

# The Role of IR in Policy Analysis and Grant-Funded Research on Faculty

Sandra W. Gahn

Office of Institutional Research

Florence A. Hamrick

Educational Leadership and Policy Studies

Jason Pontius

ADVANCE Research Assistant

**Iowa State University**

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# Overview

- Sloan Grant database
- AAUDE Faculty Satisfaction Survey
- Iowa State ADVANCE & Mizzou ADVANCE
- Lessons Learned



# Sloan Grant Goals

- Stage 1: Use institutional data to examine whether any potential savings realized by improved faculty retention justify the costs of providing tenure flexibility at Iowa State
- Stage 2: Use database to track how career flexibility at ISU affects faculty productivity, retention, and work/life balance satisfaction.

# Sloan Grant Process

- **Step 1.** Determine what data were needed and what were already captured
- **Step 2.** Meet with administrative units to determine data availability
- **Step 3.** Assess which data could be collected in time
- **Step 4.** Apply for IRB approval
- **Step 5.** Collect and combine available data into a new database
- **Step 6.** Add new data as they become available
- **Step 7.** Advocate for the collection of new information

# Issues Encountered - Sloan Grant

- Lack of complete data
- Uncertainty about why faculty leave.
- Use of college-level aggregate data
- Accounting for major research grants and other funding
- Inability to fully capture breaks in tenure/service/employment
- Concerns about privacy
- Maintaining and updating the database

# Faculty Work/Life Database

- The database measures the costs and benefits of ISU flexible career policies.
- Captures data in a systematic way about faculty who stop the tenure clock or reduce workload
- Data Elements:

<b>Faculty Demographics</b>	<b>Job Search Costs</b>
<b>Start-Up Costs</b>	<b>Faculty Compensation Data</b>
<b>Faculty Flexibility Policy Data</b>	<b>Tenure and Employment Data</b>

# Faculty Work/Life Database

College Category	Search Committee Costs Sub-Total <sup>1</sup>	On-Campus Interview Costs Sub-Total <sup>2</sup>	Advertising & Covered Classes Costs <sup>3</sup>	Average Asst. Professor Start-Up Costs FY2003-FY2006 Sub-Total <sup>4</sup>	Average Cost to Hire One New 9-mo. Asst. Professor (Tenure-Eligible)	Average Cost to Retain One 9-mo. Asst Prof from FY2006-FY2007 Sub-Total <sup>5</sup>	Estimated Staff Cost (Cental) to Administer Flexible Policies <sup>6</sup>	Total Cost to Maintain Faculty with Flexible Policies	Dollars Saved with Flex Policy Retention vs. Hiring New <sup>7</sup>
<b>A</b>	\$6,872	\$2,711	\$53,084	\$310,621	\$373,288	\$65,946	\$625	\$66,571	\$306,717
<b>B</b>	\$8,065	\$4,788	\$59,978	\$310,472	\$383,304	\$78,516	\$625	\$79,141	\$304,162
<b>C</b>	\$5,727	\$2,029	\$39,765	\$93,225	\$140,746	\$57,559	\$625	\$58,184	\$82,562
<b>D</b>	\$5,021	\$3,392	\$32,784	\$64,351	\$105,548	\$50,471	\$625	\$51,096	\$54,453
average	\$6,470	\$3,072	\$48,352	\$167,222	\$111,432	\$66,220	\$625	\$28,332	\$83,099

1. See Table 1

2. See Table 2

3. See Table 3

4. See Table 4

5. See Table 5

6. See Table 6

7. Does not include salary savings for vacant positions but dollars were calculated and appear in Table 7.

# Faculty Work/Life Database

## Search Committee Costs:

- Number of Committee Members
- Length of Search in Days
- Ave. Hours Spent on Committee per Week
- Salary to pay committee members for the percent of time spent on search committee

## Advertising Costs:

- Ave. number of publications used
- Type of publications
- Ave. cost of advertising



