19
Social science	10	11	45	47	7	6
Other	14	14	36	41	11	15
<i>All Disciplines</i>	<i>15</i>	<i>15</i>	<i>40</i>	<i>40</i>	<i>12</i>	<i>12</i>

- Across disciplinary areas at NAU, physical science faculty report spending the greatest percentage of time (63 percent) lecturing while education and professional faculty spend the smallest percentage of time (21 percent).
- Biological science, engineering and professional faculty devote approximately one-quarter of their class time to experiential work (27, 24 and 28 percent, respectively), while business faculty allocated the smallest percentage of class time (1 percent).



## Other Teaching and Learning Results

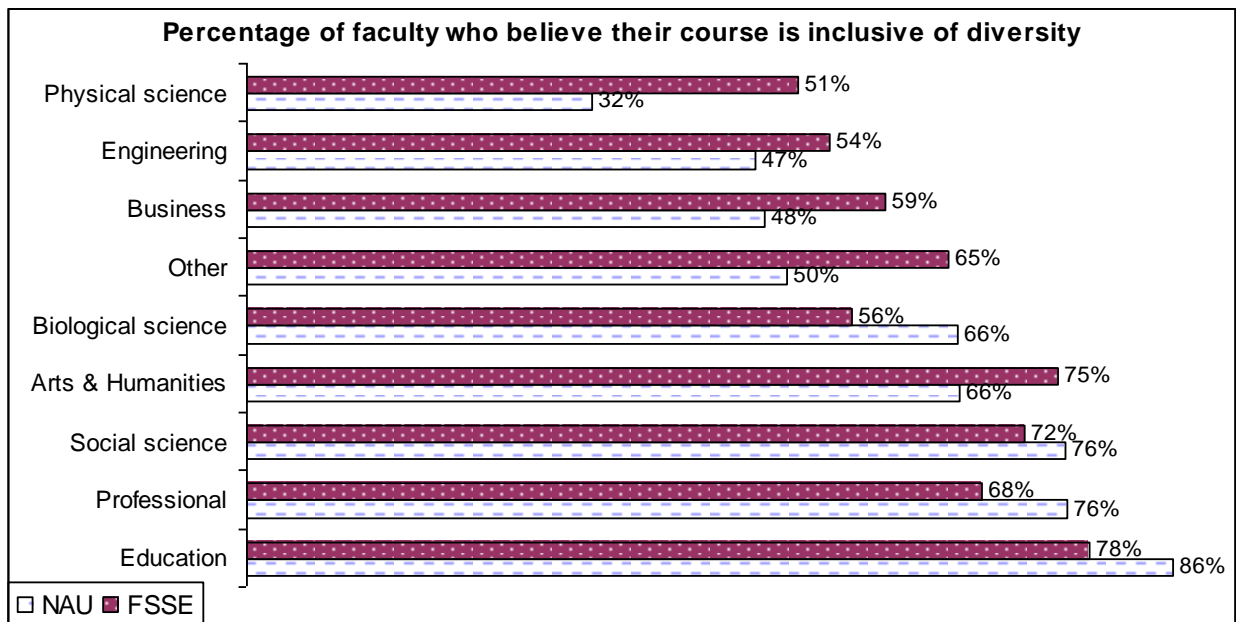
### Inclusiveness of diversity issues in teaching and learning practices

In 2007, the FSSE survey asked faculty members to select an undergraduate course they are teaching or have taught during the current academic year, and respond to items based on how inclusive they felt his or her course was of diversity related issues and teaching and learning practices. At NAU, overall one in five faculty members indicated that their selected course section fulfilled a diversity requirement. The same was true for less than one in ten faculty members in biological and physical sciences, professional engineering, and business. Overall, faculty respondents at NAU were nearly twice as likely to indicate that their course section fulfilled a diversity requirement when compared to the national FSSE results (19 versus 10 percent).

**Table 3. Percentage of faculty whose selected course section fulfills a diversity requirement**

Disciplinary Area	NAU	FSSE
Social science	31%	21%
Arts & Humanities	29%	19%
Education	27%	25%
Other	20%	15%
Biological science	8%	10%
Physical science	8%	13%
Professional	7%	19%
Engineering	6%	14%
Business	4%	13%
<i>All Disciplines</i>	<b>19%</b>	<b>10%</b>

Moreover, faculty members were asked to consider diversity in all aspects of their course (e.g. purpose, content, teaching methods, assignments, students). At least 75 percent of faculty members who taught in social science, professional and education believe their course was inclusive of diversity issues, however, percentages were noticeably lower among faculty who taught in physical science (32 percent).





