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Transforming Culture in
Engineering Education

The Climate Survey: A Tool for Institutionalizing Diversity Work

May 9, 2013
12 pm (Eastern)

WEPAN Diversity Advancement Committee

WEPAN 2012-2013 Webinar Series



- **Host: Diane Matt**, Executive Director, WEPAN, Women in Engineering ProActive Network



- **Co-Host: Sharnnia Artis**, Director of Education and Outreach, Center for Energy Efficient Electronics Science, University of California, Berkley; WEPAN National Conference Chair



- **Speaker: Chris Anderson**, Special Assistant to the President for Institutional Diversity, Michigan Technological University



- **Speaker: Lily Gossage**, Research Associate, Office of Engineering Educational Research & Assessment, California State University, Long Beach; WEPAN Director of Diversity Advancement

General Info and Q&A

- The webinar uses Voice Over Internet. If your sound quality is not good, a teleconference line is available:
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 - Audio Pin: Check your screen once you dial in.
- Participant microphones are muted for quality.
- Undock, expand “Questions” pane in control panel.
- We will stop for questions at the end of the webinar. Presenter will stay on the line for an additional 10 minutes after the webinar. Please post your questions during the webinar.
- Stay with us if we are temporarily disconnected.
- Download PowerPoint and link to recorded webinar at www.wepan.org > Webinars.

WEPAN's Core Purpose

- **To propel higher education to increase the number and advance the prominence of diverse communities of women in engineering.**



About WEPAN www.wepan.org

- **Core Values:**
Knowledge, Collaboration, Inclusion and Leadership
- **880 members from 200 engineering schools, corporations, government and non-profits**
- **Support WEPAN's work! Join and make a donation at www.wepan.org**

WEPAN Knowledge Center

<http://wepanknowledgecenter.org>

Goal: Increase the number, scope and effectiveness of initiatives to advance women in engineering.



- **Catalogued and fully cited resources-1,300+**
Research, reports, data and statistics, agenda papers, bibliographies, best practices,
- **Online Professional Community**
Network, collaborate, identify experts, share information

2013 National WEPAN Conference

Engage Everyone: Building an Inclusive Climate for Diverse Communities for Women in STEM

June 19-22, 2013

Hyatt Regency Atlanta, Georgia

Join us for the ONLY national forum entirely focused on advancing diverse communities of women in engineering higher education.

Top 5 Reasons to Attend the WEPAN Conference

1. Meet other change agents and get inspired.

Make new friends, identify potential partners and kick back and relax at the Newcomers and Showcase Receptions.

2. Learn strategies that translate directly to your work.

Attend conference sessions, including panels, paper presentations, and workshops highlighting best practices and explore new programs, research and findings.

3. Empower yourself.

Expand your skills at our Pre-Conference Workshops on Gender Competence and Creativity.

4. Share your challenges.

Enjoy thematic Dinner Discussions at local restaurant favorites.

5. Get the latest on building gender-inclusive cultures with practical, research-based strategies.

Joint Women in Engineering Division of the American Society for Engineering Education and WEPAN Symposium on Saturday, June 22nd

Register online by May 31st to save! Visit www.wepan.org



Poll Question #1

How many of you come from organizations/institutions that routinely conduct climate surveys?

What is Diversity?

❑ What is Diversity?

- “Diversity is a commitment to recognizing and appreciating the variety of characteristics that make individuals unique in an atmosphere that promotes and celebrates individual and collective achievement” (2008, University of Tennessee Libraries’ Diversity Committee).

❑ Why does Diversity Matter?

- “It enhances the organization's responsiveness to an increasingly diverse world of customers” (2011, University of California, Berkeley Human Resources).

What is Diversity? – cont'd

- ❑ **Definition of Diversity may be different for different groups/communities.**
 - Visual Diversity: gender, ethnicity/race, physical challenges, age
 - Non-Visual Characteristics: gender identity, religion, economic status

- ❑ **It is important to identify all forms of diversity.**
 - Exposure → Recognition → Valuation

