Current State of Internationalization and Global Engagement of American Colleges and Universities

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MAPPING Internationalization/ Globalization on US Campuses

Current State of Internationalization and Global Engagement of American Colleges and Universities

CONTENTS:

- **Institutional Reasons, Priority Activities, How internationalization/globalization is playing out on campuses, and Implications**
  - **The MAPPING Survey** and the Carnegie Classification
  - **"Comprehensive Internationalization"**_ AEC-CIGE
  - 6 **Key Areas of the Mapping**
  - **Global Learning Value Rubric**_ AAC&U
- **Key Findings** of the 2016 MAPPING
- **Comparisons** with former MAPPING surveys

Let’s begin with a brief background information and definitions:

In increasing order of complexity, and respectively decreasing volume of activity, the different forms of internationalization/ global engagement can be exemplified [9] **as:**

Defn..

Current State of Internationalization and Global Engagement of American Colleges and Universities

American Research Universities:

a) emphasize graduate education and research, and undergraduate research experience;

b) are committed to academic values, distinguished faculties, and considerable resource bases and resource flows.

- They are classified by different criteria, including those of the Carnegie Classification. [5]

Top 50 Research Universities in the US

[2] http://www.bestcollegereviews.org/top-research-universities/

Ranking Criteria [2]:

- The university has at least one research center or institute that functions under the jurisdiction of the university, but as a separate entity. (in 35% HEIs)
- There are opportunities for undergraduates to participate directly in research. (in 35%)
- The university receives federal research funds. (in 30%)

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with the **MAPPING**

we will address the following Questions:

1. What are **INSTITUTIONAL REASONS** for internationalization and global engagement?

2. What are the **PRIORITY ACTIVITIES** of the HEIs for internationalization and global engagement?

3. **HOW** are internationalization and global engagement playing out on campuses?

4. What are the **IMPLICATIONS** of the above on the overall state of internationalization / global engagement US-wide?

Current State of Internationalization and Global Engagement of American Colleges and Universities

US Higher Education Institution's (HEI's) approaches to internationalization differ from one another based on their unique circumstances;

the differences are of course healthy and nourishing for HE.

Current State of Internationalization and Global Engagement of American Colleges and Universities

Despite these differences,

a broad and purposeful examination of Universities and Colleges

provides a useful picture of

1. **COLLECTIVE PROGRESS** towards the ideal of internationalization/ global engagement;

2. **RECENT SUCCESSES** and Emerging **CHALLENGES;**

3. Areas that merit **A SHARPER FOCUS** by Institutions, Policy Makers, and Practitioners.

"The MAPPING Survey" or "Carnegie Classification" serve for this purpose:

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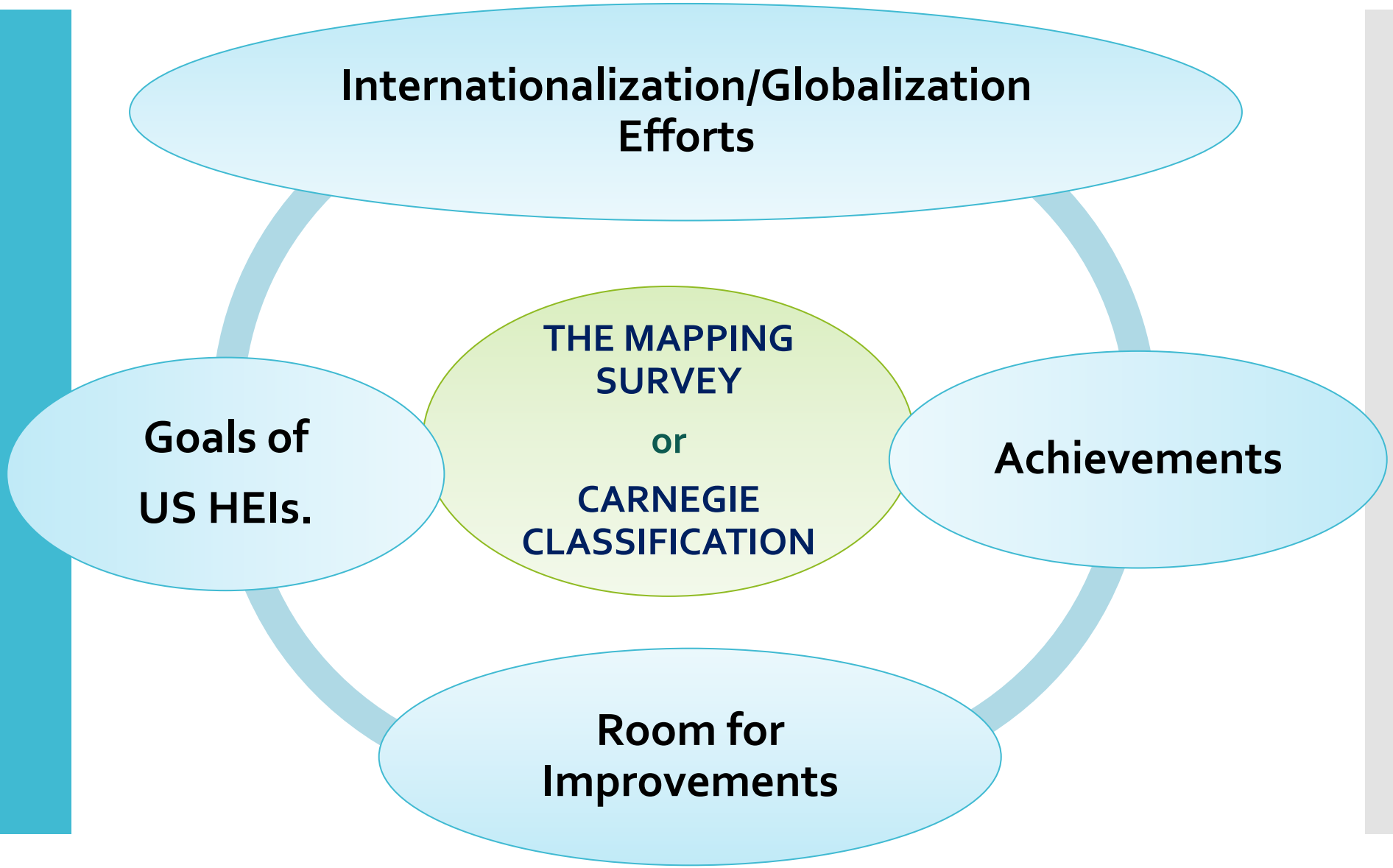

Within our timeframe today, we'll focus only on the MAPPING.

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The Purpose of the MAPPING Survey is ∴ :

1. assessing the **current state-,**
2. analyzing **progress and trends** over time-, and
3. identifying **future priorities** of

Internationalization/Globalization at American Colleges and Universities.

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The **MAPPING is**

- a distinguished project of **ACE-CIGE**

(American Council of Education ACE-

Center for Internationalization and Global Engagement CIGE);

- called

the CIGE Model for

'COMPREHENSIVE INTERNATIONALIZATION';

- designed to cover **6 interconnected 'KEY AREAS'**; and

- conducted and analyzed **every 5 years**;

(the 2016 Survey was the **4th iteration**).

What is this **Comprehensive Internationalization**?

- **a strategic, coordinated process**;

- works toward **aligning and integrating International Policies, Programs, and Initiatives;**
- positions Colleges and Universities as **more Globally Oriented and Internationally Connected Institutions**;

- requires a clear **commitment by top-level institutional leaders**;

- **impacts the curriculum and a broad range of stakeholders**; and

- results in deep and ongoing **incorporation of international perspectives and activities throughout the institution**.

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US HEIs' **INSTITUTIONAL REASONS for** INTERNATIONALIZATION & GLOBAL ENGAGEMENT

2016 MAPPING data reveals the following- :

***The first four reasons**, in order of significance, are*

1. **Improving STUDENT PREPAREDNESS for a global era,**
2. **DIVERSIFYING students, faculty, and staff at home campus,**
3. **Becoming MORE ATTRACTIVE to prospective students at home and overseas,**
4. **REVENUE generation** (up from number 6 in 2011).