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Faculty members were also asked about the inclusiveness of diversity in their institutions' undergraduate curriculum. The below table illustrates an interesting trend by disciplinary area.

In academic disciplines where an overwhelming majority of the faculty members believe their courses are inclusive of diversity, like education, professional fields and social science, the data suggests a smaller percentages of this group reports their undergraduate curriculum as also inclusive. In comparison the opposite relationship holds true in disciplines like engineering and physical science. This same inverse relationship is seen in the national FSSE data.

**Table 4. Percentage of faculty who believe their course and undergraduate curriculum are inclusive of diversity**

Disciplinary Area	NAU		FSSE	
	Selected Course	Undergrad curriculum	Selected Course	Undergrad curriculum
Arts & Humanities	66	64	75	59
Biological science	66	63	56	59
Business	48	54	59	59
Education	86	59	78	62
Engineering	47	71	54	59
Physical science	32	74	51	61
Professional	76	66	68	65
Social science	76	66	72	55
Other	50	42	65	58



## Other Teaching and Learning Results

### Differences in emphasis on deep approaches to learning by academic discipline

Emphasis on [Deep Learning](#) is a combination of three sub-scales (higher-order learning, integrative learning, and reflective learning) that measures the extent to which a particular course taught by a faculty member emphasized activities that promote higher level thinking, reflecting on one’s own learning, and incorporating information and ideas from multiple sources into one’s own thinking and work.

FSSE researchers have found an effect of academic discipline on faculty members emphasizes of deep learning. Faculty members tend to emphasize deep learning and its sub-scales at various degrees across academic discipline. Specifically, faculty who teach courses in the arts and humanities emphasize deep learning more often than their colleagues in the physical sciences. However, it is important to point out that many faculty members in each academic discipline frequently emphasize deep approaches to learning.

For the Typical Student survey option faculty members are asked to report their perception of student behaviors on the deep learning. The overall NAU results on the deep learning subscales mirror the national FSSE norms almost exactly.

**Table 5. Differences in emphasis on deep approaches to learning by academic discipline**

Disciplinary Area	Reflective Learning		Integrative Learning		Higher Order Learning		Deep Learning	
	NAU	FSSE	NAU	FSSE	NAU	FSSE	NAU	FSSE
Arts & Humanities	2.5	2.5	2.4	2.5	2.8	2.8	2.6	2.6
Biological science	2.3	2.2	2.3	2.1	2.5	2.5	2.3	2.3
Business	2.2	2.3	2.2	2.3	2.5	2.8	2.3	2.5
Education	2.5	2.6	2.6	2.6	2.8	2.9	2.6	2.7
Engineering	2.1	2.1	2.1	2.2	2.9	2.9	2.4	2.4
Physical science	2.0	2.0	1.8	1.8	2.5	2.5	2.1	2.1
Professional	2.8	2.6	2.8	2.6	3.2	3.0	2.9	2.7
Social science	2.7	2.5	2.5	2.5	2.6	2.7	2.6	2.6
Other	2.4	2.3	2.3	2.3	2.5	2.7	2.4	2.4
<i>All Disciplines</i>	<b>2.4</b>	<b>2.4</b>	<b>2.3</b>	<b>2.4</b>	<b>2.7</b>	<b>2.8</b>	<b>2.5</b>	<b>2.5</b>



## Comparing FSSE and NSSE Results

### Student/Faculty expectations: Hours per week students spend preparing for class

The FSSE survey asks faculty members how much time students are expected to spend preparing for their selected course and how much they believe students actually spend preparing for their course. In comparison, the NSSE survey asks students to report how much time they spend preparing for a class.

The NSSE and FSSE results reveal a considerable gap in what faculty members expect students to spend and how much time students actually report spending preparing for class. On average, NAU faculty members expect a typical student across all their courses to spend nearly seven hours per week preparing for class (same as the national FSSE mean), whereas students report spending half that amount of time (3.4 hours per week). Gaps fluctuate by disciplinary area. The largest gaps between faculty member expectations and student reported hours of class preparation occurs in biological science, engineering and other (4.7 hours, 4.3 hours, and 4.0 hours, respectively).