WEPAN's Diversity Statement

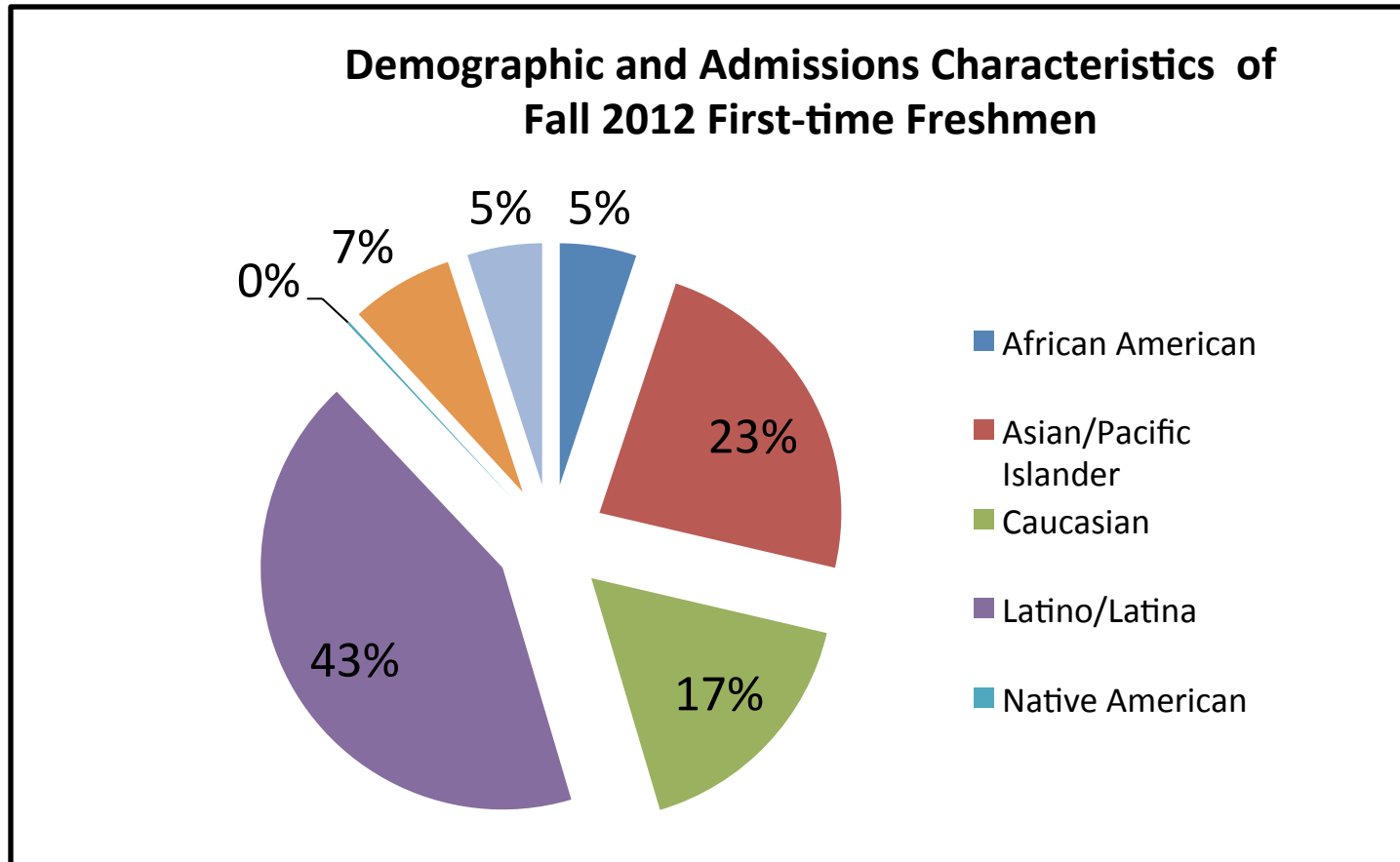
WEPAN strives to model a culture and an inclusive community that consciously embraces and celebrates rich dimensions of diverse communities of women, allies, and stakeholders. WEPAN advances best practices for increasing inclusive excellence through an education- and industry-based network of members. WEPAN demonstrates these values by creating a welcoming environment characterized by:

- Practicing mutual respect for those unique experiences and qualities that are different from our own;
- Recognizing that diversity includes ways of knowing as well as ways of behaving;
- Acknowledging that bias is a conscious and unconscious practice that manifests itself in the everyday discourse and actions of individuals and institutions;
- Building alliances across the range of individual and group differences, including the engagement of male allies;
- Sharing best practices to ensure the equity and the success of all women engineers;
- Working collaboratively with other advocacy groups

Know Your Institution

- ❑ How well do you know your institution?
 - Demographics & graduation rates of students
 - Demographics of tenure-track rate of faculty
 - Demographics of staff & administrators
 - Student services & support office
- ❑ How do individuals see themselves as supporting and contributing to diversity?
- ❑ Data is key
 - Institutional research & assessment office
 - Cultural or gender affinity professional organizations

California State University, Long Beach (sample graph)



Purposes of the Climate Survey

- ❑ Attempt to bridge the gap between people's general understanding of climate and the specific behaviors, actions, and attitudes that create it.
- ❑ Provide necessary information for students, faculty, and staff to initiate, plan, and implement steps toward achieving diversity-related goals.

Structure of the Climate Survey

- ❑ Questions are designed to make connections
- ❑ Connections between institution's diversity-related goals and student, faculty, staff needs for cross-cultural experiences and skills –
 - to enable professional success
 - to achieve excellence in learning and research
- ❑ Connections with national norms and institutional benchmarks

Typical Categories of Questions (Items)

1. Organization Design
2. Job Characteristics
3. Work Processes
4. Communications
5. Technology
6. Stakeholder Satisfaction
7. Peer Relationships
8. Direct Supervisor Relationships
9. Senior Management Relationships
10. Culture and Work Environment

Example Categories of Questions: Michigan Tech

- ☐ Related to the Mission, Purpose, and Diversity-related goals of the institution
- ☐ Perceptions of diversity-related issues on campus
- ☐ Satisfaction/Workload and Work-Life Balance
- ☐ Department/Campus Experience
 - Atmosphere
 - Respect
 - Tradition bound
 - Sexism
 - Racism
 - Homophobia
 - Accommodating Persons with Disability