US HEIs' **PRIORITY ACTIVITIES** for INTERNATIONALIZATION and GLOBAL ENGAGEMENT

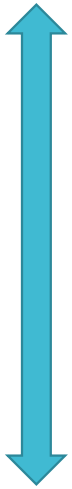
Current State of Internationalization and Global Engagement of American Colleges and Universities

2016 data tell us the following- :

***The first five activities**, in order, are*

1. **Increasing STUDY ABROAD for US Students,**
2. **RECRUITING International Students,**
3. **PARTNERSHIPS with institutions globally,**
4. **INTERNATIONALIZING the curriculum/ co-curriculum,**
5. **FACULTY DEVELOPMENT.**

The MAPPING Addresses 6 KEY AREAS:



1. **Articulated Institutional Commitment,**
2. **Administrative Leadership, Structure, and Staffing,**
3. **Curriculum, Co-Curriculum, and Learning Outcomes,**
4. **Faculty Policies and Practices,**
5. **Student Mobility, and**
6. **Collaboration and Partnerships.**

These six pillars are interconnected
(as is indicated by the upward and downward pointing arrow on left):

***Progress** (or lack thereof) **in one area impacts what can be achieved in the others**.*

6 KEY AREAS ADDRESSED
at the 2016-Mapping Survey

1. Articulated Institutional Commitment:

1. **Mission Statements;** ↗
2. **Strategic Plans;** ↗
3. **Funding Allocation;** ↗
4. **Formal Assessment Mechanisms.** →

In the MAPPING's 20th year, the first three show upward trends; the fourth, however, appears to have stalled.

Looking at the responding institutions:

2016 Data:

Mission Statements of 49% specifically refer to internationalization/ global engagement activities.

47% have included internationalization/ global engagement activities among the top 5 priorities in their **Strategic Plans**.

27% have a separate **Strategic Plan for** internationalization/ global engagement activities. (This was the case in 2011-data too).

<-> Compared to former data:

A greater proportion of institutions have a campus-wide **task force** that works solely on advancing internationalization/ global engagement than have a separate **strategic plan**.

2016
Data:

>70% reported that **INTERNAL FUNDING** for Internationalization/ Global Engagement increased or remained the same over the past 3 years.

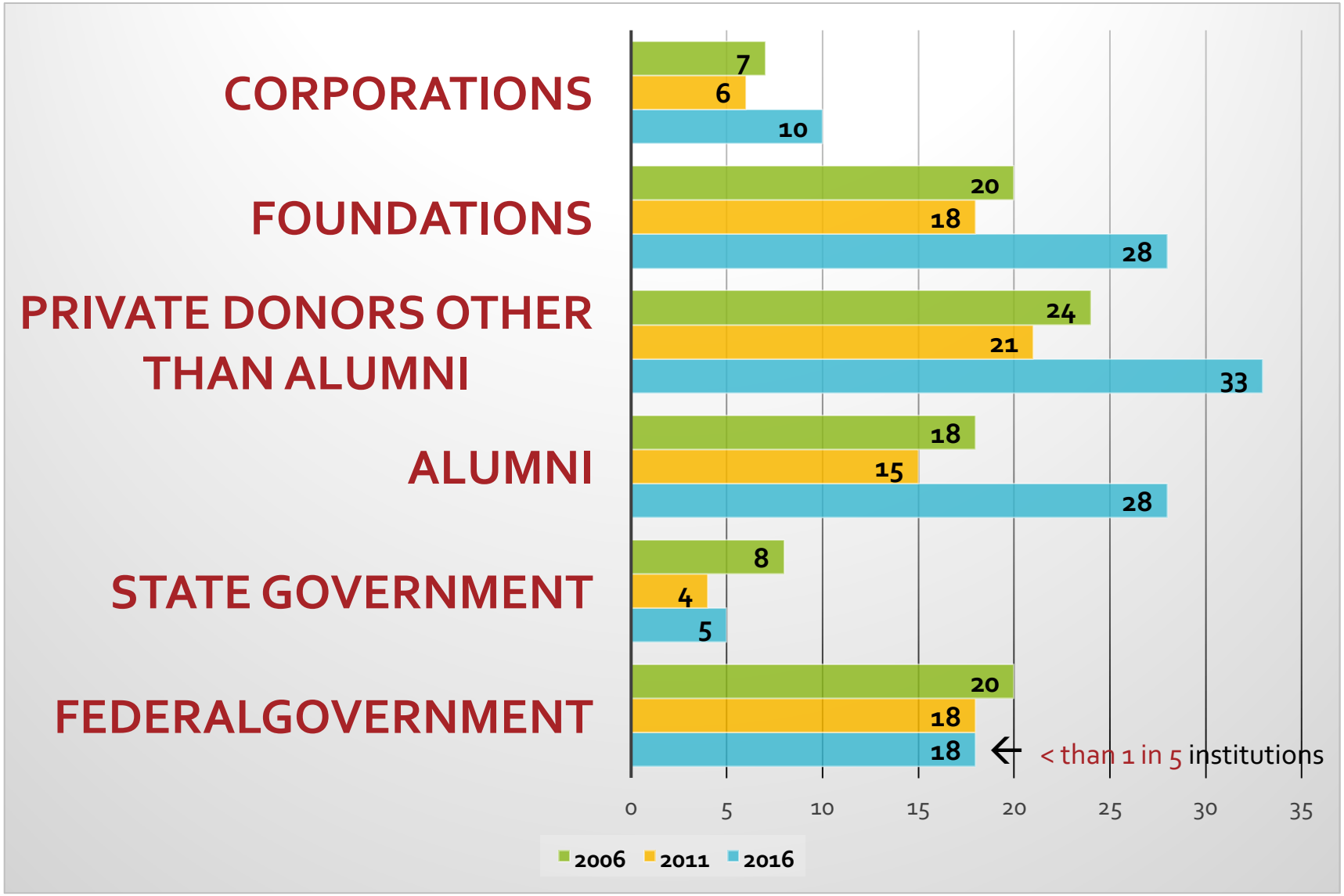
(➔Doctoral and Masters institutions were most likely to report the funding increased).

21% responding institutions have developed a formal strategy and/or launched a dedicated **FUNDRAISING CAMPAIGN** to support internationalization/global engagement activities.

(➔ Doctoral Institutions, in particular, receiving increased support from Alumni, Individual Donors, Foundations, and Corporations).

% of Institutions receiving funding for Internationalization/ Global Engagement from External Resources.

[10-13].



2016
<->
2011
Data:

Despite the overall commitment levels and resource allocations,

the percentage of institutions reporting that

they have had formally assessed
their **internationalization progress or impact** in recent years
declined from **37%** in 2011 to **29%** in 2016. (1 in every 3 institution performed assessment)

6 KEY AREAS ADDRESSED
at the 2016-Mapping Survey

2. Administrative Leadership, Structure, and Staffing:

1. **Reporting structures;**
2. **Staff configurations;** and
3. **Office organizations.**

2016 Data:

At many US HEIs,

Internationalization/ Global Engagement is an increasingly **administrative-intensive** venture coordinated buy a single office;

TOP Leadership remains an important driver;

Other administrators are also playing key roles, and are being supported by professional development funding and programs.

