NAU Strategic Plan
Key Performance Indicators

UPDATED: May 2014

EXECUTIVE SUMMARY

This Key Performance Indicators (KPI) document summarizes indicators and trends relevant to the university strategic goals set forward through an extensive strategic planning process in 2007, with revisions in 2010 and 2013. Each goal is monitored through a set of internal measures and university system-wide Enterprise Metrics updated separately and reported throughout the year to Arizona Board of Regents. Each metric is accompanied by a color-coded arrow that indicates the direction of change since the last available data point. In instances when the statistic changed minimally the flat arrow is used as is in cases when no actual change happened. In a few cases no updated data are available.

 **Positive change**

 **Negative change**

 **No change/no meaningful change**

While this report summarizes the trends on internal measures only, it is important to note that the undergraduate enrollment on the Flagstaff campus has increased significantly (by nearly six percent) since the last report in 2013 as did the number of bachelor's degrees awarded (less dramatically but still by 1.4 percent). Further, the number of Arizona community college transfers awarded bachelor's degrees increased more than eight percent and the 4-year graduation rate for the same population improved by nearly two percent.

The university improved its performance in three key areas:

1. **Global engagement:** The number of international students went up by more than 9 percent
2. **Commitment to Native Americans:** The representation of Native American faculty as well as overall experience of Native American students have slightly improved and the ranking of the university in degrees awarded to Native Americans has gone up quite a bit.
3. **Effectiveness:** The university improved its external exposure through mass media and increased fundraising, and improved its salary market position.

On many indicators, including successful completion of classes, enrollment in experiential courses, study abroad, Native American student retention, and sustainability rating, university performance is the same as reported in 2013.

In scholarly productivity—the university's strength declined, both relative to the peers and in number of total publications published (as reported in InCites, a web-based research evaluation tool from Thomson Reuters that uses bibliographic and citation data from *Web of Science* to analyze institutional productivity and benchmark output against peers). Building research capacity is among the university's top priorities, but it is a long-term goal with results trailing investments often by many years.

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*Arrows indicate change since last year or last available data.
**New measure/no historical data available.

1. STUDENT SUCCESS: Promote high levels of student access, engagement, achievement, and affordability

Strategies:

- Improve student learning and achievement
- Strengthen teaching, mentoring, and curricular design across departments and faculty ranks
- Expand use of blended and other technology enhanced course designs to increase student achievement, conserve faculty effort, and optimize use of facilities
- Build a strong academic scaffolding of student support and guidance for achievement and degree attainment
- Recruit, retain, and support degree progress of increasingly diverse learners
- Offer affordable options for time and place-bound learners that build a highly qualified Arizona workforce
- experience to promote student learning and success
- Enrich graduate education to promote student achievement and engagement in discovery and practice
- Build a strong scaffolding of student support and guidance for achievement

Key Performance Indicators:

- 1.1 Student engagement benchmarks
- 1.2 Successful completion of classes
- 1.3 Experiential learning

1.1 Student engagement benchmarks

In comparison to Carnegie peers participating in the 2012 National Survey of Student Engagement, NAU scores slightly better in student-faculty interaction as reported by both first-year students and seniors. First-year students also rated active and collaborative learning higher than first-year students at peer institutions. Seniors rated the level of academic challenge and enriching educational experience higher. The practical significance of the differences between NAU and participating Carnegie Peers is positive, but considered small. *SOURCE: NSSE August 2012 Report*

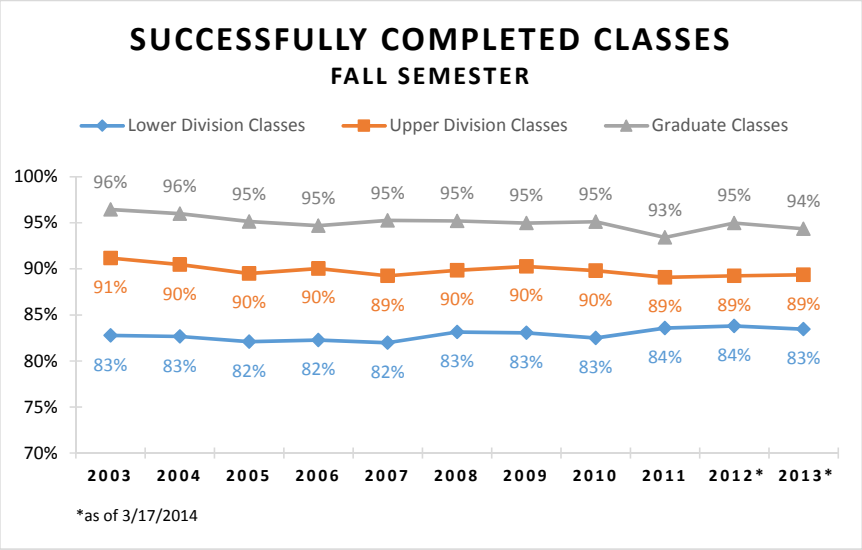
FIRST-YEAR STUDENTS	2003	2005	2007	2008	2010	2012	Carnegie Peers 2012	Effect Size
Level of Academic Challenge	52	50	50	52	53	53	54	-0.03
Active and Collaborative Learning	45	44	43	43	44	45	43	0.10
Student-Faculty Interaction		34	34	34	35	36	34	0.11
Enriching Educational Experience		29	28	28	30	29	29	0.05
Supportive Campus Environment	59	57	60	60	61	61	62	-0.06

SENIORS	2003	2005	2007	2008	2010	2012	Carnegie Peers 2012	Effect Size
Level of Academic Challenge	55	56	56	58	60	59	57	0.16
Active and Collaborative Learning	50	55	52	54	54	52	51	0.09
Student-Faculty Interaction		47	43	46	44	43	41	0.11
Enriching Educational Experience		44	42	45	42	41	39	0.10
Supportive Campus Environment	56	57	56	58	59	58	59	-0.03

**Effect size indicates the practical significance of the mean difference. It is calculated by dividing the mean difference by the pooled standard deviation. In practice, an effect size of .2 is often considered small, .5 moderate, and .8 large. A positive sign indicates that your institution's mean was greater, thus showing an affirmative result for the institution. A negative sign indicates the institution lags behind the comparison group, suggesting that the student behavior or institutional practice represented by the item may warrant attention.*

1.2 Successful completion of classes: Percentage of successfully completed student-classes (grades A, B, C, or P) in fall semester by class level.