**Table 6. Average hours per week students spend preparing for class by discipline**

Disciplinary Area	NAU			FSSE		
	Faculty Expectations	Faculty Estimated of Actual	Student Reported	Faculty Expectations	Faculty Estimated of Actual	Student Reported
Arts and Humanities	6.7	3.5	3.5	7.3	3.8	3.6
Biological science	7.9	3.7	3.2	7.5	3.7	3.9
Business	7.1	3.2	3.3	6.9	3.7	3.0
Education	6.0	3.0	3.2	5.9	3.6	3.4
Engineering	7.8	4.4	3.5	8.2	5.5	4.1
Physical science	7.1	3.4	3.8	7.9	4.1	4.0
Professional	6.0	3.8	3.9	6.7	3.9	3.8
Social science	6.7	3.8	3.2	7.1	3.7	3.3
Other	7.4	3.8	3.4	6.5	3.4	3.1
<i>All Disciplines</i>	<b>6.9</b>	<b>3.6</b>	<b>3.4</b>	<b>7.1</b>	<b>3.8</b>	<b>3.4</b>

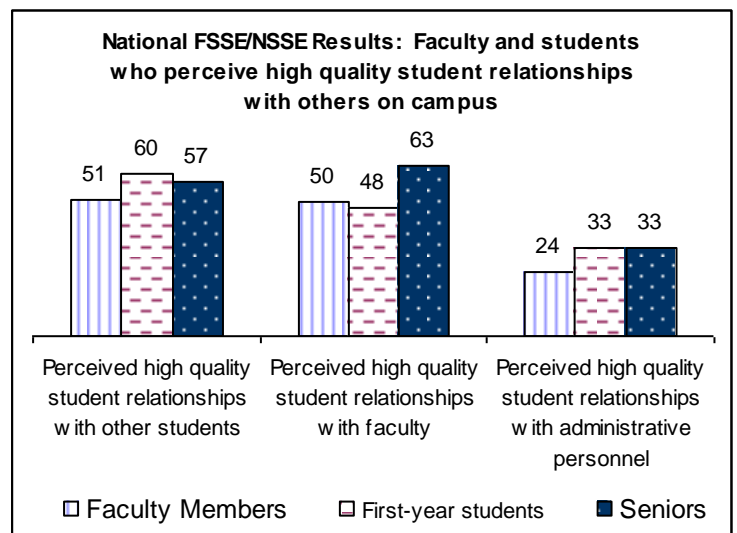
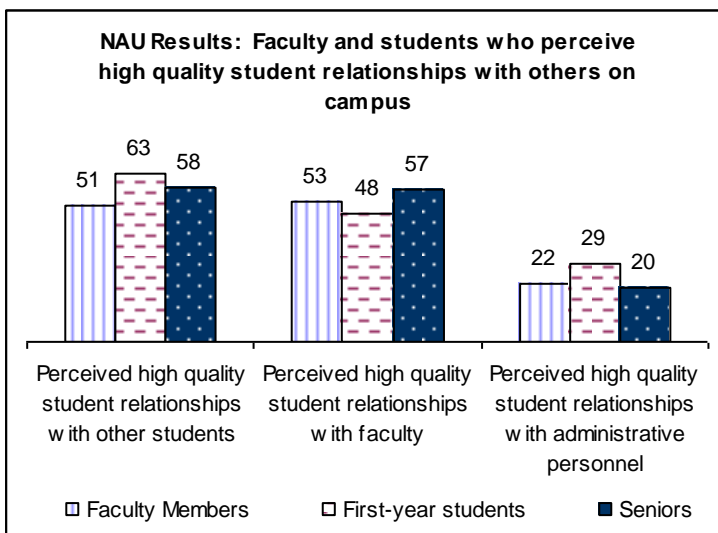
Disciplinary area represent students' reported major and courses taught by faculty member. Results in this table are based on student and faculty responses at institutions that used NSSE and the Typical Student FSSE survey option.



## Comparing FSSE and NSSE Results

### Campus Environment: Perceived high quality student relationships with others on campus

Faculty were asked to rate the quality of relationships they believe students have with other faculty members, students on campus, and administrative personnel. The same question is asked of first-year and seniors students on the NSSE. Below is a comparison of the percentage of faculty, first-year, and senior students who perceive relatively high quality student relationships with others on campus.