2016 Data

LEADERSHIP

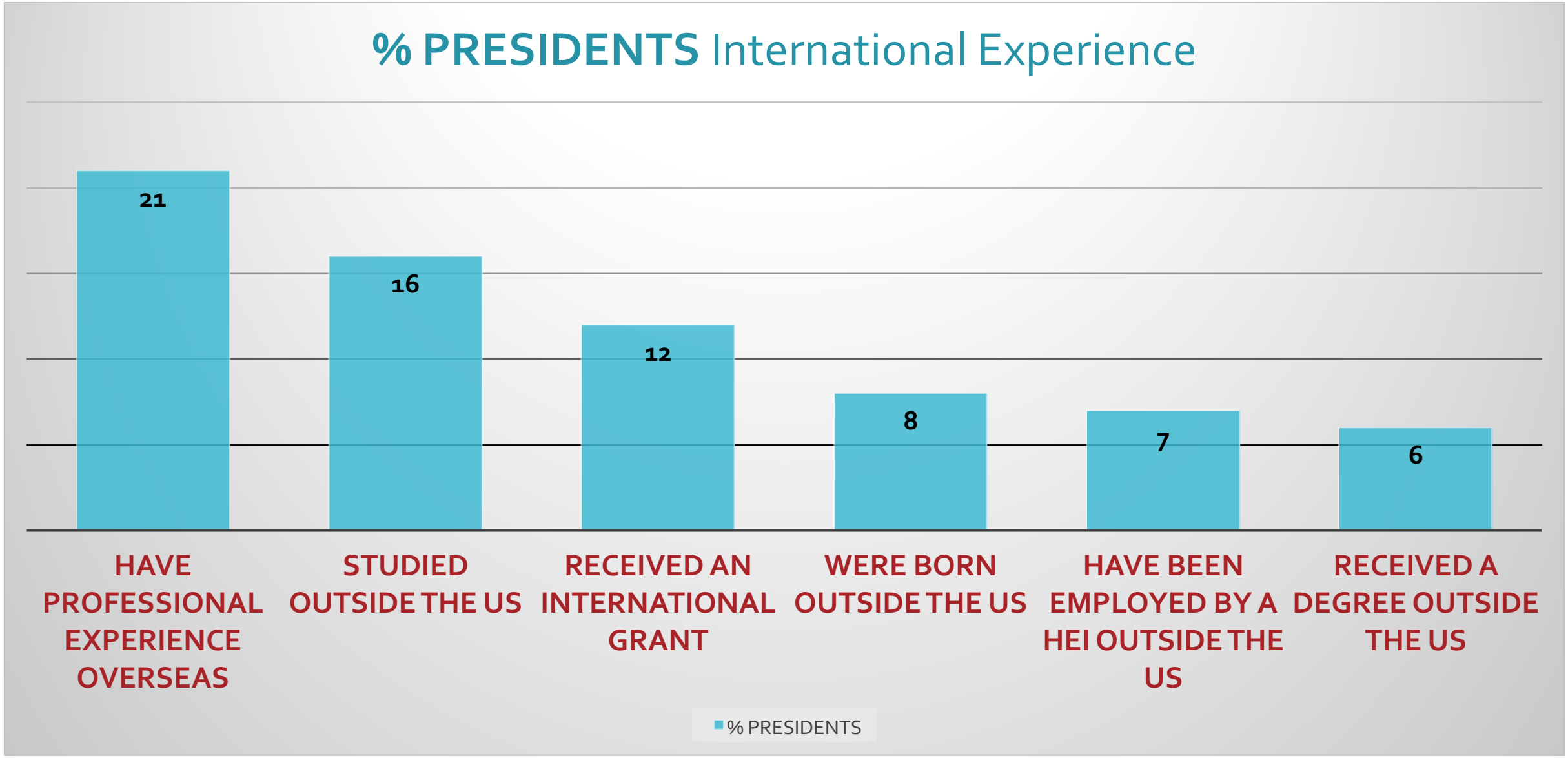
PRESIDENTS/CHANCELLORS are seen as the Top Catalysts for Campus Internationalization and Global Engagement.

No 2 Catalysts are the **SENIOR INTERNATIONAL OFFICERs SIOs**.

>80% of Doctoral Institutions and **>75%** of Masters Institutions have a FT SIO who oversees multiple international activities or programs.

➔ *PRESIDENTS/CHANCELLORS and SIOs are Primary Drivers of Internationalization/ Global Engagement.* [14, 15]

70% of the responding presidents have international experience of some type [14]:

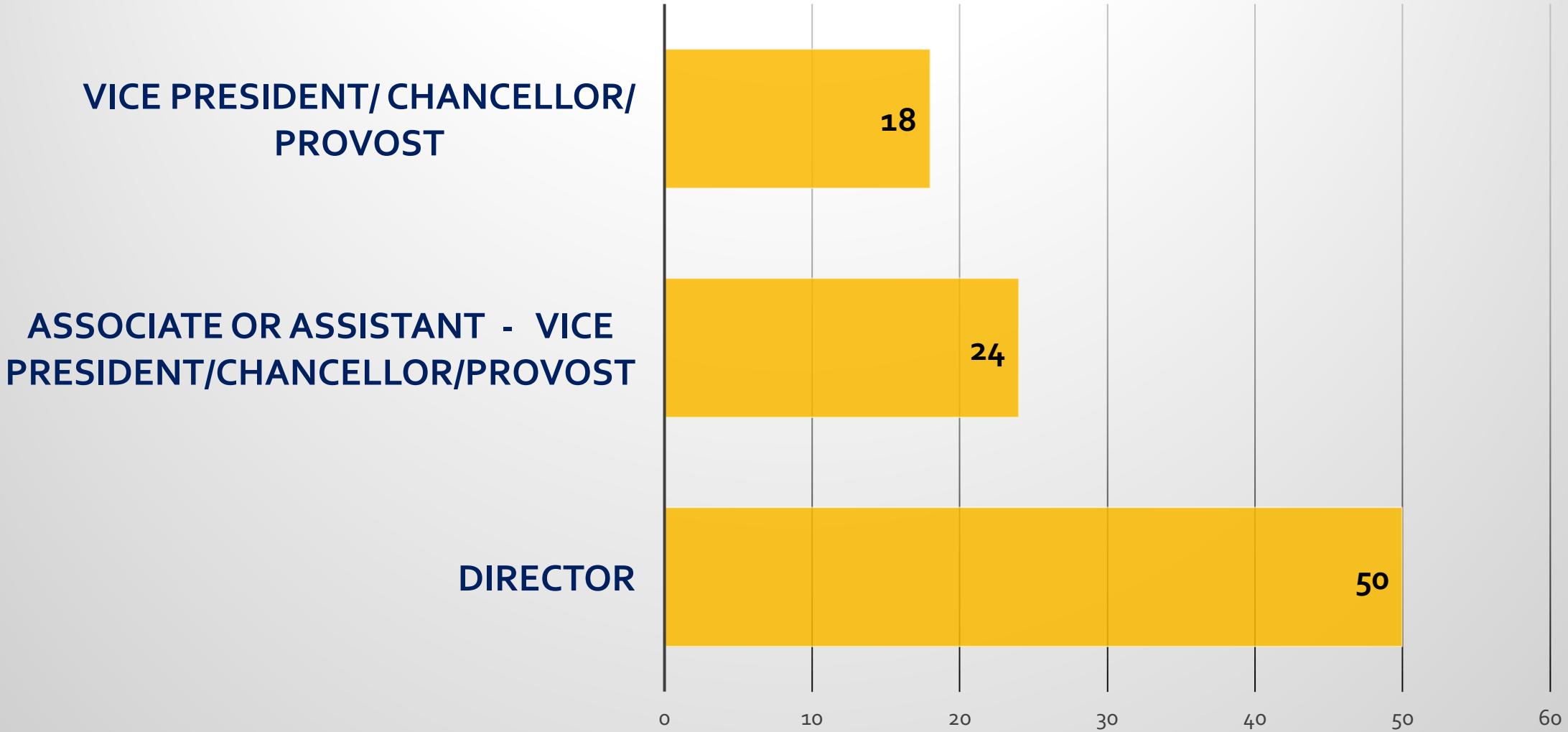


Top 3 SIO RESPONSIBILITIES: [15]

1. **Managing linkages and partnerships,**
2. **Representing the institution in international dealings,**
3. **Strategic planning for internationalization.**

65% of responding SIOs report to a
Vice President/ Chancellor/ Provost of Academic Affairs.