Since fall 2003, the rate at which students successfully completed graduate or undergraduate classes have been fairly stable. Currently, lower division classes have the lowest completion rate at 83%, followed by upper division classes at 89%, and graduate classes at 94%. *SOURCE: Institutional Data*

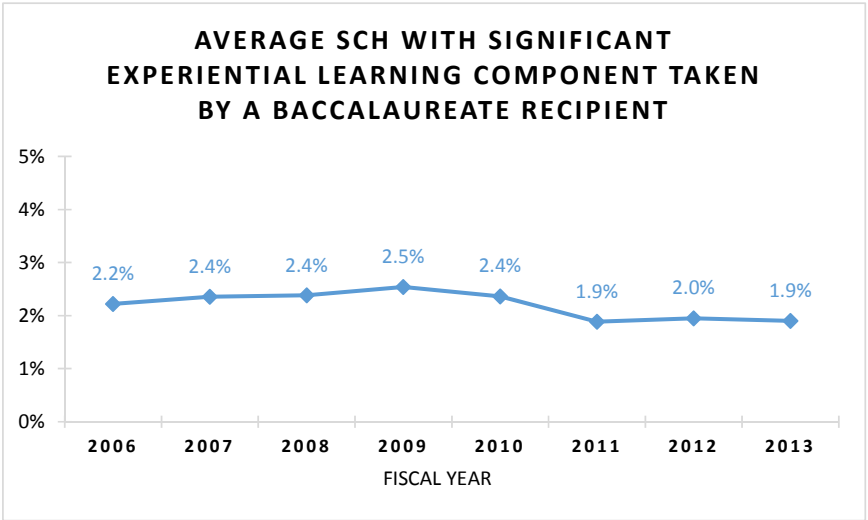


1.3 Experiential learning: Average percentage of student credit hours an NAU graduate takes in courses identified as having an experiential learning component.

The percentage of courses with significant experiential learning component taken by an NAU degree recipient varies greatly by college. As expected, students graduating from the College of Health and Human Services took significantly greater percentage of experiential learning courses than other baccalaureate degree recipients. The College of Social and Behavioral Sciences is a distant second on this measure. On average, baccalaureate degree recipients at NAU take about 1.9% of their credit hours in courses that can be classified as having a substantial experiential learning component. *SOURCE: Institutional Data*

Experiential learning is defined as credit hours in courses with the course numbers 208, 389, 408, 466, 485, 497:

- Fieldwork experience
- Cooperative education
- Internship
- Undergraduate research
- Independent study



2. NATIONALLY RECOGNIZED RESEARCH EXCELLENCE: Expand the boundaries of knowledge to improve lives

Strategies:

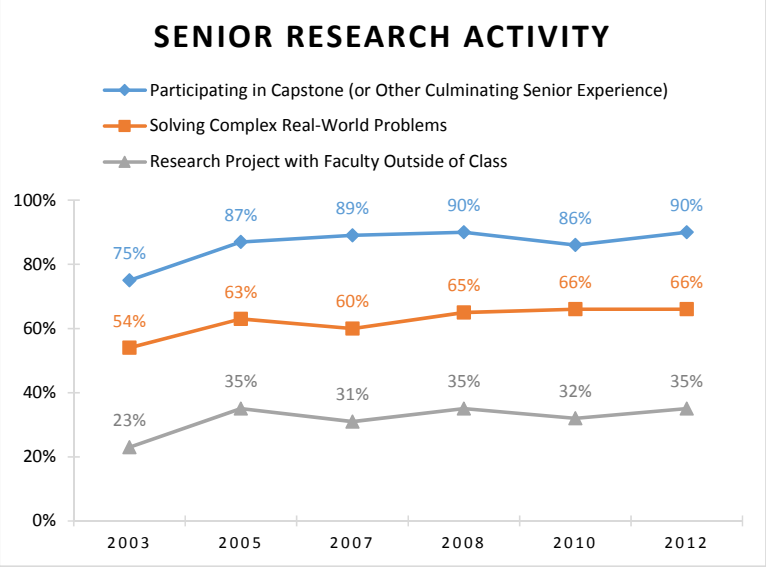
- Generate nationally recognized science, art, and scholarship
- Emphasize and reward high productivity and impact
- Provide cutting-edge training and learning opportunities to students
- Address regional and state-wide culture through a wide range of scholarly activities

Key Performance Indicators:

2.1 Undergraduate research activity
2.2 Scholarly productivity

2.1 Undergraduate research activity

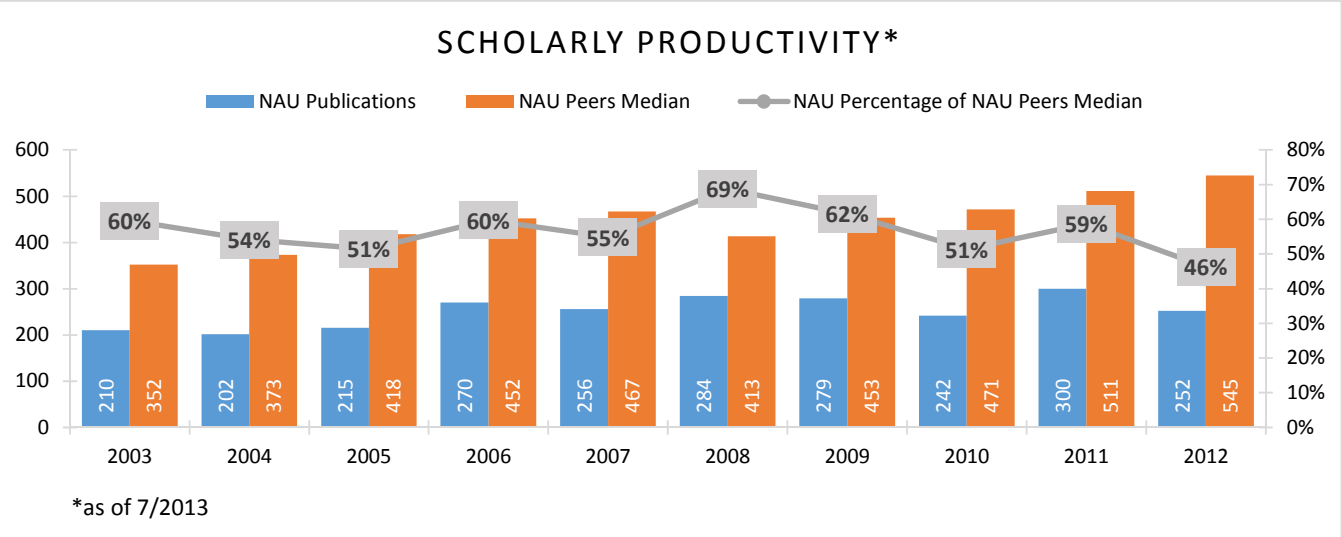
The trend data from the National Survey of Student Engagement generally show a modest increase in student involvement in research. The percentage of students reporting culminating senior experience, solving complex real-world problems, or participating in research projects with faculty outside of class increased since 2003 by 15, 12, and 12 percent respectively. *SOURCE: NSSE*



2.2 Scholarly productivity: A number of *Web of Science* documents

Annual output of scholarly activity at NAU as measured by the number of research data, books, journals, proceedings, publications and patents organized by the Web of Science has been fluctuating in the recent years. The lowest level of activity in the last ten years occurred in 2004 and the highest in 2011. Relative to the activity of our peers, NAU has been most productive in 2008 and least productive in 2012. The number of subject areas that the *Web of Science* covers (see Appendix B) increases every year, although it does not capture all scholarly activity that NAU produces. Historically, the most productive areas have been ecology, zoology, and history. *SOURCE: InCites, a web-based research evaluation tool from Thomson Reuters that uses bibliographic and citation data from Web of Science to analyze institutional productivity and benchmark output against peers.*

A *Web of Science* document is the record of an article that may be viewed in *Web of Science*, a database of records of articles from scholarly publications. Although traditionally strong in fields such as science and medicine, Thomson Reuters has increased depth in areas such as social sciences and humanities over the past year.



Top Ten Most Active Subject Areas	CUMMULATIVE TOTALS BY DECADE 1990	2000	2010	2013**
Ecology	127	361	841	979
Zoology	91	218	477	548
History	141	320	442	474
Geosciences, Multidisciplinary	51	117	310	377
Forestry	28	139	321	375
Environmental Sciences	16	83	278	350
Linguistics	19	76	217	264
Plant Sciences	31	109	222	263
Education & Educational Research	31	116	227	258
Chemistry, Multidisciplinary	24	120	219	231

Top Ten Producing Authors	1980-2013**
Keim, P	235
Whitham, TG	174
Price, PW	117
Nishikawa, KC	115
Fule, PZ	114
Hart, SC	110
Hungate, BA	95
Kolb, TE	95
Covington, WW	91
Blinn, DW	90

Top Ten Most Cited Authors	1980-2013**
Whitham, TG	8,465
Keim, P	8,263
Price, PW	5,857
Hart, SC	5,218
Covington, WW	3,420
Salt, DE	2,987
Fule, PZ	2,880
Hungate, BA	2,718
Kolb, TE	2,538
Moore, MM	2,188

***as of 12/16/2013*
Totals are cummulative since 1980

Note: Scholarly productivity includes articles, bibliographies, book reviews, corrections, discussions, editorials, items about an individual, letters, meeting abstracts, news items, notes, proceedings papers, reviews, and TV/radio reviews.

3. GLOBAL ENGAGEMENT: Advance the internationalization of the university to prepare students for global citizenship

Strategies:

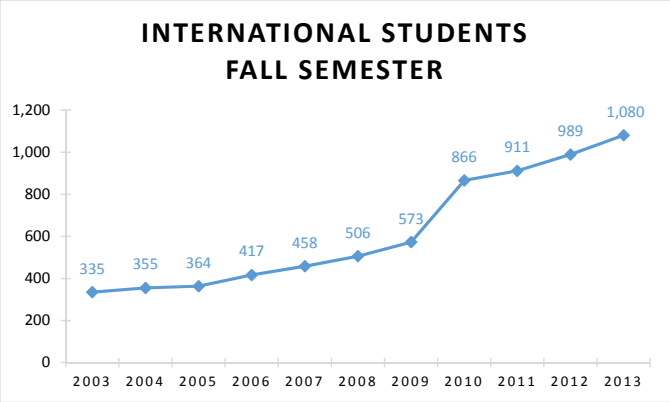
- Build upon the Global Learning Initiative to further engage faculty and academic departments in an intentional and strategic process of preparing students to become globally competent graduates
- Expand teaching and research partnerships with partner institutions worldwide
- Leverage intellectual human capital to meet the national and global demands of the 21st century

Key Performance Indicators:

3.1 International student enrollment
3.2 Study abroad

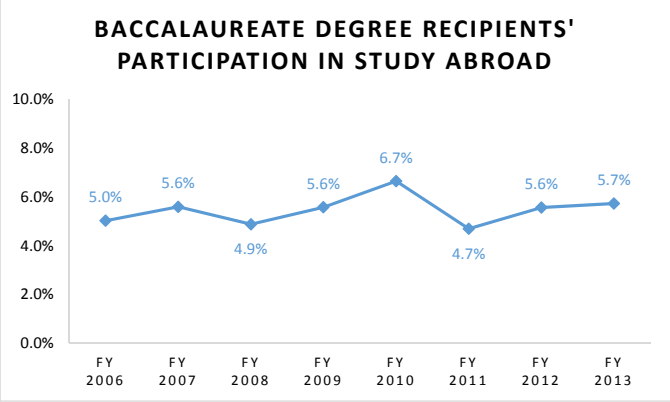
3.1 International student enrollment

International student enrollment has registered significant growth, especially in the last few years. Since 2003, enrollment has more than tripled. *SOURCE: Institutional Data*