# Faculty Work/Life Database

## Interview Costs:

- Ave. no. of on-campus interviews per search
- Ave. domestic airfare
- Des Moines to Ames ground travel costs
- Ave. Ames hotel costs per night
- Food per diem
- Ave. number of days on campus

# Faculty Work/Life Database

## Start Up Costs:

- Ave. Assistant Professor starting salary
- Ave. start-up costs
  - Computer/peripherals
  - Lab space/equipment
  - Graduate assistants
  - Summer support
  - Moving expenses
  - Research support

# Faculty Work/Life Database

## Vacancy Costs and/or Savings:

- Ave. length of search in days
- Time from hire to start date
- Average cost of lecturer to fill vacancy

## Work/Life Administrative Costs:

- No. of administrative staff to approve policies
- Hours spent administering program
- Salary of staff

# Tenure-Clock Extension Policy Reasons, 2003-2008

Reason	Women	Men	Total
Arrival of children	17	11	28
Illness	4	9	13
Extenuating P&T review decision	2	2	4
Family/life change	3	1	4
Care of spouse	2	1	3
Hire date caused tenure date changes	1	2	3
Care of child	1	1	2
Care of parent		2	2
Change in job responsibilities	1		1
Lab construction delays		1	1
<b>Total</b>	<b>31</b>	<b>30</b>	<b>61</b>

# Outcomes of Tenure Clock Extension Policy, 2003-2008

Outcome	Women	Men	Total
Tenure Granted	7	2	9
Tenure Pending	19	20	39
Deceased	1		1
Resigned			
Accepted other employment	2	2	4
Personal reasons (e.g. childcare)	1	1	2
Tenure Pending, Accepted academic position elsewhere	1	4	5
Tenure Granted, Accepted academic position elsewhere		1	1
<b>Resigned Total</b>	<b>4</b>	<b>8</b>	<b>12</b>
<b>Total</b>	<b>31</b>	<b>30</b>	<b>61</b>

# NSF ADVANCE Institutional Transformation Grant to Iowa State University (2006-2011, \$3.3 million).

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- Any opinions, findings, and conclusions or recommendations expressed in this material are those of the authors and do not necessarily reflect the views of the National Science Foundation.



# ISU ADVANCE Program

- Faculty Satisfaction
- Institutional Transformation process
- Mentoring
- Faculty Data Reporting Requirements

# AAUDE Faculty Satisfaction Survey

- Created by Association of American Universities Data Exchange
- Record-level submission of responses to AAUDE data warehouse
- 11 institutions (including ISU) collected survey data beginning in 2006



# Topics Covered in Faculty Survey:



- Overall Satisfaction
- Faculty Resources
- Work Environment
- Sources of Stress
- Mentoring
- Tenure & Promotion
- Advancement
- Hiring & Retention
- ISU Work/Life Policies**
- Life Outside the Institution