% TITLES of SIOs in US HEIs



2016 Data

In advancing internationalization, the US HEIs recognize

Top Leadership & SIOs

- the trend toward **centralized administrative structures**

Other Campus Administrators

- parallel to this, the role of **a broader network of campus administrators**

Staff Engagement

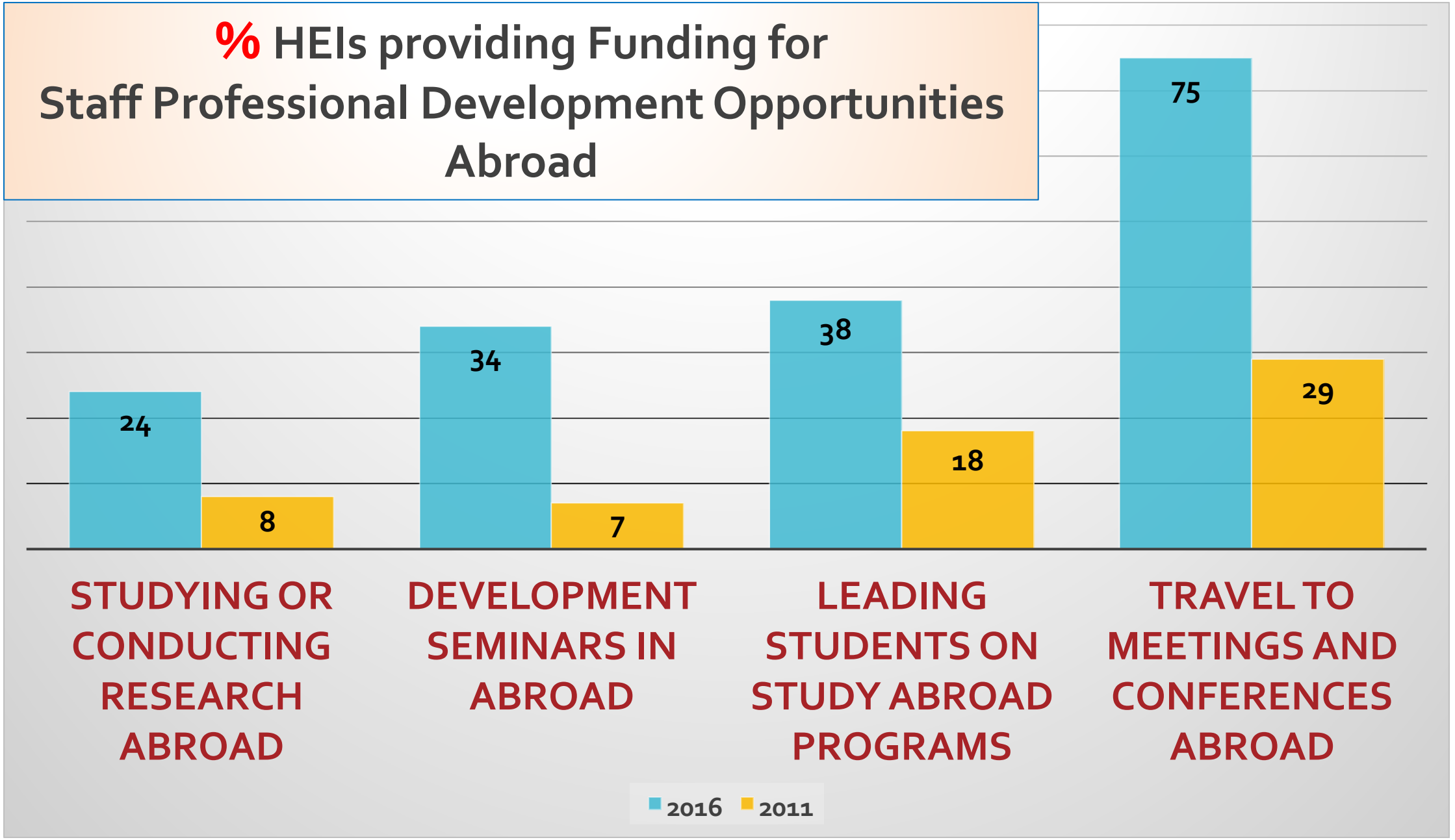
- the need for globally focused **professional development to support staff engagement** in the process.

Consequently, the following are reported to have been provided as professional development opportunities **PDOs for administrative staff** other than those working in an international programs office:

- In **56%** of HEIs:
  On-campus workshops and training sessions related to internationalization, and

- Staff PDOs **abroad** in the range of **25%-75%:**

% HEIs providing Funding for Staff Professional Development Opportunities Abroad



6 KEY AREAS ADDRESSED
at the 2016-Mapping Survey

3. Curriculum, Co-Curriculum, and Learning Outcomes:

1. General education and language requirements;
2. Co-curricular activities and programs;
3. Specified and well-defined student learning outcomes.

2016 Data vs 2011 Data

The Overall proportion of institutions engaged in efforts actively to internationalize the undergraduate curriculum has remained nearly unchanged since 2011.

(just over 50%).

(When sectors are considered separately, the picture is as follows:

Associate and Special Focus Institutions saw increases, Doctoral, Masters, Baccalaureate Institutions saw declines (10 – 16%))

2016 Data vs 2011 Data

LEARNING OUTCOMES AND ACADEMIC REQUIREMENTS:

More institutions have

outlined broad-based global learning outcomes, and

implemented academic policies (e.g., general education GE requirements) that **extend the reach of internationally focused content to a larger proportion of students**:

64% institutions have specified international or global student learning outcomes for **all** students, or for students in **some** schools, departments, or programs.
(An upward trend compared to 2011).

49% institutions have reported that their GE requirements include an international global component.

To fulfill this requirement students take courses that

a) **focus on global trends/ issues**
(e.g., health, environment, or peace studies), and/or

b) **feature perspective issues, or events from specific countries or areas** outside the US.
(Less than 10% require students to take courses of both types).

For the first time in the MAPPING history,
Foreign Language Requirements are on the rise:

46% of institutions have a foreign language requirement **for undergraduate graduation**.

(**17%** for **all** students, **29%** for **some** students).

The Association of American Colleges & Universities AAC&U - Global Learning VALUE Rubric

is used to

- **Assess student learning,**
- **Guide institutional conversations about global learning,**
- **Develop student learning outcomes,**
- **Support assignment creation, and**
- **Guide co-curricular programming.**

(Institutions often modify this rubric to suit their institutional context and mission, and to match their student learning outcomes).

The VALUE Rubric is designed to measure students' progress over time on 6 Dimensions of Global Learning:

1. Global Self-awareness
2. Perspective taking
3. Cultural diversity
4. Personal and Social Responsibility
5. Global Systems
6. Knowledge application.

2016 Data

TECHNOLOGY IN THE GLOBAL CLASSROOM

For many institutions, **technology is playing an important role in internationalizing curricular content**.

32% respondents (~ 1 in 3) reported that their institutions are **using technology for the emerging virtual exchange in HE** (e.g.,

video conferencing;
online learning programs;
managing different languages, learning styles, and expectations;
establishing a shared classroom culture;
social media)

to facilitate course-level collaboration between faculty and/or students on the home campus and counterparts overseas.[16]

2016 Data

CO-CURRICULAR PROGRAMS and OPPORTUNITIES ON CAMPUS

include

- Regular and ongoing international festivals or events on campus (75%)
- Meeting place for students interested in international topics (45%)
- Buddy programs that pairs US and International Students to help integrate students socially (36%)
- Language partner program that pairs US and International Students (28%)
- Residence hall with special programs designed to facilitate the integration of US and International Students (25%)
- Programs to link study abroad returnees or International Students in K-12 Schools. (12%)

BUT, institutions need be careful as
the data reveal also the following:

the most abundant co-curricular activities,
e.g., the international festivals and events, and
the meeting place for students interested in international topics,

do NOT necessarily entail sustained and intensive **engagement** by students.

6 KEY AREAS ADDRESSED
at the 2016-Mapping Survey

4. Faculty Policies and Practices:

- Hiring guidelines;
- Promotion policies;
- Tenure Policies;
- Faculty Development Opportunities.