Example Categories of Questions: Michigan Tech (cont'd)

- ☐ Personal Relation to Diversity-Related Principles and Goals
- ☐ Diversity-Related Knowledge and Skills
- ☐ Orientation Toward Participating in Diverse Interactions
- ☐ Classroom and Campus Experiences
- ☐ Personal Experience or Witness of Harassment or Discrimination
- ☐ Personal Safety
- ☐ Demographics of Responders

Organization Design (sample questions)

- ☐ Employees at my institution have a shared understanding of what the institution is supposed to do.
- ☐ Employees at my institution have the right skill sets to perform their job functions.
- ☐ My institution does a good job of informing students, staff, and faculty of its diversity-related goals.
- ☐ My institution would benefit from having more women faculty on campus.

Job Characteristics (sample questions)

- ☐ I gain satisfaction from my current job responsibilities.
- ☐ I have the opportunity to further develop my skills and abilities.
- ☐ My work adds value to the organization.
- ☐ My colleagues value my research.

Work Processes (sample questions)

- ☐ I am clear on how best to perform my work tasks.
- ☐ Everyone in my institution takes responsibility for their actions.
- ☐ My work group operates effectively as a team.
- ☐ I make changes to my teaching or course content in order to incorporate more diverse or multicultural materials.
- ☐ Criteria for tenure and promotion are clear to me.

Communications (sample questions)

- ☐ When I need help, I can ask others in my work group for suggestions or ideas.
- ☐ Interpersonal communication and relationships contribute to organizational performance.

Technology (sample questions)

- ☐ Our technology is reliable and works when we need it to work.
- ☐ The tools and technologies that I use help me to be efficient in completing my work.

Stakeholder Satisfaction (sample questions)

- ☐ Faculty and staff understand the specific needs of our students.
- ☐ Students, staff, and faculty regularly tell us that we are doing a great job.
- ☐ I am satisfied with my overall experience at my institution.
- ☐ I have seriously considered leaving my institution because...

Peer Relationships (sample questions)

- ☐ I feel supported by my peers in developing my skills and abilities.
- ☐ I feel that my peers are receptive to the cultural differences and support a diverse community.
- ☐ When disagreements occur, my peers are open to addressing them promptly.
- ☐ When disagreements occur, my peers are open to addressing them fairly.

Supervisor Relationships (sample questions)

- ☐ My direct supervisor listens to my ideas and concerns.
- ☐ My direct supervisor serves as a positive role model for me.
- ☐ I feel that my direct supervisor appreciates the work I do.
- ☐ I believe my direct supervisor values the diverse cultural differences in his/her staff.

Management Relationships (sample questions)

- ☐ Senior management treats employees fairly.
- ☐ I trust the information I receive from senior management.
- ☐ I believe senior management appreciates the work I do.
- ☐ I believe senior management values cultural differences and supports a diverse community.

Culture/Work Environment (sample questions)

- ☐ Morale is high across my institution.
- ☐ I enjoy being a part of my institution.
- ☐ I feel that my institution's leaders/peers are supportive of cultural differences.
- ☐ My institution is receptive to diversity issues and express support.

Climate Survey Logistics

- Use reliable tools/software (e.g., SurveyMonkey, Qualtrics)
- Evaluate and test the survey and the tool.
- Determine ideal time to be implemented (e.g., academic calendar).
- Survey all constituents.
- Ensure upper-admin is supportive of time commitment
- Keep surveys similar for comparisons; relevant questions to increase feelings of inclusion.
- Participant incentives are important
- Identify individuals and units for implementation
- Ensure survey addresses groups' concerns
- Use written comments carefully
- Follow up with focus groups
- Ensure confidentiality of responses

Overview of “Diversity Work”: Michigan Tech

- ❑ 1992: Women, recommendations implemented
- ❑ 2003: “Diversity Framework” conceived
- ❑ 2005-2007: Analysis/Development/Implementation of Recommendations
 - Themes: Diversity definition, communications, recruitment/retention, dialogue for improving climate, work environment/space
 - Develop a diversity policy
 - Integrate diversity in all university functions
 - Regularly assess all academic/administrative units in meeting diversity goals
 - Utilize resources for the aforementioned
 - Ensure professional development addresses diversity

Overview of “Diversity Work”: Michigan Tech (cont’d)

- ❑ 2006-2007 Focus Groups
- ❑ 2007 Final Report
- ❑ Actions at different stages
 - Established
 - Ongoing
 - Not addressed
 - To be addressed
 - Focus has changed
- ❑ 2010: Second Campus Climate Survey implemented
- ❑ 2011-2013: Sharing results; Developing diversity plans
- ❑ 2013-2015: Status Report; Focus groups

Response Rates: Michigan Tech

Total count of target populations surveyed in 2005 and 2010

Michigan Tech

Office for Institutional Diversity

Institutional-wide Climate Study Update

Climate Survey: 2005 & 2010

	2005				2010		
	Total Responses	Total in Group	% of Response		Total Responses	Total in Group	% of Response
Faculty	260	451	58%		252	443	57%
Students	3,077	6,550	47%		2,653	6,957	38%
Professional Staff	288	506	57%		402	562	72%
Employees	143	362	40%		183	399	46%

