AAAS
ADVANCING SCIENCE, SERVING SOCIETY

Council of Graduate Schools
50th Annual Meeting
Washington, DC
December 1, 2010
2-4:30 PM

Workshop on

Strategies for Effective Diversity Programs

in Graduate Schools

Daryl E. Chubin, American Association for the Advancement of Science

Janet C. Rutledge, University of Maryland, Baltimore County

Sweeney R. Windchief, University of Utah

Issues/Themes for Presentation & Discussion

1. Assumptions & Approaches

2. Diversity & Inclusiveness as Institutional Goals

3. National Context: Data on Faculty & Student Participation

4. Local Context: How Law & Policy Constrain Programs

5. What to Measure, Analyze, & Apply

6. Outcomes: Changing Climate & Culture

7. Monitoring Participants: Students, Faculty, Leaders, Staff

8. Take-home Lessons: Calibrating Your Campus

Council of Graduate Schools
50th Annual Meeting
Washington, DC
December 1, 2010
2-4:30 PM

Strategies for Effective Diversity Programs in Graduate Schools: What's Legally Sustainable?

Daryl E. Chubin, AAAS Capacity Center

American Association for the Advancement of Science

Problem Thread of Capacity Center Work

- Who *participates* in STEM education & the workforce—who does not and why?

- How can *institutions* of higher education improve academic success, career advancement, and utilization of talent—students to faculty and other professionals?

- How does Federal *policy* help/hinder?

Definitions—Mind the Language

- **Diversity**: a condition, a starting point, a means of achieving goals—not an end in itself *("visible diversity" as symbolism too often displaces "enacted diversity" or deeds*)

- **Underrepresentation**: a statistical concept that measures participation/presence relative to a denominator (*not to be confused with <u>diversity</u>*)