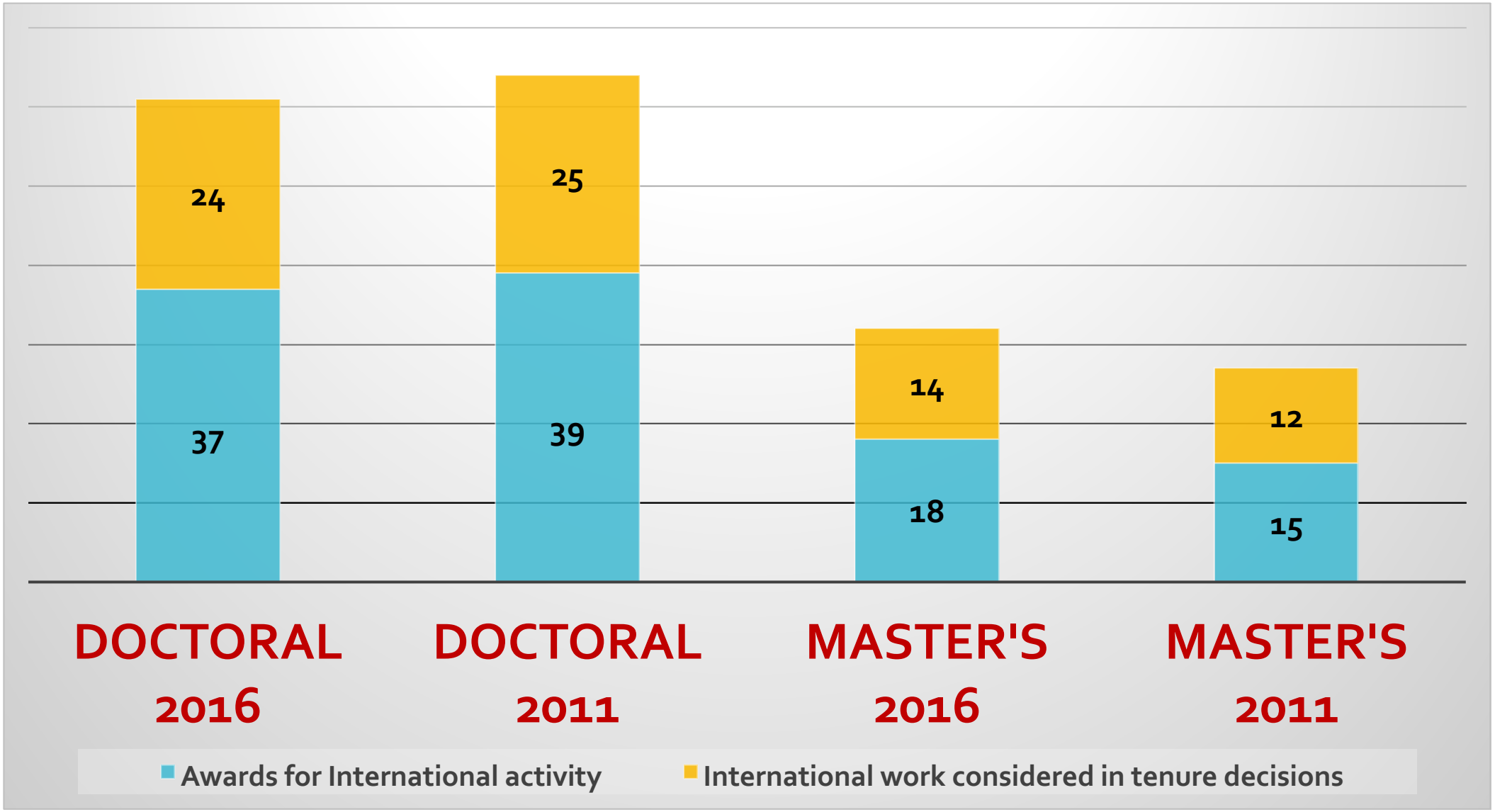
2016 Data vs 2011 Data

More Colleges and Universities are intentionally seeking to hire **faculty with an international orientation**.

(**47%** respondents say their institutions are occasionally or frequently having this practice).

More Colleges and Universities specify **international work or experience** as a consideration in faculty **promotion and tenure** decisions. **(10%)**

% US HEIs considering international work or experience in promotion and tenure decisions and/or offer faculty awards



2016 Data

FACULTY DEVELOPMENT

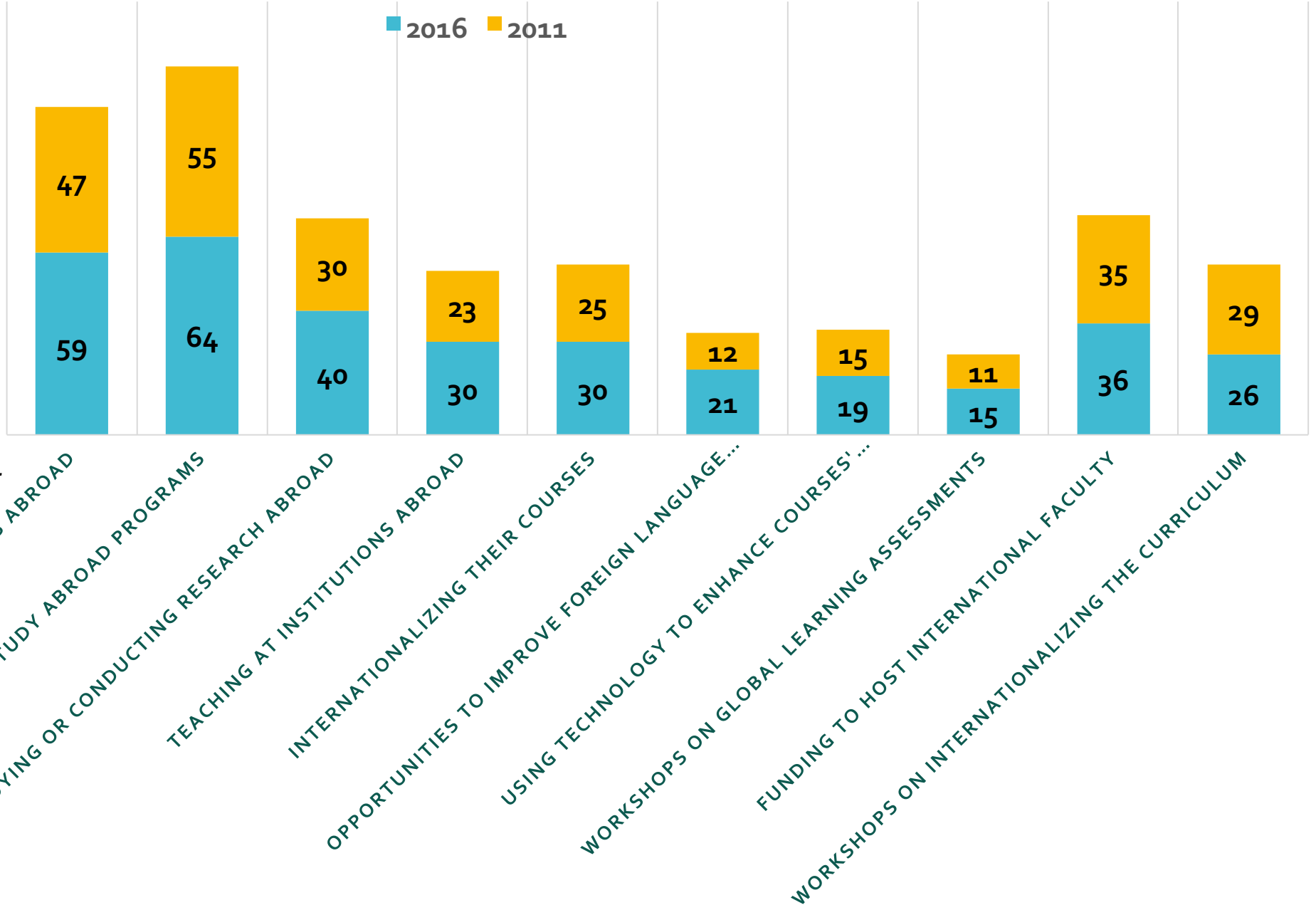
(the 5th in the Priority activities)

Only slightly over **20%** of respondents indicated that **faculty development is among their institution's top three internationalization priorities.**

Still, professional development opportunities PDOs in this regard are generally more available to faculty than in 2011.

% HEIs Offering Faculty Development Funding, Programs, and Opportunities

(increase in all, except the last one).



! Taken together and compared to specific indicators in other areas, this data raise questions about
the recognition of faculty as key drivers of internationalization.

6 KEY AREAS ADDRESSED at the 2016-Mapping Survey

5. Student Mobility:

- **Education Abroad Programs;**
- **International Student Recruitment and Support.**

2016 Data

48% HEIs have **International Student Recruiting Plan** in place, either for the institution, or for one or more schools/colleges.

58% of the recruiting plans cited by respondents include **geographic targets**.

6 KEY AREAS ADDRESSED
at the 2016-Mapping Survey

6. Collaboration and Partnerships :

- Institutional Partnerships;
- Joint Degree programs;
- Dual/Double degree programs;
- Branch Campuses;
- Other Offshore Programs.

KEY FINDINGS of the Mapping

Looking beyond perceived **Institutional Reasons** and stated **Priorities** for internationalization/ global engagement,

- **the 2016 data** expose a number of **current key trends** in the overall internationalization/ global engagement picture nationwide in the US.

- **Taken together, the Mapping data of all four iterations** deliver **the key focus areas and directions** of US HE internationalization/ globalization engagement in the last 20 years.

All iterations of MAPPING SURVEY bare **a core base of questions**.

The survey has of course evolved over time, with steps forward, steps backward, and steady increases every iteration.

There are no Mapping indicators that have seen progressive declines.

➔Overall, there has been a forward progress.