Response Rates: Michigan Tech

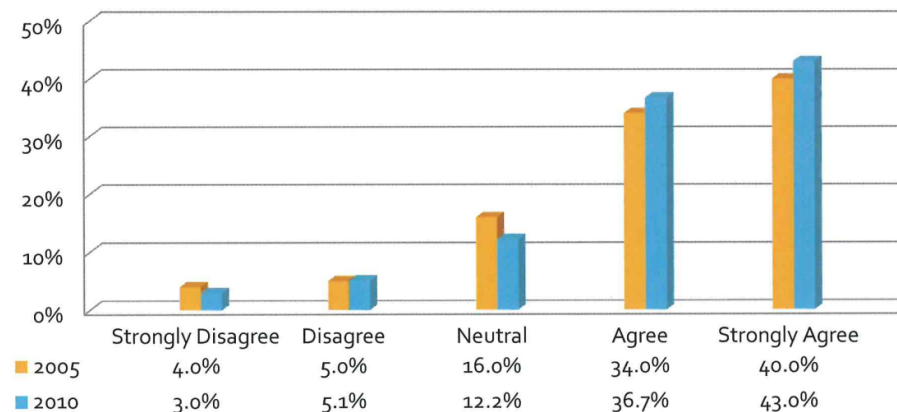
Question: "Faculty benefit from gaining knowledge, skills, and experiences that support diversity-related goals."

Institutional-wide Climate Study Update

MichiganTech
Office for Institutional Diversity

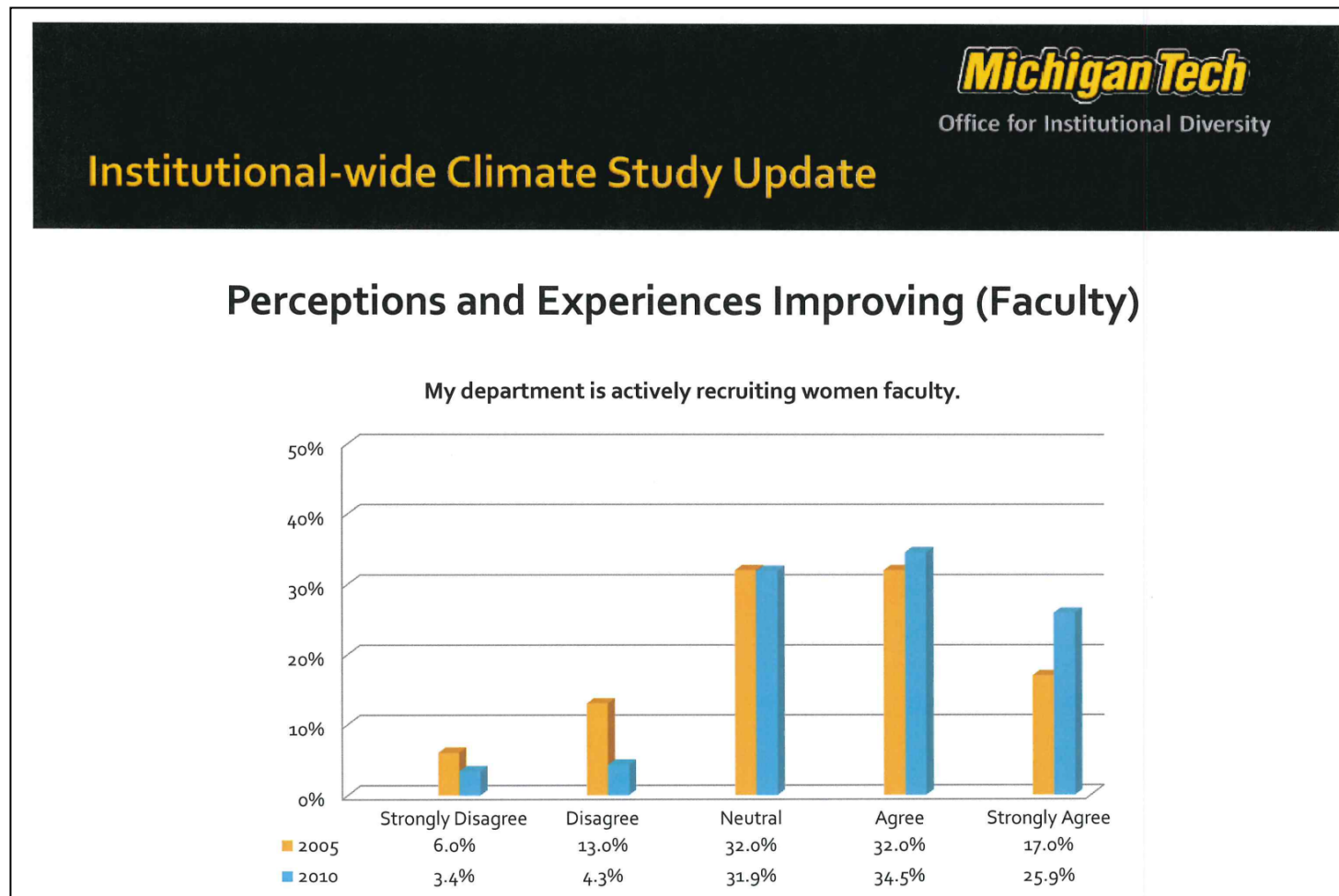
Perceptions and Experiences Improving (Faculty)

Faculty at Michigan Tech benefit from gaining knowledge, skills, and experiences that support diversity-related goals.