3.2 Study abroad

The percentage of bachelor's degree recipients who participate in study abroad anytime during their career at NAU has been oscillating around 5.6% since 2006. *SOURCE: Institutional Data*



4. DIVERSITY, CIVIC ENGAGEMENT, AND COMMUNITY BUILDING: Promote issues of diversity, civility, democracy, citizenship, and community engagement and collaboration

Strategies:

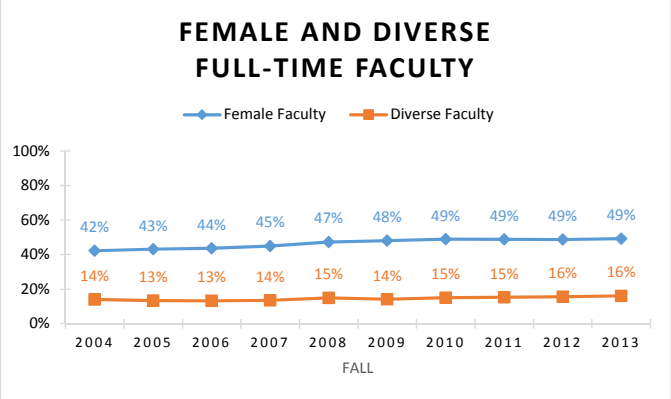
- Expand diversity of the university community
- Foster a community of inclusion and prepare students to engage in and understand the complexities of the human experiences
- Enhance the university as a regional economic development driver and partner
- Foster programs linked to civic engagement
- Promote community engagement

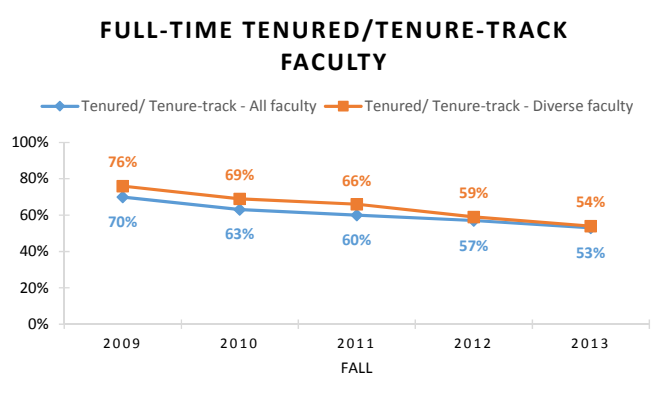
Key Performance Indicators:

⟺ 4.1 Diverse faculty
⟺ 4.2 Diverse staff
🎓 4.3 Culture of inclusion
** 4.4 Employees' membership on boards and commissions

4.1 Diverse faculty

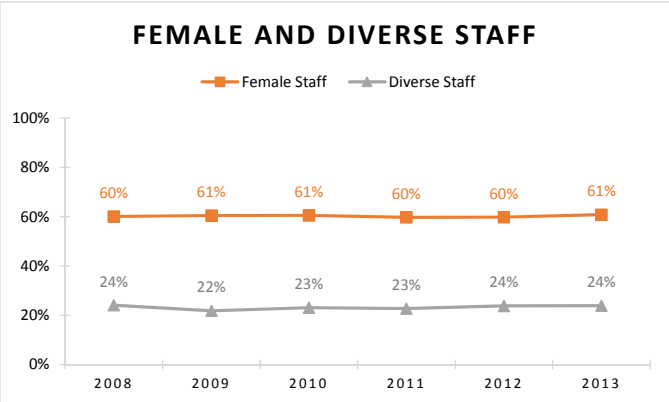
The proportion of diverse and female faculty members has not changed much in the recent years. In fall 2009 diverse faculty were overrepresented among those tenured or on a tenure-track. By fall 2013 the percentage of diverse tenured/ tenure track faculty has decreased more than the percentage of tenured/ tenure track faculty in all full-time faculty. *SOURCE: Institutional data*





4.2 Diverse staff

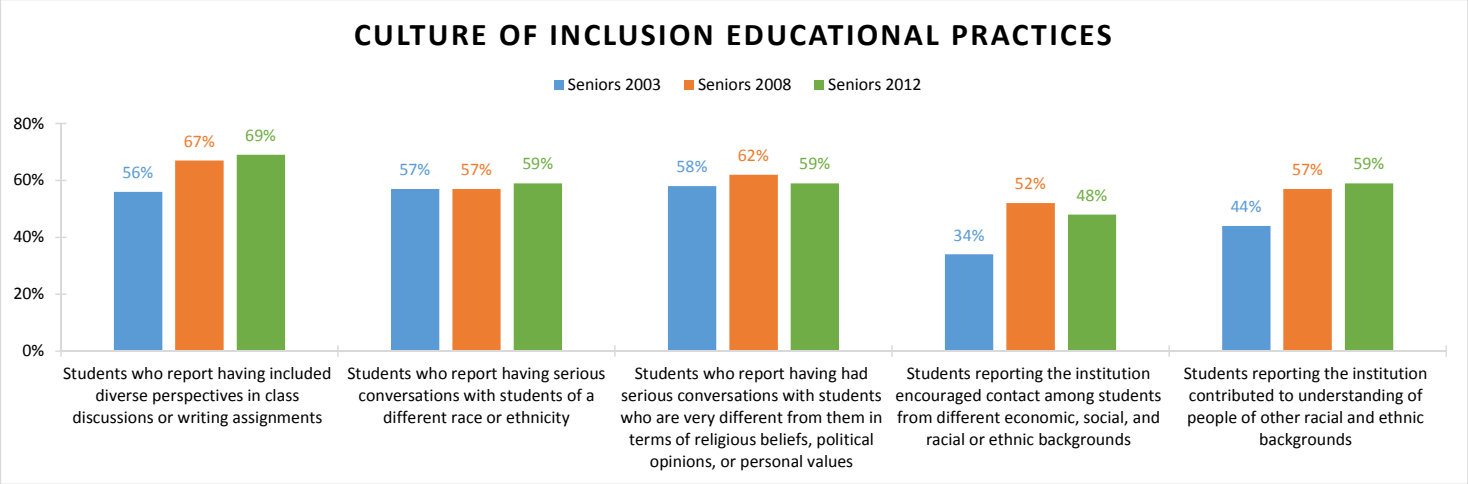
The proportions of female and diverse staff has not changed over the last few years. In 2013, 61% of employees were women. *SOURCE: Institutional data*



Note: Diverse includes all non-white.