- **Affirmative action**: an action to help accomplish a stated goal, e.g., achieving diversity. As a legal concept, it permits taking certain characteristics of the individual into account, all other things being equal, i.e., meritorious (and *has nothing to do with <u>preferences, quotas, or reverse discrimination</u>*)
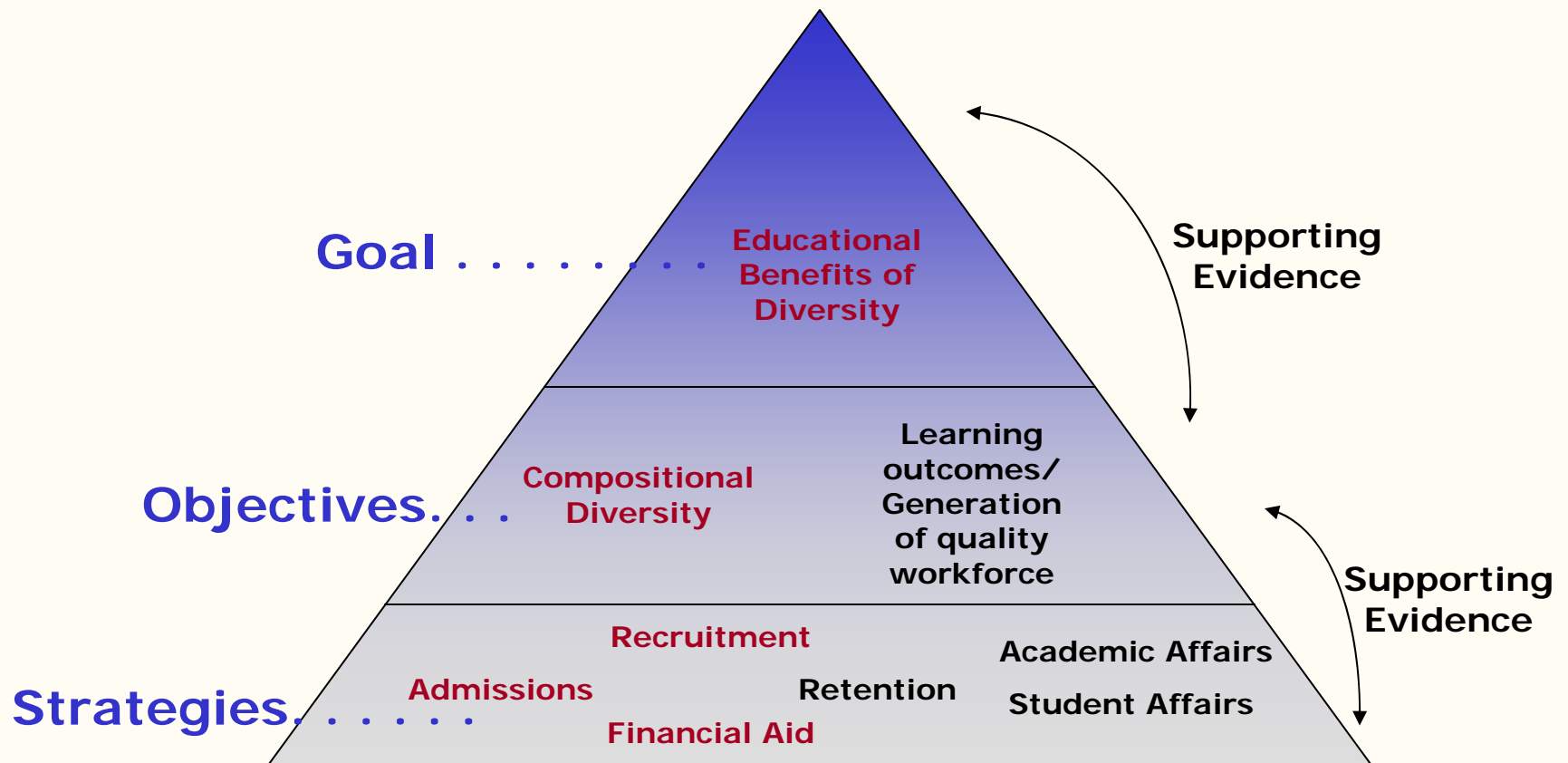
The Reach of Underrepresentation

Underrepresentation of this magnitude in the S&E workforce stems from the underproduction of minorities in S&E at <u>every</u> level of postsecondary education:

- 38.8 percent of K-12 public enrollment

- 33.2 percent of the U.S college age population

- 26.2 percent of undergraduate enrollment

- 17.7 percent of those earning S&E bachelor's degrees

- 17.7 percent of overall graduate enrollment

- 14.6 percent of S&E master's

- 5.4 percent of S&E doctorates.

Source: The National Academies, *Expanding Underrepresented Minority Participation*, Sept. 2010

Coherent Policy Design:
Mapping the University of Michigan Model

Educationally sound and legally defensible race-/ethnicity-conscious practices must be the product of a well-designed, institutionally aligned, and integrated process.

Goal . . . . **Educational Benefits of Diversity**

Objectives . . . **Compositional Diversity** — **Learning outcomes/ Generation of quality workforce**

Strategies . . . . . . **Recruitment** — **Admissions** — **Retention** — **Financial Aid** — Academic Affairs — Student Affairs