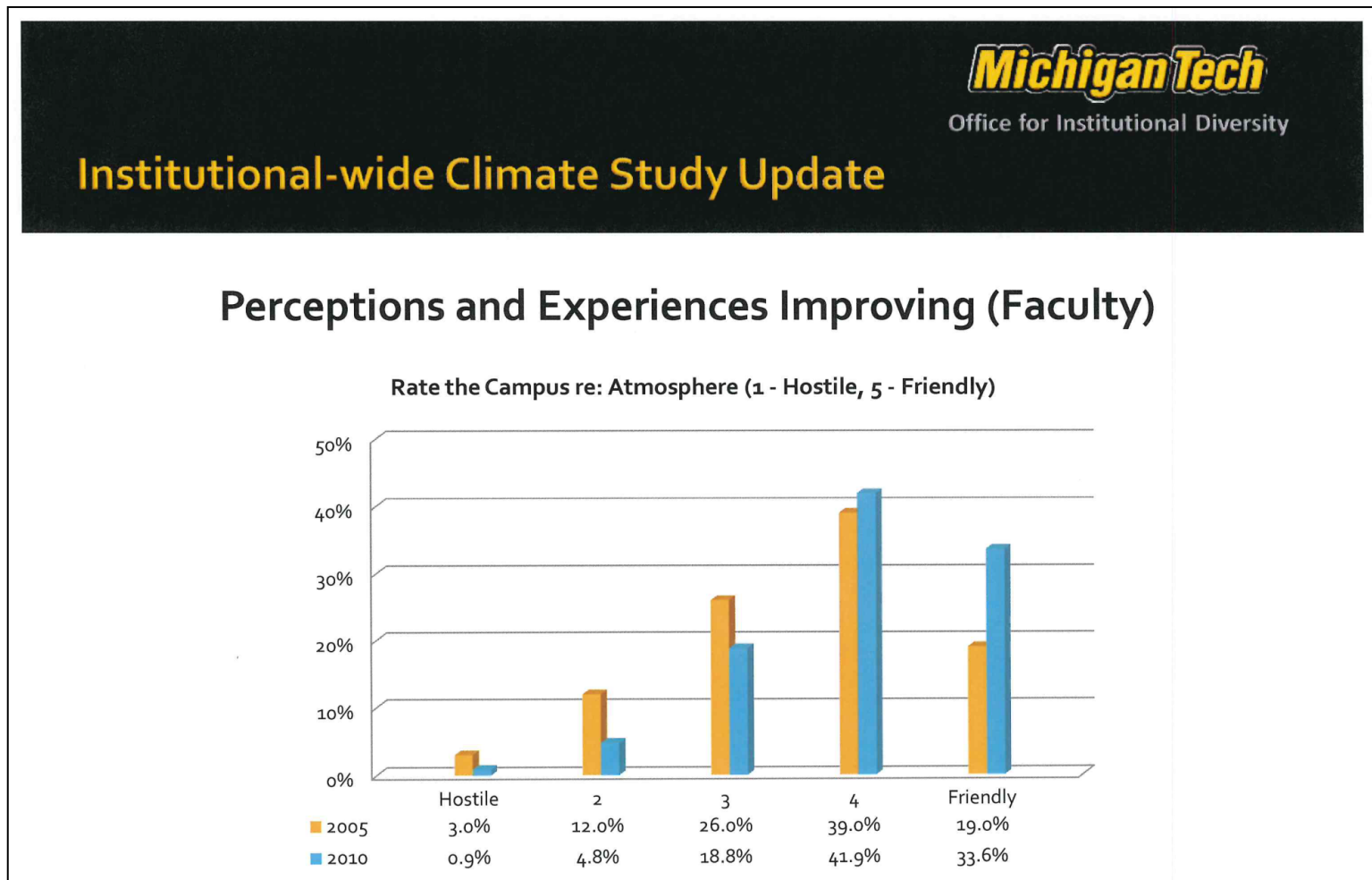
Response Rates: Michigan Tech

Question: "My department is actively recruiting women."



Response Rates: Michigan Tech

Question: "Rate the campus atmosphere (1-Hostile, 5-Friendly)."



Sample Outcomes: Michigan Tech

- Childcare Center
- ADVANCE Grant
- Electrical Engineering Women's Center
- Internal Benchmarking/ Competition
- Dual Career Program
- Center for Diversity and Inclusion
- Change in Perceptions (2010 Climate Survey)
- Bias Literacy & Legal Aspects Training for Search and P&T Committees
- Native American Project
- Diversity Facts created
- Set Female student goals @ 35% in Engineering
- Ongoing Diversity Plans

Campus-wide Diversity Work (using Climate Study Results)

Diversity Plans: a) Preparation; b) Template; c) Review of Status; d) Opportunities to Suggest Strategies. Below is a sample template.