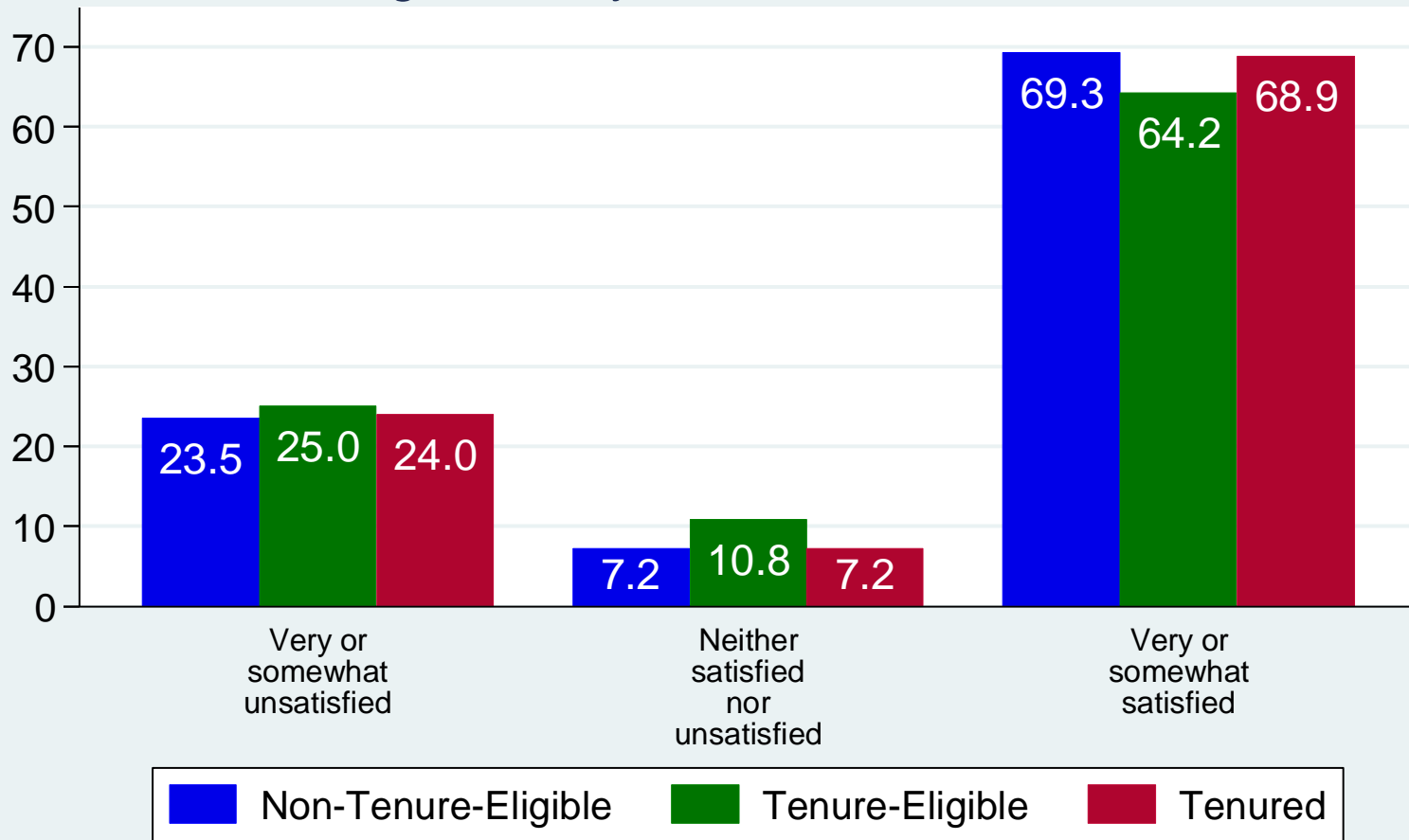
# AAUDE Faculty Satisfaction Survey

- ISU faculty surveyed electronically in January 2008.
- All tenured and tenure track faculty, all non-tenure-eligible.
- 889 Respondents; overall response rate: 53%.