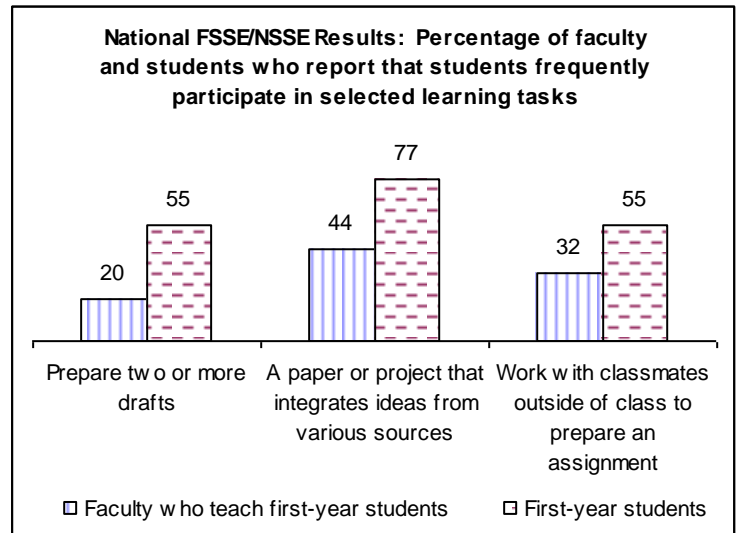
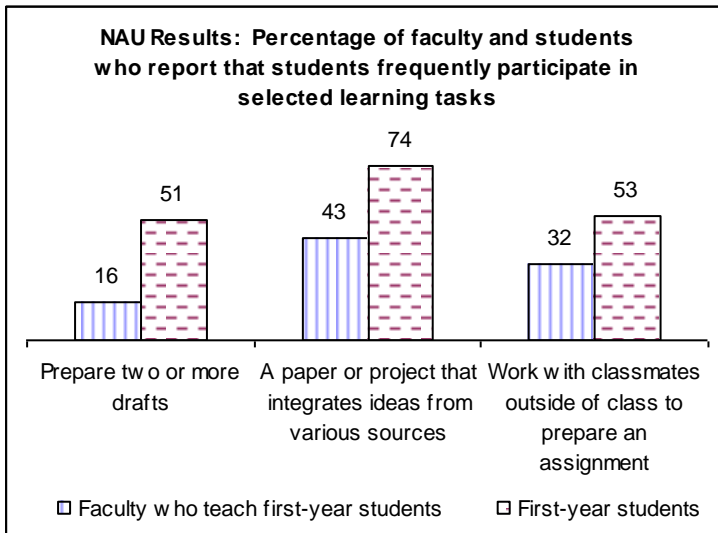
- Generally, NAU’s first-year students have the most positive perception of people on campus. More than 60 percent of first-year students perceive that students have quality relationships with other students. Although first-year students tend to have similar perceptions as their senior counterparts when considering administrative personnel, a lower percentage (48 percent versus 57 percent) rate student relationships with faculty members on campus high in quality.
- Similar to the national FSSE/NSSE results, the majority of faculty and students have low perceptions of administrative personnel. Less than one-third of students perceive high quality student relationships with campus administrators, and less than one in four faculty members tend to believe the same.



## Comparing FSSE and NSSE Results

### Classroom Practices: Faculty values and student experiences

The Typical Student option of the FSSE survey asks faculty members to respond based on a typical first-year or senior student they teach across all of their courses. Although not course specific, the typical student versions asks faculty how often they believe students in their courses participate in the below classroom practices. Similarly, NSSE asks students to indicate how frequently they participate in the same activities.



The above illustration suggests that less than one-fifth of faculty who teach first-year students believe the typical student they teach frequently prepares two or more drafts of a paper before turning it in, whereas more than half of first-year students who responded to the same question on NSSE claim they do. A similar gap is found among the other two classroom practices: creating a paper or project that integrates ideas from various sources and working with classmates outside of class to prepare an assignment. These NAU specific results are nearly identical to the national FSSE/NSSE results.



## Appendix A. FSSE 2007 Respondent Characteristics

<b>Response rate</b>	48%	
<b>Number of invited faculty members</b>	1101	
<b>Total number of respondents</b>	530	(245 teach mostly first-year students, 212 teach mostly seniors, and 41 teach other students, and 32 missing class rank of students taught.)

	<b>Faculty who teach First-year students</b>	<b>Faculty who teach Seniors</b>	<b>Faculty who teach Other students</b>	<b>Total</b>
<b>Discipline of appointment</b>				
Arts and humanities	34%	19%	12%	26%
Biological science	6%	12%	3%	9%
Business	4%	10%	9%	7%
Education	3%	15%	9%	9%
Engineering	4%	4%	6%	4%
Physical science	16%	7%	12%	12%
Professional	5%	5%	21%	6%
Social science	14%	16%	15%	15%
Other	14%	11%	12%	13%
<b>Rank</b>				
Professor	17%	35%	36%	27%
Associate Professor	16%	27%	11%	21%
Assistant Professor	12%	22%	28%	18%
Instructor	17%	5%	6%	11%
Lecturer	11%	5%	6%	8%
Graduate Teaching Assistant	17%	3%	8%	10%
Other	9%	3%	6%	6%
<b>Tenure status</b>				
Tenured	34%	59%	51%	47%
On tenure track but not tenured	10%	17%	20%	14%
Not on tenure track	51%	23%	29%	37%
No tenure system	5%	1%	0%	3%
<b>Highest degree earned</b>				
First professional degree	2%	2%	3%	2%
Doctoral degree	42%	75%	64%	58%
Master's degree	34%	18%	22%	26%
Bachelor's degree	18%	3%	8%	11%
Associate's degree	0%	0%	3%	0%
Other	4%	2%	0%	3%
<b>Full-time/Part Time</b>				
Full-time	64%	92%	89%	78%
Part-time	36%	8%	11%	22%