Submitted by: _____ **Date:** _____

2012 – 2013 Department/School/College Diversity Plan

1. Describe the most significant strategies you will implement, expand, or continue. These short and/or long-term objectives and strategies should result in increased diversity and a more inclusive department/school/college that supports students, faculty, and staff success. The outcomes should help Michigan Tech accomplish short- and long-terms diversity goals.

Objective	Brief Descriptions of Strategies	Person(s) responsible for leading Strategy	How will you measure success or progress
For Faculty			
For Students			
For Staff			

Sample Outcomes: California State University, Long Beach

2007 Salary Study: \$2,200 staff, \$7,300 faculty, \$12,200 Administrators

Important Note: Compare within similar institutions (i.e., growing salary gap between public and private universities; gains larger at private)

University	Full Professors	Associate Professors	Assistant Professors
CSU-Long Beach	\$93,800	\$75,500	\$69,500
CSU-Dominguez Hills	\$92,800	\$77,500	\$71,200
CSU-Fresno	\$92,900	\$70,600	\$63,300
CSU-Fullerton	\$93,500	\$78,200	\$70,800
CSU-San Bernardino	\$92,900	\$70,700	\$64,300
CSU-Stanislaus	\$89,200	\$69,800	\$62,300
CSU-Chico	\$90,000	\$69,600	\$62,300
CSU-Bakersfield	\$94,800	\$73,600	\$68,600

Source: AAUP faculty salary survey.

Sample Outcomes: California State University, Long Beach

2009 College of Engineering: *Women, SWE, and the Lactation Law*

- ❑ Minimum requirements of the California Lactation Accommodation Law:
 - Labor Code§1030: Employers shall provide reasonable amount of break time for employee to express breast milk
 - Labor Code§1031: Employer shall make reasonable efforts to provide employee with use of a room or other location, other than a toilet stall
 - Labor Code§1032: Employer violation subject to \$100/violation
- ❑ Why a focus group was needed:
 - Room lacks: No clean/safe water source, disinfectant soap, paper towels, refrigerator, electrical outlet, chair, table for pumping supplies
 - Mass confusion among women students, staff, faculty
- ❑ “Lactation Room” → “Quiet Room”

Sample Results: CSULB Faculty Diversity (2001-2009)

- ❑ Faculty of color: 189 (23%) to 276 (31%) – 8% is huge!
 - Representation among faculty of color exceeds the national average
- ❑ Hispanic tenured/tenured track: 38 (4.6%) to 63 (7.1%)
- ❑ African American tenured/tenured track: 33 to 37
 - 27 African Americans have been hired since 2000
 - Issue with retention
- ❑ American Indian tenured/tenured track: 3 to 6
- ❑ Asian American tenured/tenured track: 115 (13.9%) to 170 (19.1%)
- ❑ White tenured/tenure track: 73 to 67
- ❑ Managers of color: 47 (23%) to 73 (33%)
- ❑ Hispanic (highest increase): 10 (4.9%) to 28 (12.7%)

Sample Outcomes: California State University, Long Beach

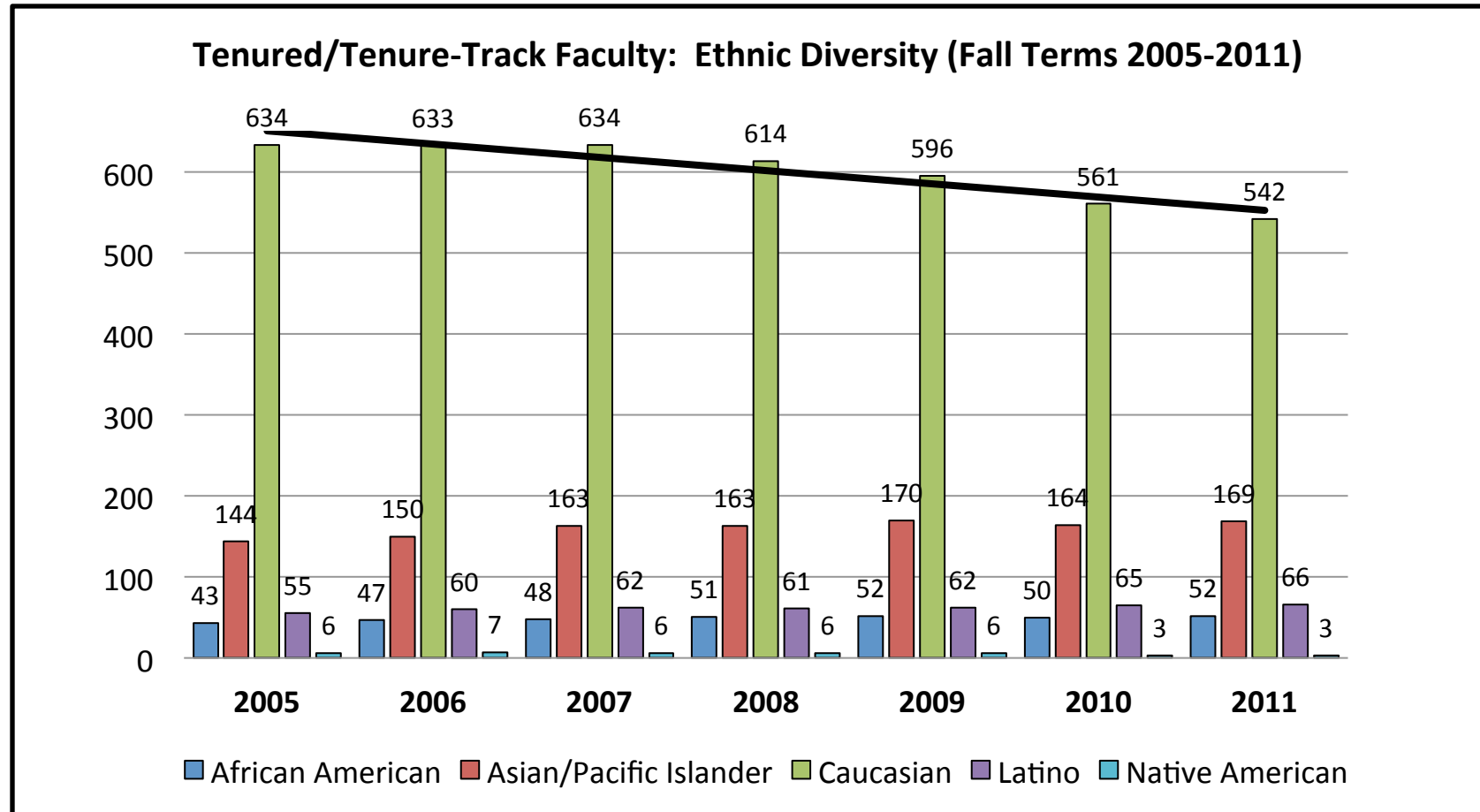
2010 WASC Report (focus group, employees representatives)