Supporting Evidence

Supporting Evidence

Arthur Coleman, Esq., or Steven Winnick, EducationCounsel LLC, Washington, D.C. www.educationcounsel.com
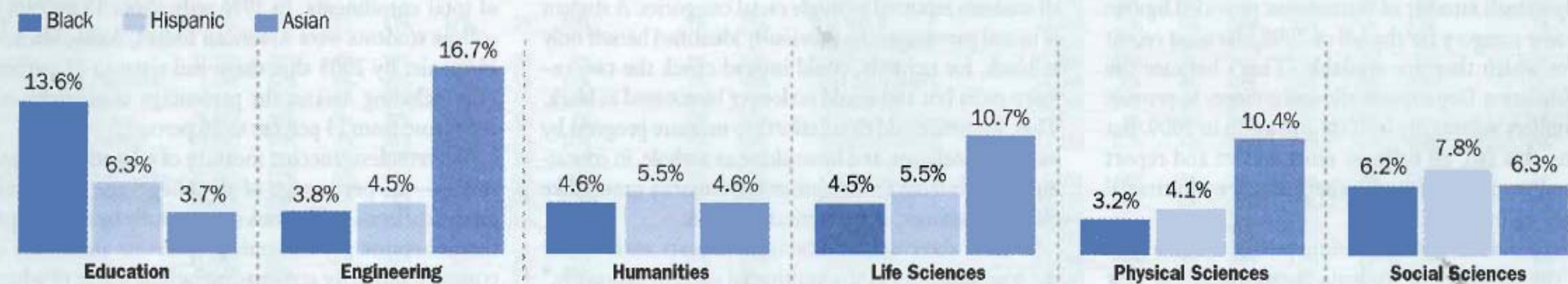
EducationCounsel

AAAS

Doctoral Diversity: More Degrees for Blacks, Hispanics

The total number of doctorates awarded to all U.S. citizens and permanent residents has been flat since 1998, but degrees for blacks and Hispanics have grown, by one-quarter and one-third, respectively. The number of women earning doctorates surpassed those received by men in 2002, and has continued to grow.

Doctorates Earned by Minority-Group Members Who Are U.S. Citizens, 2008

The bars highlight the percentage of all doctorates in each discipline awarded to members of the most prominent racial groups. The table below includes details by field for all racial groups and women.

Legend: ■ Black ■ Hispanic ■ Asian

Field	Black	Hispanic	Asian
Education	13.6%	6.3%	3.7%
Engineering	3.8%	4.5%	16.7%
Humanities	4.6%	5.5%	4.6%
Life Sciences	4.5%	5.5%	10.7%
Physical Sciences	3.2%	4.1%	10.4%
Social Sciences	6.2%	7.8%	6.3%

Doctorates Earned by Minority-Group Members Who Are U.S. Citizens, 2008

This table shows the percentage of all doctorates in each discipline awarded to members of racial groups and women.

	Black	Hispanic	Asian	Women	Number of degrees
Total, all fields	6.6%	5.7%	8.3%	52.1%	30,791
Engineering	3.8%	4.5%	16.7%	25.5%	2,948
Aerospace/aeronautical engineering	1.7%	2.5%	13.2%	10.7%	121
Chemical and related engineering	3.9%	5.1%	13.5%	31.3%	408
Civil and related engineering	2.6%	5.6%	8.9%	27.7%	270
Electrical and related engineering	2.7%	4.2%	28.3%	16.7%	664
Industrial engineering	13.3%	7.8%	11.1%	38.9%	90
Materials/metallurgical engineering	5.8%	2.9%	14.2%	25.4%	275
Mechanical and related engineering	4.7%	4.7%	9.6%	18.2%	387
Other engineering	3.0%	4.5%	16.9%	31.4%	733
Life sciences	4.5%	5.5%	10.7%	n/a	7,269
Agricultural sciences/natural resources	4.8%	4.0%	6.3%	n/a	647
Biological/biomedical sciences	3.7%	6.1%	11.7%	51.1%	5,135
Health sciences	7.0%	4.0%	9.2%	74.3%	1,487
Physical sciences	3.2%	4.1%	10.4%	29.0%	4,027
Chemistry	4.1%	5.9%	11.2%	35.6%	1,227
Computer and information sciences	3.7%	2.9%	16.8%	25.3%	695
Earth, atmospheric, and ocean sciences	1.7%	3.2%	4.7%	40.3%	533
Mathematics	4.5%	4.3%	9.0%	32.8%	667
Physics and astronomy	1.7%	3.1%	8.6%	20.0%	905
Education	13.6%	6.3%	3.7%	67.7%	5,590
Humanities	4.6%	5.5%	4.6%	51.3%	3,736
Social sciences	6.2%	7.8%	6.3%	n/a	5,477
Other	11.2%	4.9%	7.5%	n/a	1,744