# AAUDE Faculty Satisfaction Survey

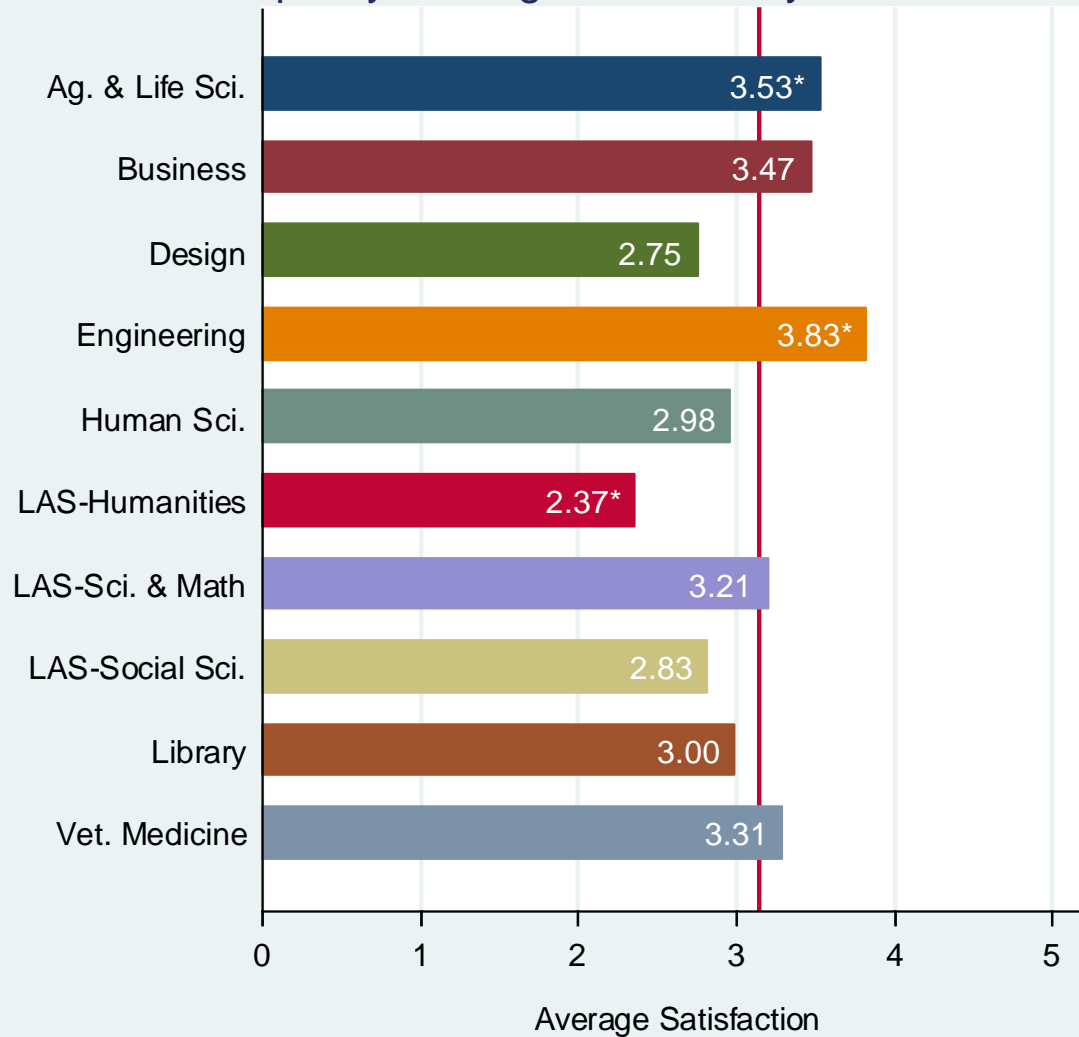
<b>Response Category</b>	<b>Population</b>	<b>Respondents</b>	<b>Response Rate</b>
Women	574	328	57.1%
Men	1,102	560	50.8%
Professor	573	331	57.8%
Associate Professor	427	231	54.1%
Assistant Professor	328	193	58.8%
Instructor	348	134	38.5%
Tenured	984	557	56.6%
Tenure-Eligible	308	178	57.8%
Non-Tenure-Eligible	384	154	40.1%
White	1,368	759	55.5%
African American	33	16	48.5%
Asian/Pacific Islander	228	88	38.6%
American Indian	9	5	55.6%
Hispanic	38	21	55.3%
Full-time	1,435	801	55.8%
Part-time	241	88	36.5%