4.3 Culture of inclusion: Educational practices

Based on the trend data from the National Survey of Student Engagement (as reported by participating seniors), since 2003, NAU has made substantial improvements in its educational practices that foster culture of inclusion. For example, in the 2012 survey 15% more students reported the institution contributed to understanding of people of other racial and ethnic backgrounds than in 2003. *SOURCE: NSSE*



4.4 Employees' participation on boards and commissions

Percentage of active employees reporting holding leadership positions (serving on the board and commisisions or holding public office) is 7.1%. The data come from eCERT reporting that is used to capture employees' extracurricular activities and identify potential conflicts of interest. It is likely that some employees underreport their membership on boards and commissions, especially if their community involvement is not expected to raise conflict of interest concerns. As a result the percentage of employees holding a leadership position in the community may be underreported. *Source: Human Resources as of February 2014.*

Active employees reporting Public Office/Board Membership: 468
Active employees who completed the eCERT: 6,588

5. COMMITMENT TO NATIVE AMERICANS: Become one of the nation's leading universities serving Native Americans

Strategies:

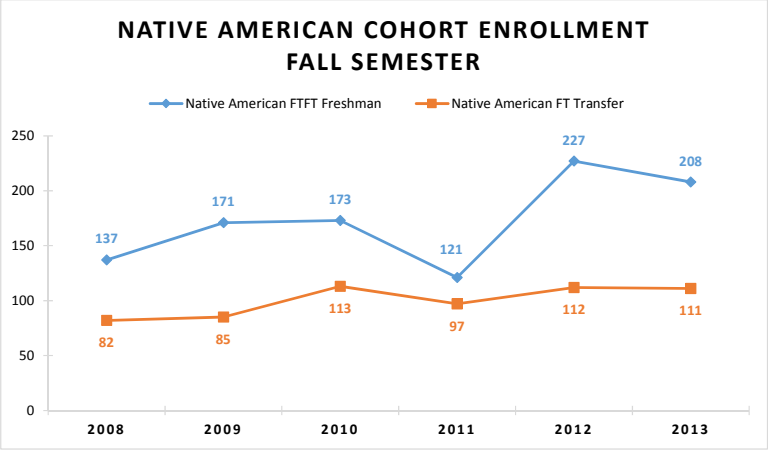
- Increase the enrollment and improve the progress and success of Native American students by nurturing a university climate and culture that enhances their academic experiences
- Develop collaborative service and outreach programs with Native American communities
- Promote engagement with and appreciation and understanding of Native American cultures and tribal nations within the university and in the broader community

Key Performance Indicators:

- 5.1 Native American student enrollment
- 5.2 Native American student retention
- 5.3 Native American faculty
- 5.4 National rankings of degrees awarded to Native American students
- 5.5 NAU experience of Native American seniors

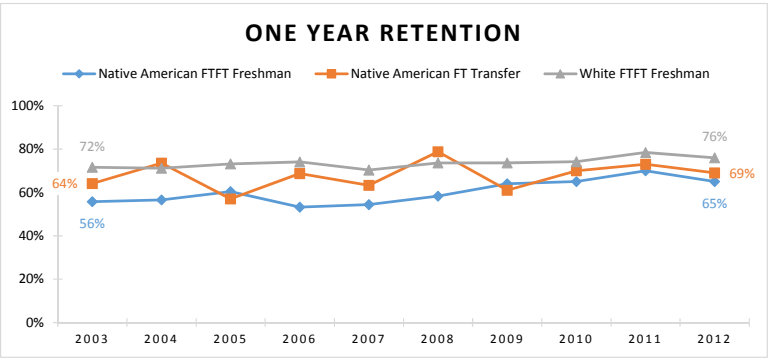
5.1 Native American student enrollment

Enrollment of first-time full-time Native American freshmen has been growing in the last several years, except for a slight decline in 2013 and a significant dip in 2011. The first-time full-time Native American freshmen constitute about five percent of the entire first-time full-time freshmen cohort—a proportion that has been relatively stable over the last five years. The first-time full-time Native American transfer student cohort has seen an increase in 2010 and since then the enrollment hovers around 110. *SOURCE: Institutional Data. Unduplicated Native American headcount identified by race and/or tribal affiliation.*



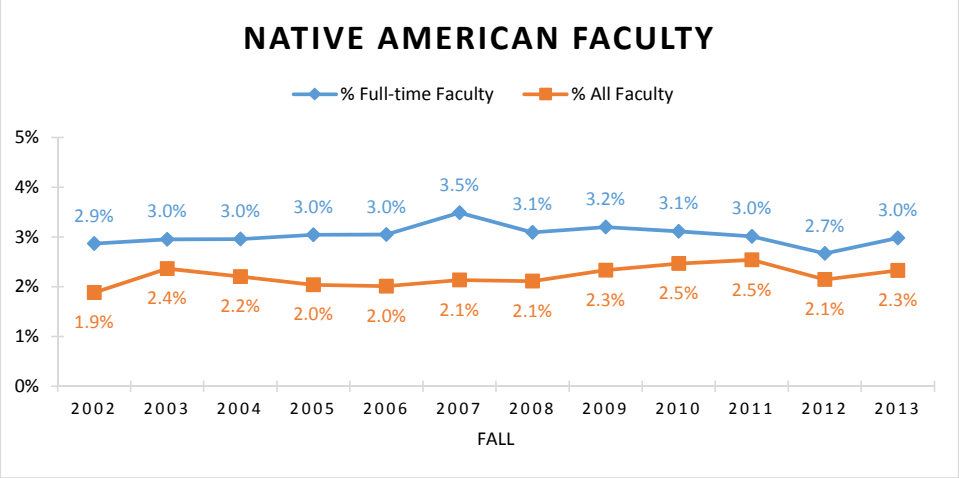
5.2 Native American student retention

Starting with the 2011 cohort, the university has employed a new advising protocol, reducing the credit hour load of at-risk students and working with them to address their math deficiencies. This strategy is expected to improve future retention rates. *SOURCE: Institutional Data*