Consistently upward trending Survey Items include:

1. Is internationalization or global education among **the top 5 priorities** in your institution's strategic plan?
2. Does your institution have **a separate strategic plan** that addresses institution-wide internationalization?
3. Has your institution developed specific international or global **student learning outcomes?**
4. Does your institution, or do any schools or departments within your institution, **provide specific institutional funds for student education abroad**, in addition to all other sources of financial aid?
5. Does your institution provide **scholarships/ stipends/ other financial aid** as a means to recruit international students?

KEY FINDINGS of the MAPPING_

1. Institutions are positive about their internationalization progress,

2. Internationalization is increasingly an administrative-intensive venture,

3. In-house models dominate in resources for internationalization and the management of activities and programs; however, a significant proportion of institutions are also engaging with external entities;

4. Student mobility has consistently been a focus of internationalization efforts; the 2016 data indicate an increasingly sharp emphasis on this pillar;

5. An increasing percentage of institutions are implementing academic and co-curricular policies and programming that facilitate on-campus global learning;

6. More institutions are offering internationally focused professional development opportunities for faculty;

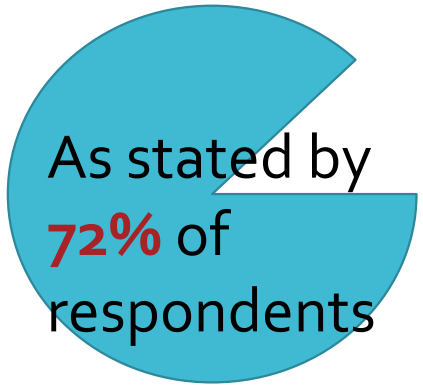
7. International partnerships and activities abroad are gaining increased attention, energy, and support on many campuses.

KEY FINDINGS _
OF THE MAPPING

1.Institutions are positive about their internationalization progress; internationalization continues to gain momentum among US Colleges and Universities;

Key Findings with regards to Pillar 1:

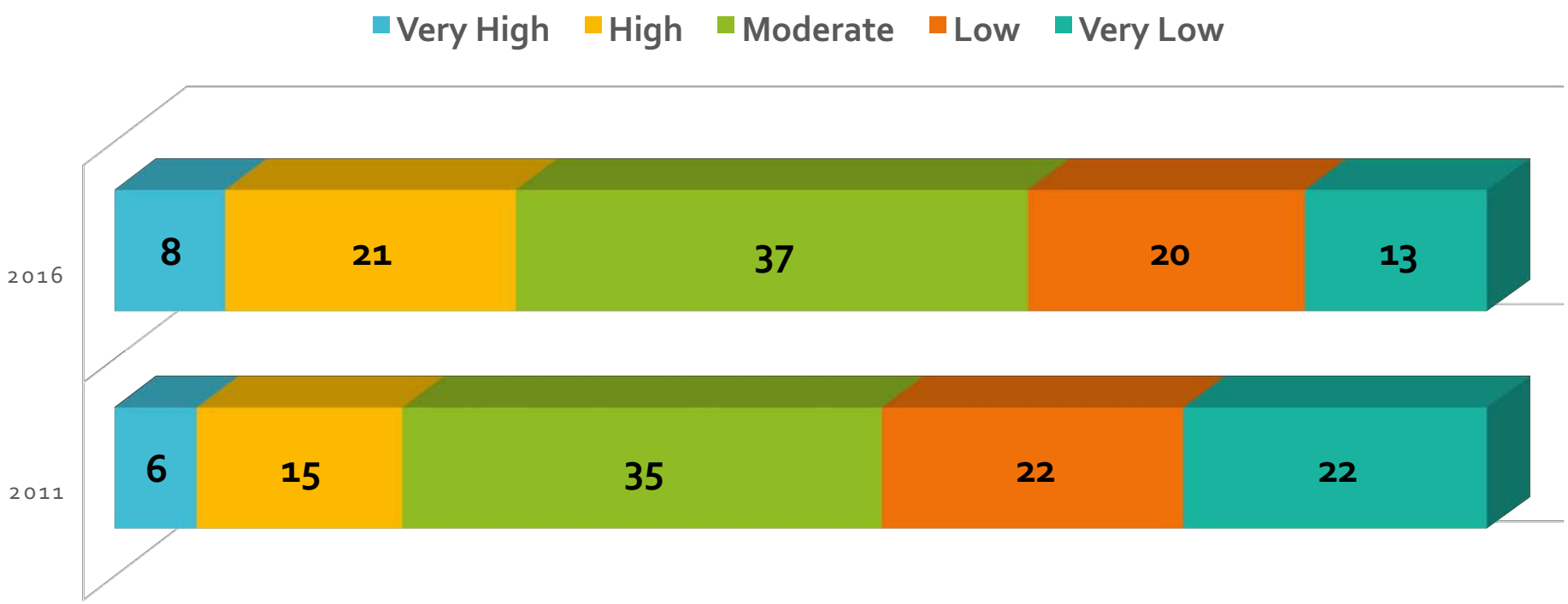
Internationalization has accelerated in recent years
(compared to 64% in 2011):



HE Institutions reporting **'high' or 'very high' levels of internationalization rose:**

from 21% in 2011
to **29%** in 2016.

REPORTED %OVERALL LEVEL OF INSTITUTIONAL INTERNATIONALIZATION/ GLOBAL ENGAGEMENT IN RECENT YEARS



KEY FINDINGS _
OF THE MAPPING

2.

Internationalization is increasingly an administrative-intensive venture,

coordinated by a single Office and/or a senior International Officer.

To guide internationalization efforts:

more institutions are implementing POLICIES,
PROCEDURES, &
PLANNING PROCESSES.

KEY FINDINGS _
OF THE MAPPING

3. In-house models dominate, for internationalization and the management of activities and programs;

still,

a significant proportion of institutions are also engaging with external bodies,
e.g.,
third-party program providers,
funders, and
international partners,

to further support and supplement in-house efforts

KEY FINDINGS _
OF THE MAPPING

4. the 2016 data indicate an increasingly sharp emphasis on 'student mobility' relative to other aspects of internationalization:

Student Mobility
has consistently been a focus of internationalization efforts.

HEIs'

- **Stated Priorities,**
- **Resource Allocations for Education Abroad and**
- **Resource Allocations for International Student Recruiting-**

including a marked increase in the percentage of institutions that engage Overseas Student Recruiters,

prove increasingly sharp emphasis on this Pillar.

!Though the level of support international students receive once they arrive on campus is trending upward, **it remains a concern!**

KEY FINDINGS _
OF THE MAPPING

5. An increasing percentage of institutions are implementing academic and co-curricular policies and programming that facilitate on-campus global learning.

Further,
these efforts are

on a broader scale and
among a broader base of students,
when compared to former 3 Surveys.

KEY FINDINGS _
OF THE MAPPING

6. More institutions are offering Internationally focused professional development opportunities for faculty;

Still
only **10%** specify international engagement as a consideration in **promotion and tenure** decisions.!

! Overall, the faculty related data raise questions about **the recognition of faculty as key drivers of internationalization**.

KEY FINDINGS _
OF THE MAPPING

7. International partnerships and activities abroad are gaining increased attention, energy, and support on many campuses.

However, there is still a wide spectrum in terms of activity levels, as well as the extent of planning and intentionality surrounding global engagement.