- ☐ “Recommendation 4”: Diversity Plan (faculty/staff)
- ☐ Nine (9) Key principles: student success, academic freedom, respect, appreciation, inclusiveness, engagement, equity, modeling, academic quality,
- ☐ Four (4) Action Areas:
 - Education & Training
 - Recruitment (e.g., use MWDD, CDIP)
 - Retention & Campus Climate
 - Assessment
- ☐ CSULB Diversity Plan:
<http://www.csulb.edu/depts/oed/policies/faculty-staff-diversity-plan.html>

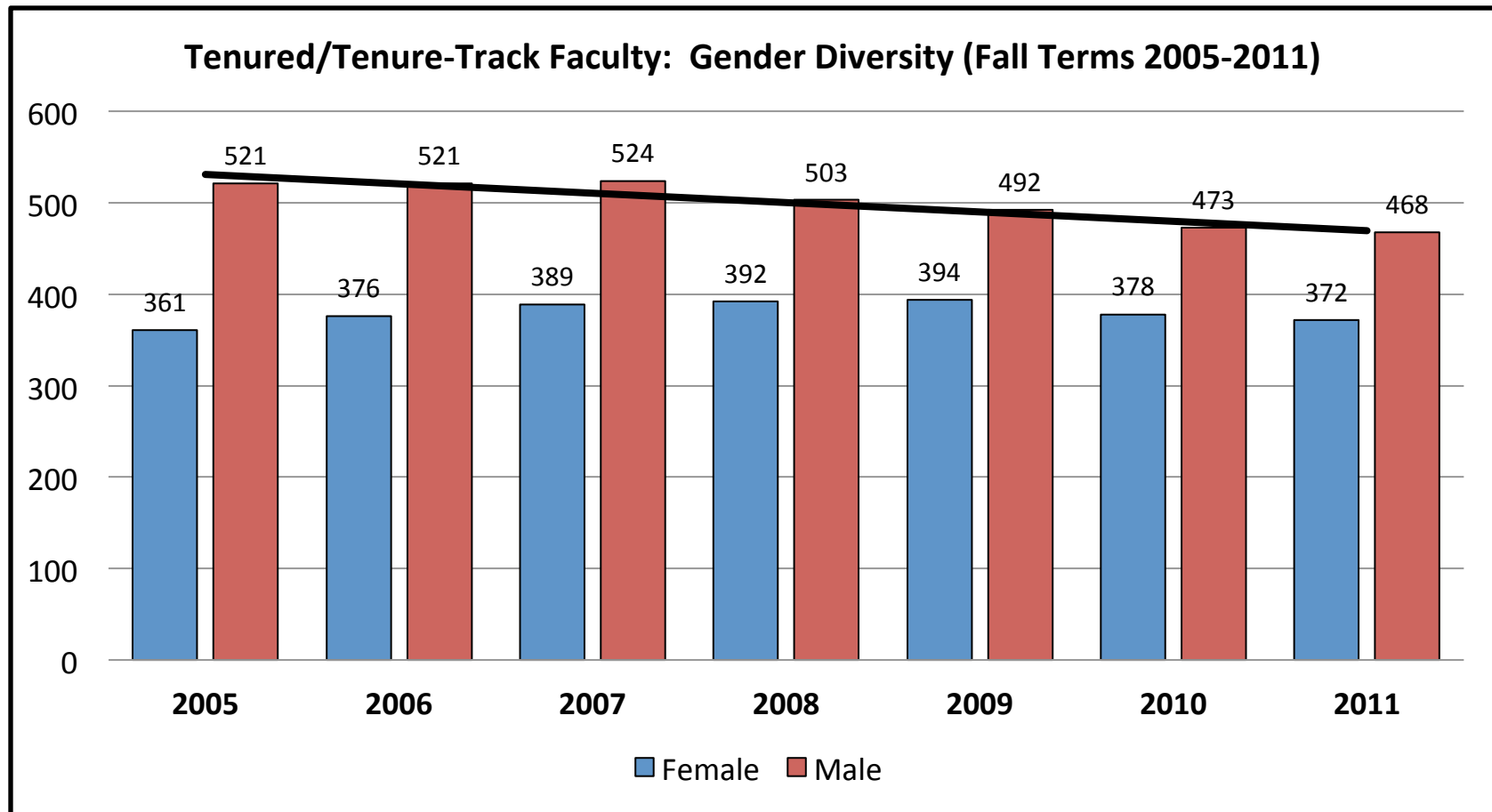
Some Effects of Diversity Initiatives: CSU, Long Beach