5.3 Native American faculty

The percentage of full-time Native American faculty and all Native American faculty has not changed significantly over the last ten years. *SOURCE: IPEDS*



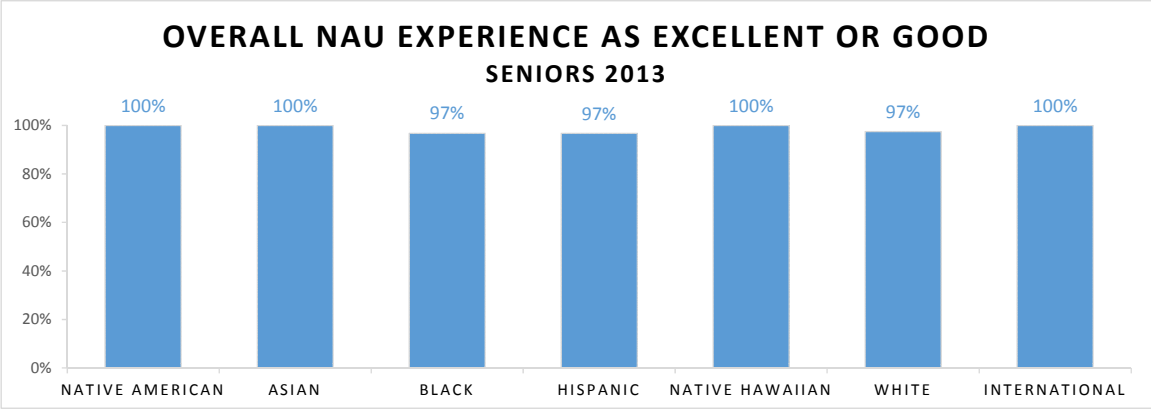
5.4 National ranking of degrees awarded to Native American students

In 2013 NAU's relative position in awarding both master's degrees and baccalaureate degrees to Native American students has improved to #2 and #8, respectively. *SOURCE: DIVERSE: Issues in Higher Education*

DIVERSE: Issues in Higher Education Ranking in Degrees Awarded to Native American Students										
All Disciplines	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**
Master's Degrees	**#1**	**#2**	**#1**	**#1**	**#1**	**#4**	**#2**	**#2**	**#5**	**#2**
Baccalaureate Degrees	**#6**	**#5**	**#5**	**#6**	**#7**	**#9**	**#9**	**#9**	**#11**	**#8**

5.5 Native American student experiences at NAU

Native American seniors report having similarly good experience at NAU as White students. *SOURCE: Institutional Data*



6. SUSTAINABILITY AND EFFECTIVENESS: Exemplify a sustainable, innovative, and effective university community

Strategies:

- Model environmentally responsible and sustainable operations and education
- Continue to improve institutional effectiveness and organizational performance
- Maximize faculty, and staff commitment through workforce practices and services that contribute to the long-term viability of the university
- Develop fundraising opportunities in support of expanded capacity to meet the strategic goals

Key Performance Indicators:

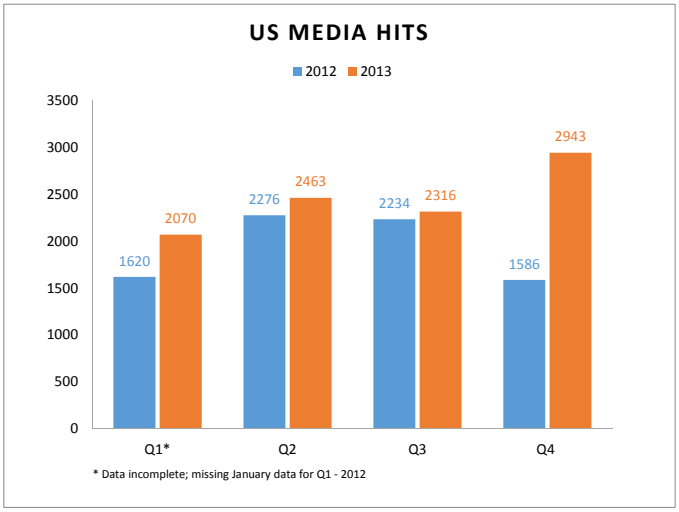
- ⟷ 6.1 Sustainability rating
- 🎓 6.2 Number of national stories placed annually
- 🎓 6.3 Total dollars fundraised
- 🎓 6.4 Salary market comparison

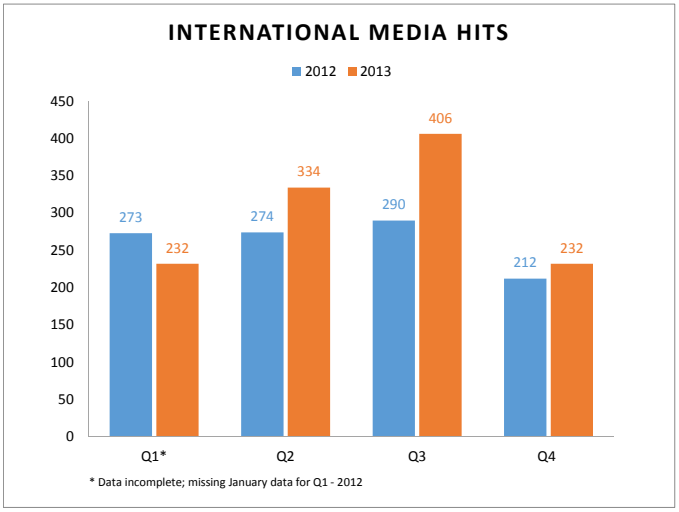
6.1 Sustainability rating: Sustainability Tracking, Assessment and Rating System