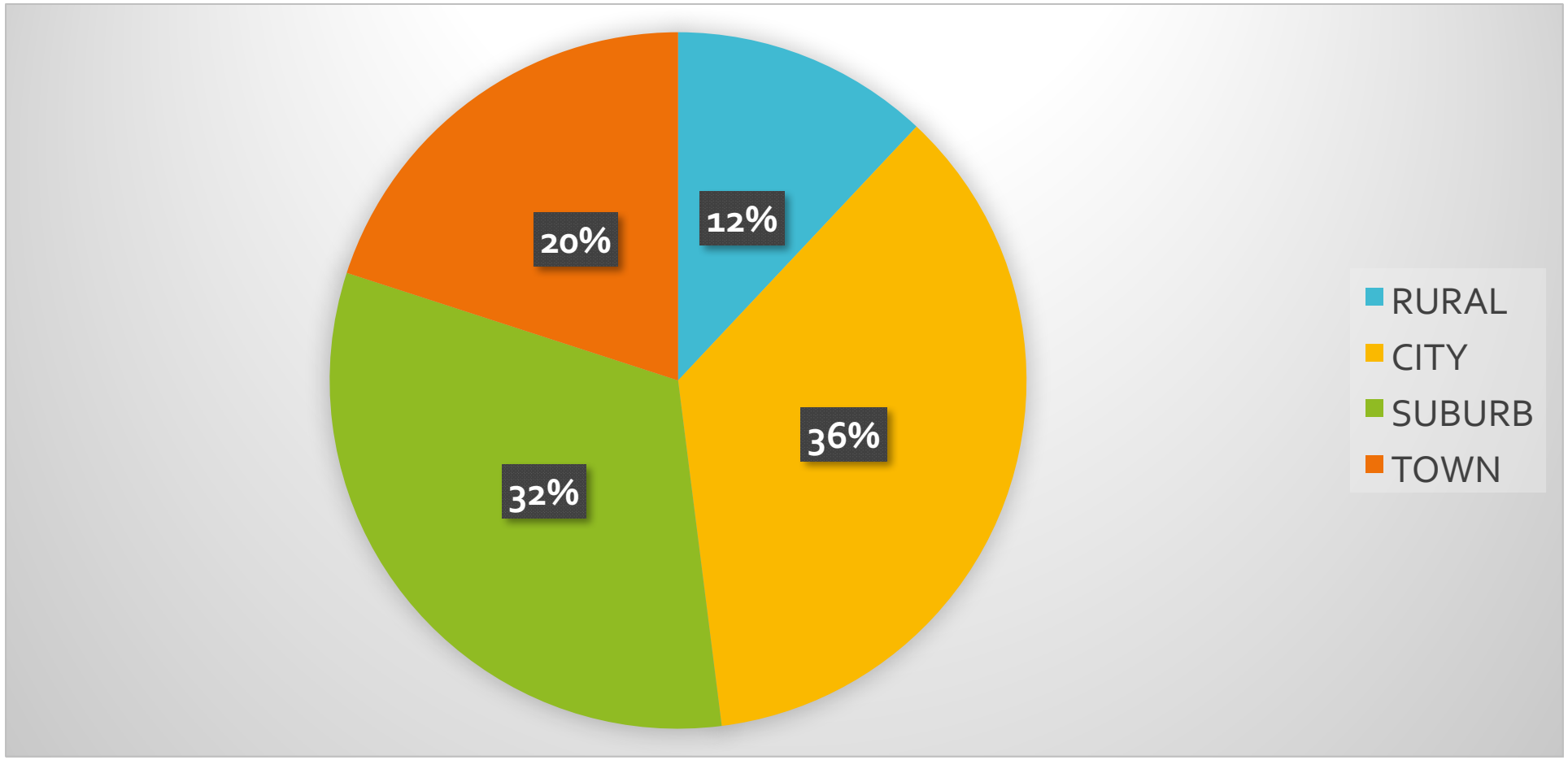
Overall View

While doctoral institutions continue to lead overall,
a number of indicators suggest that their progress has plateaued in certain areas.

Associate and special focus institutions, in contrast, have seen considerable advances in many areas, particularly when it comes to curriculum.

% HEIs characterizing their Internationalization/Global Engagement Overall Level as Very High or High

2016 Sector Specific Analysis



Thank You!

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APPENDIX A:

Three Examples of TOP 50 RESEARCH UNIVERSITIES in the US

[2] http://www.bestcollegereviews.org/top-research-universities/

Three Examples of Top 50 Research Universities in the US

[2] http://www.bestcollegereviews.org/top-research-universities/

1st MIT_

a private research university; at its founding, MIT was a research university that adopted a European polytechnic university model that stressed laboratory instruction in applied science and engineering. During World War II and the Cold War, researchers at MIT were working on computers, radar, and inertial guidance.

As of 2014, 81 Nobel Laureates, 52 National Medal of Science Recipients, 45 Rhodes Scholars, 38 MacArthur Fellows, and 2 Fields Medalists have been affiliated with MIT. MIT is home to one of the most powerful university-based nuclear reactors in the United States.

The Undergraduate Research Opportunities Program (UROP) was founded in 1969; MIT students can join or initiate research projects for academic credit pay, or on a volunteer basis.

A substantial majority of undergraduates participate and often become published, file patent applications, or launch start-up companies based on their experience in UROPs.

2nd UCLA _
each year since the 2009-10 academic year, UCLA has averaged $1 billion in research funding.
There are over 350 research labs, centers, and institutes, 290 of these are medical centers, and
over 1,800 inventions have come from this research powerhouse.,

13th. UC Berkeley_
Receiving a total of $730.7 million in research funding and
boasting an accomplished faculty,
the University of California Berkeley is a top research university.
Amongst the faculty, there are 8 Nobel laureates, 141 members of the National Academy of Sciences, 94 members of the National Academy of Engineering, and 10 recipients of the National Medal of Science.
There are over 100 research centers at UC Berkeley.

Current State of Internationalization and Global Engagement of American Colleges and Universities

APPENDIX B:

First 15 of
TOP 50 RESEARCH UNIVERSITIES in the US

[2] http://www.bestcollegereviews.org/top-research-universities/

1st of Top 50 : MIT

Founded in 1861, Massachusetts Institute of Technology (MIT) is a private research university located in Cambridge Massachusetts. At its founding, MIT was a research university that adopted a European polytechnic university model that stressed laboratory instruction in applied science and engineering. During World War II and the Cold War, researchers at MIT were working on computers, radar, and inertial guidance. As of 2014, 81 Nobel laureates, 52 National Medal of Science recipients, 45 Rhodes Scholars, 38 MacArthur Fellows, and 2 Fields Medalists have been affiliated with MIT. MIT is home to one of the most powerful university-based nuclear reactors in the United States. The Undergraduate Research Opportunities Program (UROP) was founded in 1969; MIT students can join or initiate research projects for academic credit pay, or on a volunteer basis. A substantial majority of undergraduates participate and often become published, file patent applications, or launch start-up companies based on their experience in UROPs.

2nd of Top 50: University of California Los Angeles UCLA

Each year since the 2009-10 academic year, UCLA has averaged $1 billion in research funding. There are over 350 research labs, centers, and institutes, 290 of these are medical centers, and over 1,800 inventions have come from this research powerhouse. Within this enormous institution, there are plenty of opportunities available for undergraduates to conduct research. Whether it is presenting at a conference, working with faculty, or writing for the Undergraduate Science Journal, undergraduates are a key part of the outstanding research being conducted at UCLA. Research at UCLA has made some of the world's greatest discoveries, from the invention of the internet, to reporting and classifying the first AIDS case in 1981.

3rd of Top 50: Johns Hopkins University

Johns Hopkins University was founded in 1876 as the nation's first research university. If you're looking for scientific research in almost any field at any level this is a tremendous place to find it. The mission of JHU is "discovery—the creation of new knowledge through research and scholarship, and the education of our students, undergraduate and graduate alike." Here are a just a few of the many research opportunities and centers at JHU: The Henry A. Rowland Center for Astronomy and Physics is unique in offering research in exciting fields such as Astrophysics, Condensed Matter Physics, Particle Physics, and Plasma Spectroscopy not only to graduates but also undergraduates, not to mention state of the art technology and instruments. The Silcio O. Conte Center, located at the Maryland Psychiatric Research Center (MPRC), provides students opportunities to conduct neuroscience research in preclinical and clinical laboratories, participate in a didactic lecture series, ethics discussions with faculty, literature journal club, and career development seminars.

4th of Top 50: Texas A & M University

In 1887, the U.S. Congress passed the Hatch Act, paving the way for Texas lawmakers to establish the Texas Agricultural Experiment Station, which is now Texas A&M AgriLife Research. It is the source for much needed research into the agricultural issues of the day. There are 13 research centers with over 1,700 employees, over 500 of which are doctoral-level scientists. These scientists are studying everything from plant diseases, animal parasites, grass and forage production, and the economical feeding of dairy and beef cattle. Researchers strive to maintain a traditional connection to farming and ranching, while developing crops with enhanced nutrition, discovering innovative renewable energy resources, and implementing new methods to improve air and water quality. This vast research organization serves all 254 counties in Texas and has 15 facilities around the state.