Note: Percentages represent the shares of all doctorates awarded. Figures include permanent residents. People classified as Hispanic may be of any race. American Indian/Alaska Natives vary from zero to 0.7%. Percentages for Asian recipients do not include Native Hawaiians or other Pacific Islanders. Percentages are rounded. N/a means that figures were not available. Source: National Opinion Research Center at the U. of Chicago for U.S. government agencies, published in The Chronicle of Higher Education, 9-19-10.

Enter the Law

. . . Where the answer to any question is

seldom yes or no.

Rather, it depends. . . Context matters.

Handbook on Diversity and the Law—

Navigating A Complex Landscape to Foster Greater Faculty and Student Diversity in Higher Education

The Law Governing Effective Faculty and Student Body Diversity Programs in STEM and Related Disciplines . . . and Its Implications for Institutional Policy

American Association for the

Advancement of Science, April 2010

http://php.aaas.org/programs/centers/capacity/publications/complexlandscape/

Applicable Federal Laws

- Equal Pay Act of 1963—prohibits sex discrimination in compensation

- Civil Rights Act of 1964—outlaws race discrimination in schools & discrimination in employment based on race, sex, religion, and national origin; establishes Equal Employment Opportunity Commission as enforcer

- Title IX 1972—any educational program receiving federal funds may not discriminate based on sex

- Americans With Disabilities Act of 1990—bars discrimination in employment based on disability; bars discrimination by public and private entities in providing programs or services

- Civil Rights Act of 1991—amends and strengthens 1964 civil rights laws; establishes the Glass Ceiling Commission (1991-1996)

Laws Re: Science and Engineering*

- The Perkins Act of 1978 – to open vocational training, required each state to hire a sex-equity coordinator; truncated in 1998

- Equal Opportunities for Women and Minorities in Science and Technology Act of 1981 – NSF should encourage all groups; offer a suite of targeted programs; report national statistics every two years

- Commission on the Advancement of Women and Minorities in Science, Engineering, and Technology Development 1998 – *Land of Plenty* report, a.k.a. Morella Commission; BEST reports, 2002-2004

- U.S. Government Accountability Office Report on Gender Issues 2004 – Title IX applies to science and engineering in higher education more compliance reviews needed as enforcement is inadequate

applies to all federal contractors, e.g., grantee institutions

Complicated Legal Landscape: Different Legal Justifications Are Required For Employment and Students

Employment-_Remedial_

- Equal Protection Clause
  - o Public Institutions
- Title VII (Race, Ethnicity, Gender, Religion)
  - o Private (>15 Employees), Public employers
- OFCCP--Executive Orders (Race, Ethnicity, Gender, Religion)
  - o Federal Contractors
- Title VI (Race/Ethnicity); Title IX (Gender)
  - o If Purpose Of Federal Funding Is Employment Or Employment Confers An Educational Benefit
  - o Overlaps With Title VII

Student Programs-_Diversity_

- Equal Protection Clause (EPC)
  - o Public Institutions
- Title VI (race)
  - o Whole Operation Of Federal Funding Recipient, Including Employment If It Is The Purpose Of Funding Or Confers An Educational Benefit
  - o EPC Principles To Privates
- Title IX (gender)
  - o Whole Operation Of Federal Funding Recipient, Including Employment.
  - o EPC Principles To Privates

Some Possible "Do's": *Chairs*

- List peer institutions by department/discipline.

- Benchmark your unit against these departments and all institutions nationally regardless of type.

- Establish a timeline for diversifying your faculty (baseline + interim goals) consistent with university affirmative action plan.

- Assess your unit's "climate"—survey faculty and grad students. If possible, disaggregate results by gender, race/ethnicity, rank, etc. (without disclosing individual identities).