Sustainability Tracking, Assessment and Rating System (STARS) awarded NAU the STARS Gold rating for sustainability in education outreach, operations, planning, administration and engagement, and innovation. *SOURCE: AASHE 5/1/2014 submission (https://stars.aashe.org/institutions/northern-arizona-university-az/report/2014-05-01/)*

6.2 Number of national stories placed annually

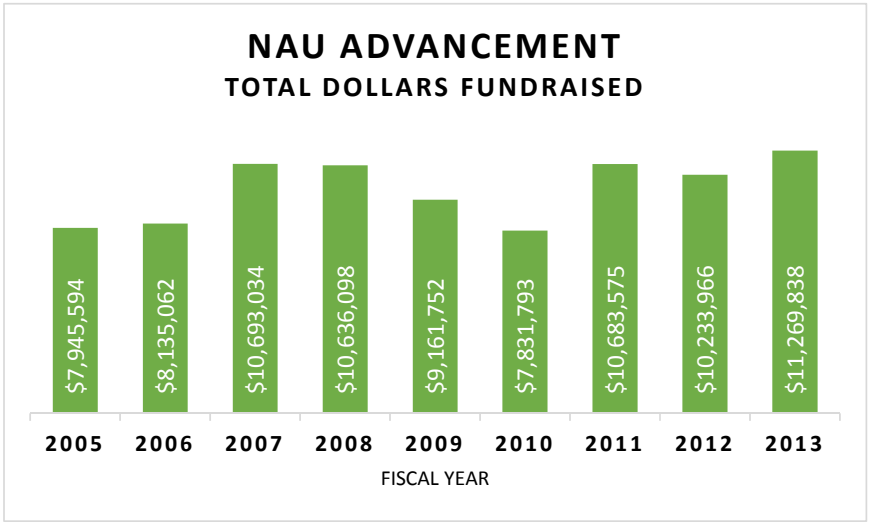
The number of independent US and international news outlets (i.e. media hits) that made an NAU story available online (which also could be a radio, TV and/ or print story) has increased in nearly every quarter in 2013 as compared with the 2012 quarters. *SOURCE: Meltwater, a media monitoring service*





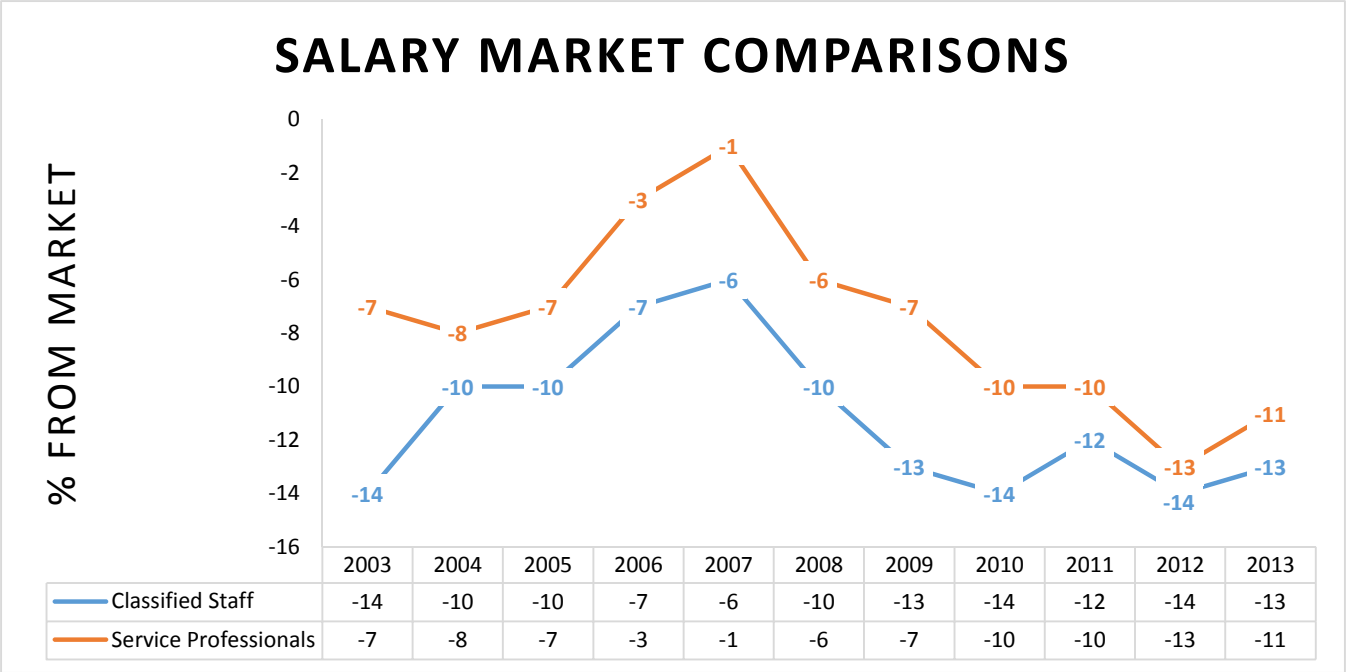
6.3 Total dollars fundraised

Since 2005, annual funds raised through NAU advancement efforts increased by 42% to more than $11 million. *SOURCE: NAU Advancement.*



6.4 Salary market comparison

Wages for both classified staff and service professionals have improved relative to the market in 2013. They are still 13% and nearly 11% from the market, respectively. *SOURCE: Human Resources.*



	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Classified Staff	-14	-10	-10	-7	-6	-10	-13	-14	-12	-14	-13
Service Professionals	-7	-8	-7	-3	-1	-6	-7	-10	-10	-13	-11