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	Faculty who teach First-year students	Faculty who teach Seniors	Faculty who teach Other students	Total
<b>Number of courses taught 06-07<sup>1</sup></b>				
None	0%	0%	3%	0%
1-3	31%	19%	29%	26%
4-6	53%	57%	42%	54%
7 or more	16%	24%	26%	20%
<b>Years of teaching experience</b>				
4 or less	27%	13%	17%	20%
5-9	19%	17%	11%	18%
10-14	15%	16%	20%	16%
15 or more	39%	54%	51%	47%
<b>Age</b>				
34 or younger	26%	6%	9%	16%
35-44	22%	24%	15%	22%
45-54	25%	34%	52%	31%
Older than 54	28%	36%	24%	31%
<b>Gender</b>				
Male	50%	58%	31%	52%
Female	50%	42%	69%	48%
<b>Race / Ethnicity</b>				
American Indian/ Native Amer.	5%	1%	3%	3%
Asian/ Asian Amer./ Pacific Isl.	3%	1%	6%	3%
Black or African American	1%	2%	0%	1%
White (non-Hispanic)	69%	76%	69%	72%
Mexican or Mexican American	2%	2%	0%	2%
Puerto Rican	0%	0%	0%	0%
Other Hispanic or Latino	1%	3%	0%	2%
Multiracial	3%	3%	3%	3%
Other	3%	2%	0%	2%
Prefer not to respond	12%	11%	19%	12%
<b>Citizenship status</b>				
U.S. citizen, native	89%	91%	86%	90%
U.S. citizen, naturalized	4%	4%	6%	4%
Permanent resident of the U.S. (immigrant visa)	3%	4%	6%	4%
Temporary resident of the U.S. (non-immigrant visa)	4%	1%	3%	3%

1: Includes 2006-2007 undergraduate and graduate courses, taught or scheduled, as reported by faculty respondents.



## Appendix B. FSSE Categorization of Disciplines for Analysis

### **Arts and Humanities**

Art, fine and applied  
English (language and literature)  
History  
Journalism  
Language and literature (except English)  
Music  
Philosophy  
Speech  
Theater or drama  
Theology or religion  
Other arts & humanities

### **Physical Science**

Astronomy  
Atmospheric science (including meteorology)  
Chemistry  
Earth science (including geology)  
Mathematics  
Physics  
Statistics  
Other physical science

### **Biological Sciences**

Biology (general)  
Biochemistry or biophysics  
Botany  
Environmental science  
Marine (life) science  
Microbiology or bacteriology  
Zoology  
Other biological science

### **Professional**

Architecture  
Urban planning  
Health technology (medical, dental, laboratory)  
Law  
Library/archival science  
Medicine  
Dentistry  
Veterinarian  
Nursing  
Pharmacy  
Allied health/other medical  
Therapy (occupational, physical, speech)  
Other professional

### **Business**

Accounting  
Business administration (general)  
Finance  
International business  
Marketing  
Management  
Other business

### **Social Science**

Anthropology  
Economics  
Ethnic studies  
Geography  
Political science (including government, international relations)  
Psychology  
Social work  
Sociology  
Gender studies  
Other social science

### **Education**

Business education  
Elementary/middle school education  
Music or art education  
Physical education or recreation  
Secondary education  
Special education  
Other education

### **Engineering**

Aero-/aeronautical engineering  
Civil engineering  
Chemical engineering  
Electrical or electronic engineering  
Industrial engineering  
Materials engineering  
Mechanical engineering  
General/other engineering

### **Other**

Agriculture  
Communications  
Computer science  
Family Studies  
Natural resources and conservation  
Kinesiology  
Criminal justice  
Military science  
Parks, recreation, leisure studies, sports management  
Public administration  
Other field  
Technical/vocation