Some Possible "Do's": More for *Chairs*

- Use your postdoc pool to develop potential faculty hires.

- Establish a research relationship with a minority-serving institution, which becomes a source of graduate student and faculty talent (for exchange and possible hire).

- Hold faculty accountable for the "in-the-trenches" work that goes on at a subdisciplinary/specialty level.

- Create a part-time (or release time) position to implement the unit's search, recruitment, and hiring plan.

- Consult the Dean and/or the General Counsel's offices if you question the propriety/legality of a part of your process.

Bottom Line: The Faculty Search Process

- Focus on the adequacy of the *outreach process*.

- Task individual faculty members with contacting colleagues to *identify potential candidates*.

- Examine the resulting *diversity of the candidate pool.*

- ➢ **If you have not done all possible outreach and the pool is not diverse, the *outreach*, not the pool, is inadequate.**

- ➢ **Terminating a search *is* an option.**

Beware . . .

- **In "target of opportunity" faculty hiring . . .**

  the Provost establishes a central fund for faculty hiring that especially advances priorities in the institutional mission. This is commonly seen in many NSF-ADVANCE projects, as well as in medicine, law, and business schools.

- **The key is to reward the unit's behavior without punishing the new hire . . .**

  If there is "affirmative action backlash," i.e., the suspicion that the position was not "earned" or dilutes faculty quality, then the good intention is a disservice to the individual and may adversely affect unit climate and morale.

AAAS

Some Possible "Do's": *Deans*

- Recognize that the college/school must diversify bottom to top, i.e., undergraduates, staff, faculty, chairs.

- Establish a timeline (3-5 years) for achieving faculty diversity goals (recruitment and retention) consistent with university's affirmative action plan.

- Hold department chairs accountable for making progress (increase over baseline) toward faculty hiring and retention goals.

- Monitor across the college. Provide feedback. Be competitive and impatient, but prudent.

An Empirical Basis for Optimism in Faculty Hiring

"One of the most important findings from our research is that success in faculty diversity is no mere historical accident. A significant amount of the variation in faculty diversity reflects individual university effort and practice—strategies that can be replicated at other institutions."

source: University Leadership Council, *Breakthrough Advances in Faculty Diversity*, 2008, p. 14

Key Sources of My Remarks

- *Handbook on Diversity and the Law: Navigating A Complex Legal Landscape To Foster Greater Faculty and Student Diversity In Higher Education*, Burgoyne et al., AAAS-AAU, 2010, http://php.aaas.org/programs/centers/capacity/publications/complexlandscape/PDFs/LawDiversityBook.pdf

- *Governance Report to the Board of Trustees—Diversity*, Purdue University, May 2010.

- *Prepared for Work, Not the Career: Building Science, Engineering, and Technology Leadership,* A Report of a PAESMEM/AAAS Workshop for Women in Industry, Academia and Government, October 2010, http://www.lulu.com/product/paperback/paesmem-aaas-workshop-proceedings/12667312 (Bogue, B., Y. Comedy, and D. Chubin).

- *Expanding Underrepresented Minority Participation: America's Science and Technology Talent at the Crossroads,* The National Academies*,* Sept. 2010, http://www.nap.edu/catalog.php?record_id=12984

- "Bias literacy: A Review of Concepts in Research on Gender Discrimination and the U.S. Context." In A. Cater-Steel & E. Cater (Eds.), *Women in Engineering, Science and Technology: Education and Career Challenges*. Hershey, PA: IGI Global, April 2010 (Sevo, R. and D.E. Chubin).

- *Breakthrough Advances in Faculty Diversity*, University Leadership Council, 2008, http://www.educationadvisoryboard.com/ulc_council_services.asp

To continue the conversation. . .

Daryl Chubin, Ph.D., Director

dchubin@aaas.org

202-326-6785

AAAS Capacity Center

www.aaascapacity.org