ABOR ENTERPRISE METRICS GOALS

https://webapp6.asu.edu/corda/dashboards/ABOR_public/main.dashxml

	NAU GOAL 1: Student Success
GOAL 1	Bachelor's degrees awarded
GOAL 1	Master's degrees awarded
GOAL 1	Arizona community college transfers
GOAL 1	Arizona community college transfers awarded bachelor's degrees
GOAL 1	Teaching effectiveness: student learning
GOAL 1	Overall effectiveness: student satisfaction
GOAL 1	Cost of attendance as a percentage of Arizona median family income
GOAL 1	6-year graduation rate
GOAL 1	Success and progress rate (VSA)
GOAL 1	Freshman retention rate
GOAL 1	Undergraduate enrollment
GOAL 1	Total enrollment
GOAL 1	Arizona community college transfers' 4-year graduation rate
GOAL 4	Resident undergraduate tuition
GOAL 4	Online degrees awarded
GOAL 4	Online certificates awarded
GOAL 4	Employment of graduates who stay in Arizona
	NAU GOAL 2: Nationally Recognized Research Excellence
GOAL 2	Research & development expenditures
GOAL 2	PhD degrees awarded
GOAL 2	Invention disclosures transacted
GOAL 2	Patents issued
GOAL 2	Intellectual property income
GOAL 3	New companies started
GOAL 3	Service and engagement activities expenditures
	NAU GOAL 3: Global Engagement
	(ABOR Enterprise Metrics not used for this goal)
	NAU GOAL 4: Diversity, Civic Engagement, and Community Building
GOAL 3	Community engagement activities impact
GOAL 3	Degrees awarded in high-demand fields
GOAL 3	Diversity of graduates
GOAL 3	Non-PhD doctoral degrees awarded
	NAU GOAL 5: Commitment to Native Americans
	(ABOR Enterprise Metrics not used for this goal)
	NAU GOAL 6: Sustainability and Effectiveness
GOAL 4	Bachelor's degrees awarded per 100 FTE students
GOAL 4	Composite financial index (CFI)
GOAL 4	Education and related expenses per degree
GOAL 4	Online enrollment

Web of Science Subject Areas

http://incites.isiknowledge.com/common/help/h_field_category_wos.html

ARTS & HUMANITIES

archaeology
architecture
art
Asian studies
classics
dance
film, radio, television
folklore
history
history & philosophy of science
humanities, multidisciplinary
language & linguistics
literary reviews
literary theory & criticism
literature
literature, African, Australian, Canadian
literature, American
literature, British Isles
literature, German, Dutch, Scandinavian
literature, romance
literature, Slavic
medieval & renaissance studies
music
philosophy
poetry
religion
theater

SCIENCE

acoustics
agricultural economics & policy
agricultural engineering
agriculture, dairy & animal science
agriculture, multidisciplinary
agronomy
allergy
anatomy & morphology
andrology
anesthesiology
astronomy & astrophysics
automation & control systems
behavioral sciences
biochemical research methods
biochemistry & molecular biology
biodiversity conservation
biology
biophysics
biotechnology & applied microbiology
cardiac & cardiovascular systems
cell & tissue engineering
cell biology
chemistry, analytical
chemistry, applied
chemistry, inorganic & nuclear
chemistry, medicinal
chemistry, multidisciplinary
chemistry, organic
chemistry, physical
clinical neurology
computer science, software engineering
computer science, theory & methods
construction & building technology
critical care medicine
crystallography
dentistry, oral surgery & medicine
dermatology
developmental biology
ecology
education, scientific disciplines
electrochemistry
emergency medicine
endocrinology & metabolism
energy & fuels
engineering, aerospace
engineering, biomedical
engineering, chemical
engineering, civil
engineering, electrical & electronic
engineering, environmental
engineering, geological
engineering, industrial
engineering, manufacturing
engineering, marine
engineering, mechanical
engineering, multidisciplinary
engineering, ocean
engineering, petroleum
entomology
environmental sciences
evolutionary biology
fisheries
food science & technology
forestry
gastroenterology & hepatology
genetics & heredity
geochemistry & geophysics
geography, physical
geology
geosciences, multidisciplinary
geriatrics & gerontology
health care sciences & services
hematology
history & philosophy of science
horticulture
imaging science & photographic technology
immunology
infectious diseases
instruments & instrumentation
integrative & complementary medicine
limnology
marine & freshwater biology
materials science, biomaterials
materials science, ceramics
materials science, characterization & testing
materials science, coatings & films
materials science, composites
materials science, multidisciplinary
materials science, paper & wood
materials science, textiles

Web of Science Subject Areas (continued)

medical ethics
medical informatics
medical laboratory technology
medicine, general & internal
medicine, legal
medicine, research & experimental
metallurgy & metallurgical engineering
meteorology & atmospheric sciences
microbiology
microscopy
mineralogy
mining & mineral processing
multidisciplinary sciences
mycology
nanoscience & nanotechnology
neuroimaging
neurosciences
nuclear science & technology
nursing
nutrition & dietetics
obstetrics & gynecology
oceanography
oncology
operations research & management science
ophthalmology
optics
ornithology
orthopedics
otorhinolaryngology
paleontology
parasitology
pathology
pediatrics
peripheral vascular disease
pharmacology & pharmacy
physics, applied
physics, atomic, molecular & chemical
physics, condensed matter
physics, fluids & plasmas
physics, mathematical
physics, multidisciplinary
physics, nuclear
physics, particles & fields
physiology
plant sciences
polymer science
psychiatry
psychology
public, environmental & occupational health
radiology, nuclear medicine & medical imaging
rehabilitation
remote sensing
reproductive biology
respiratory system
rheumatology
robotics
soil science
spectroscopy
sport sciences
statistics & probability
transplantation
transportation science & technology
tropical medicine
urology & nephrology
veterinary sciences
virology
water resources
zoology

SOCIAL SCIENCES

anthropology
area studies
business
business, finance
communication
criminology & penology
demography
economics
education & educational research
education, special
environmental studies
ergonomics
ethics
ethnic studies
family studies
geography
gerontology
health policy & services
history
history & philosophy of science
history of social sciences
hospitality, leisure, sport & tourism
industrial relations & labor
information science & library science
international relations
law
linguistics
management
nursing
planning & development
political science
psychiatry
psychology, applied
psychology, biological
psychology, clinical
psychology, developmental
psychology, educational
psychology, experimental
psychology, mathematical
psychology, multidisciplinary
psychology, psychoanalysis
psychology, social
public administration
public, environmental & occupational health
rehabilitation
social issues
social sciences, biomedical
social sciences, interdisciplinary
social sciences, mathematical methods
social work