5th of Top 50: Princeton University

Research is integral at Princeton University, with over 1,100 participating faculty members in 34 academic departments, and 75 institutes and centers. Students at all levels are encouraged to participate in research with plenty of funding available. One opportunity available for undergraduate students is through PRISM (Princeton Institute for the Science and Technology of Materials) where undergraduates can earn a Certificate in Materials through taking a combination of core courses and participating in research with PRISM faculty. PRISM was founded to develop a deeper understanding of the world of materials and their applications while integrating science and engineering. Join Princeton in the attempt to advance the frontiers of human knowledge and society.

6th of Top 50: California Institute of Technology Caltech

Edward Teller said, "The science of today is the technology of tomorrow." At Cal-Tech research for undergraduates is diverse, flexible, competitive, and exciting. Opportunities abound starting with SURF (Summer Undergraduate Research Fellowships). Beginning in 1979, SURFs have introduced students to academic research under the guidance of some of the world's leading scientists and engineers; 85% of applicants have been awarded SURFs. If Caltech's location doesn't fit your needs there are other off-campus locations in Washington, Louisiana, and other college campuses. The LIGO Project is a NSF-supported endeavor through a summer program to design, build, and operate an astrophysical observatory for the direction and study of gravitational radiation. Caltech Undergraduate Research Journal, the WAVE program, Amgen Scholars, and NASA Programs are a few more opportunities at Caltech.

7th of Top 50: Yale University

It comes as no surprise that being an Ivy League university is one of the leading research universities in the nation. Yale University views research as an integral part of an undergraduate education. Students at Yale have access to over 800 faculty laboratories in 43 programs. First year students can participate in "Perspectives on Science and Engineering", a year-long course and summer program providing students with an introduction to scientific research and research opportunities. Other programs include STARS (Science, Technology and Research Scholars), developmentally based research programs, and individual fellowship programs. Also to consider is the ability to conduct research on neuroscience, black holes, and climate change at Yale's expansive research facilities.

8th in Top 50: Cornell University

Undergraduates at Cornell University are encouraged to participate in research to learn about their field of interest while gaining practical knowledge in that field. In 2011, 2,800 Cornell students earned credit for their research, and the typical senior science major spent 10-15 hours each week in the lab participating in faculty-led research. Cornell boasts two national research centers, Cornell High Energy Synchrotron Source and Cornell NanoScale Facility that serve broad national and international scientific communities. In addition to the numerous research centers and institutes, Cornell also has multiple laboratories, including a Duck Research Laboratory, New York Wine Analysis Laboratory, Equine Drug Testing Laboratory, and a Laboratory of Plasma Studies.

9th in Top 50: Georgia Institute of Technology

Conducting first-rate research since 1934, Georgia Tech Research Institute is a leader of scientific research today. During the fiscal year 2014, Georgia Tech was awarded $363 million in government and industry sponsored research contracts, and they currently have 76 active US Letters Patents and 43 pending US Patent applications. There are nearly 1,600 highly-skilled people employed at GTRI. Undergraduates can apply for President's Undergraduate Research Awards and receive a $1500 salary for conducting research with a faculty member. A student whose research has been accepted for presentation at a professional conference can apply for an additional $1000 in travel funds. Opportunities for student involvement flourish at this world-class institution.

10th in Top 50: Emory University

Almost half of undergraduates at Emory University have an opportunity to work with faculty on a research project; Emory received over $520 million in research funding awards, with over $300 million coming from the National Institutes of Health. The Scholarly Inquiry and Research at Emory program provides funding for undergraduates to pursue both domestic and international research. Emory has a vast amount of centers and institutes that conduct research. To name a few: Emory Global Health Institute, Emory Heart and Vascular Center, Emory Transplant Center, and Emory Vaccine Center. Emory is also home to the Woodruff Health Sciences Center, which has a $3.5 billion operating expenditure, over 23,000 employees, and 5,200 students and trainees.

11th in Top 50: Stanford University

Stanford University research has impressive statistics. Research faculty includes 2,118 members, 21 Nobel laureates, and 4 Pulitzer Prize winners. The university has a $1.33 billion budget, over 5,300 sponsored projects, and 5.4 million jobs have been created by Stanford entrepreneurs since the 1930's. Stanford's expansive list of research centers and institutions include the Center on Stress and Health, Cystic Fibrosis Center, Genome Technology Center, and the Pain Management Center. At the Stanford LPCH Vaccine Program, research is being conducted on using vaccines to prevent or treat cancer and allergic diseases, as well as to measure the benefit and cost of the vaccination in different populations.

12th in Top 50: Northwestern University

One of the country's leading private research universities, Northwestern University has an annual budget of $2 billion and sponsor research in excess of $500 million. There are over 17,000 students at Northwestern, 2,500 full-time faculty, and 90 school-based research centers. Northwestern's vision is for research to be interdisciplinary with people from different disciplines working together, as opposed to being divided into different disciplines with scholars working in isolation. Undergraduates can apply for the exciting and singular Circumnavigators Travel Study Grant, where a student is selected to receive a $9,000 stipend to spend the summer traveling the world, researching a topic of their choice. There are numerous other opportunities for undergraduates to conduct research during the summer or academic year.

13th in Top 50: University of California, Berkeley

Receiving a total of $730.7 million in research funding and boasting an accomplished faculty, the University of California Berkeley is a top research university. Amongst the faculty, there are 8 Nobel laureates, 141 members of the National Academy of Sciences, 94 members of the National Academy of Engineering, and 10 recipients of the National Medal of Science. There are over 100 research centers at UC Berkeley. The Berkeley Energy and Climate Institute is the coordinating hub for all of Berkeley's energy and climate efforts to ensure the integration of science, engineering, social science, and market and policy research. Through this center, projects are being conducted on present day energy challenges, such as biofuel research, climate change, and energy demand.

14th in Top 50: Columbia University

The oldest institution of higher learning in the state of New York, and one of the country's nine Colonial Colleges founded before the American Revolution, Columbia University is a private Ivy League research university. It was founded in 1754 as King's College by royal charter of George II of Great Britain, and renamed Columbia College in 1784. Columbia operates over 200 research institutes and centers including the Center for Archaeology, Institute for Cancer Genetics, Center for Schizophrenia Research, Columbia Neuroscience, the Earth Institute, the Center for Family Medicine, and Huntington's Disease Center. Columbia University annually administers the Pulitzer Prize and lastly, 101 Nobel Prize laureates have been affiliated with the university, the second most of any institution in the world.

15th in Top 50: Michigan State University

During the 2013-14 academic year, Michigan State University received $528 million in research funding, with 64% coming from the federal government, and 19% from private donors. Historic discoveries at Michigan State University include the research that led to the development of hybrid corn and the process still used for the homogenization of milk. MSU scientists are at the forefront of water research, working collaboratively across campus and around the world to find the best solutions to present day water challenges. They are studying a diverse range of disciplines including engineering, chemistry, microbiology, fisheries, crop and soil sciences, molecular genetics, geology, medicine, zoology, and sociology. Undergraduates at MSU are encouraged to participate in research at the university; one opportunity available is through the Undergraduate Research and Creative Activities program, which enables students to participate in the original investigation, experimentation, creative activity, and presentation of a research project.

Current State of Internationalization and Global Engagement of American Colleges and Universities

APPENDIX C:

First 15 of
The 50 BEST STUDY ABROAD PROGRAMS IN AMERICA

[3] http://www.bestcollegereviews.org/best-study-abroad-programs/

The 50 Best Study Abroad Programs in America

[3] http://www.bestcollegereviews.org/best-study-abroad-programs/ in the US, 2017

Potential employers see international experience as a qualification in hiring college/university graduates. The studying abroad enriches one's resume, and travelling broadens the mind, grows compassion, and allows the individual to see the world through a new lens.

Ranking Criteria _**The 50 Best Study Abroad Programs in America**[3]:

- The program is open to a limited number of students, 500 or less, providing a more intimate experience while abroad.
- The program is at least a semester long.
- Faculty from the university are involved with the students internationally, either traveling with the students, teaching abroad, or overseeing the program in the country.
- The university has a specific location internationally, students are not simply enrolling at international universities.

Current State of Internationalization and Global Engagement of American Colleges and Universities

APPENDIX D:

THE VALUE RUBRIC

For each dimension, the rubric outlines indicators for four increasingly complex levels of learning and understanding.

So the rubric is not only a tool for institutions, faculty, and staff, but also provides students with language to describe and analyze their experiences, and
ensures a connection between the learning outcomes and student reflection.

The End.