- ❑ 1996-2009: 6-year graduation doubled to 54%
 - African American rate more than tripled to 46%, the largest gain of any subgroup.
 - Hispanic more than doubled to 46%.
 - Native American increased to 61%, ~ 1 ½ more than earlier levels
 - Asian more than doubled to 55%.
 - Whites increased to 59%, ~ 1 ½ more than earlier levels
- ❑ CSULB ranked 6th nationally among all institutions conferring bachelor's degrees to students of color (2009, Diverse Issues in Higher Education).

Some Effects of Diversity Initiatives: CSU, Long Beach



Some Effects of Diversity Initiatives: CSU, Long Beach



How Results Used: Rochester Institute of Technology (RIT)

- ☐ Established Search Procedure Guidelines/Resources manual
- ☐ Involve Board of Trustees in planning Diversity Day events and reactivated Diversity subcommittee
- ☐ Mandated Multicultural Competencies/Bias Awareness Training (sponsored by Provost)
- ☐ Broadened Phase 2 training to 'Train-the Trainer' for college departments (College Liaisons)
- ☐ Established Women's Commission
- ☐ Set Hiring Goals for women @ 32%
- ☐ Received ADVANCE Catalyst grant

How Results Used: RIT (cont'd)

- ❑ Implemented Chemical Engineering program.
- ❑ Established we@rit summer program for girls.
- ❑ Increased AALANA faculty hires by avg. 30% over next six consecutive years.
- ❑ Increased number and scope of Future Faculty Career Exploration Program participants.
- ❑ Introduced monetary award for faculty diversity recognition.
- ❑ Began Emerging Leaders Program in 2008.
- ❑ Instituted Provost's Faculty Associates Program.
- ❑ Conducted follow up Climate Study and Employee Satisfaction Survey in 2009.

Tips for an Effective Survey

- Ensure respondents understand measures of perceptions about diversity.
- Ensure President and executive team on board.
- Create steering committee with representative groups.
- Conduct pilot before actual survey.
- Ensure steering committee understands comments small % responses.
- Break down results by colleges/schools, gender, URM, etc.
- Use focus groups for non-definitive responses.
- Higher response rate is ideal. Compare “with-in” group responses.
- Analysis is arduous/ongoing; data mined/interpreted concurrently.
- Employ expert researchers, utilize quantitative/qualitative software.
- Follow up recommendations with responsible parties.
- Report on progress, once or twice a year.
- Encourage university to participate in national surveys (e.g., NSSE, etc.)

Poll Question #2

How many of you feel a climate survey will help your institution?

Continue the Conversation at 2013 WEPAN National Conference

Keynote Speakers



Engage Everyone: Strategies to Increase Participation of Under-represented Groups in Science and Engineering

Maria Klawe, Ph.D.

President, Harvey Mudd College



**Who Will Sit at the STEM “Welcome Table”?:
Food for Thought (and for the Table)**

Arthur C. Jones, Ph.D.

*Clinical Professor & Associate Dean for Inclusive Excellence
Colorado Women’s College, University of Denver*

Other Related Presentations

Corporate Environment Focusing on Inclusive Policies for Women in STEM

Lee Ann Schwope
Battelle

**Activating Advocates and Allies for Gender Equity:
Engaging with Male Colleagues**

Canan Bilen-Green, Cali Anichah, Ann Burnett, & Christi McGeorge
North Dakota University

Gender-focused Policy Analysis for STEM Faculty at Regional Teaching-Focused Institutions

Heather Kanenberg & Sara Atwood
Elizabethtown College

Corporate Service Corps - Creating an Inclusion for Everyone Environment

Dan Gateno & Jessica Eide
IBM

Asking Questions and Discussion

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Questions & Discussion



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Thank You for Attending

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- Pay a personal tribute to someone who has made a difference to women in engineering
- Thank you for attending today!