## Overall, how satisfied are you being a faculty member at Iowa State?



Source: ISU AAUDE Faculty Satisfaction Survey 2008

## Salary, specify the degree to which you are satisfied



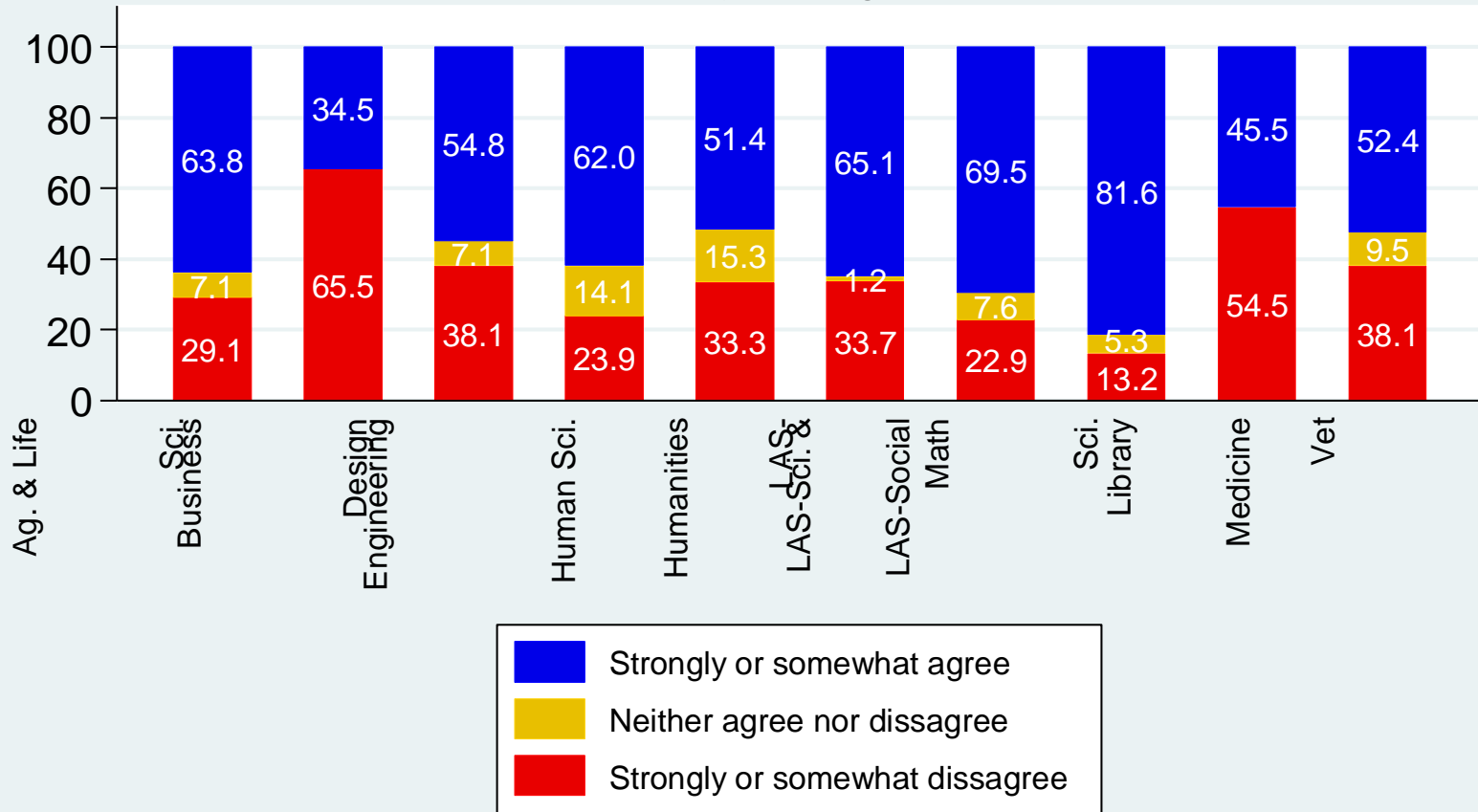
Scale: 1 = Very dissatisfied, 5 = Very satisfied

Red line = mean response for all faculty

Source: ISU AAUDE Faculty Satisfaction Survey 2008

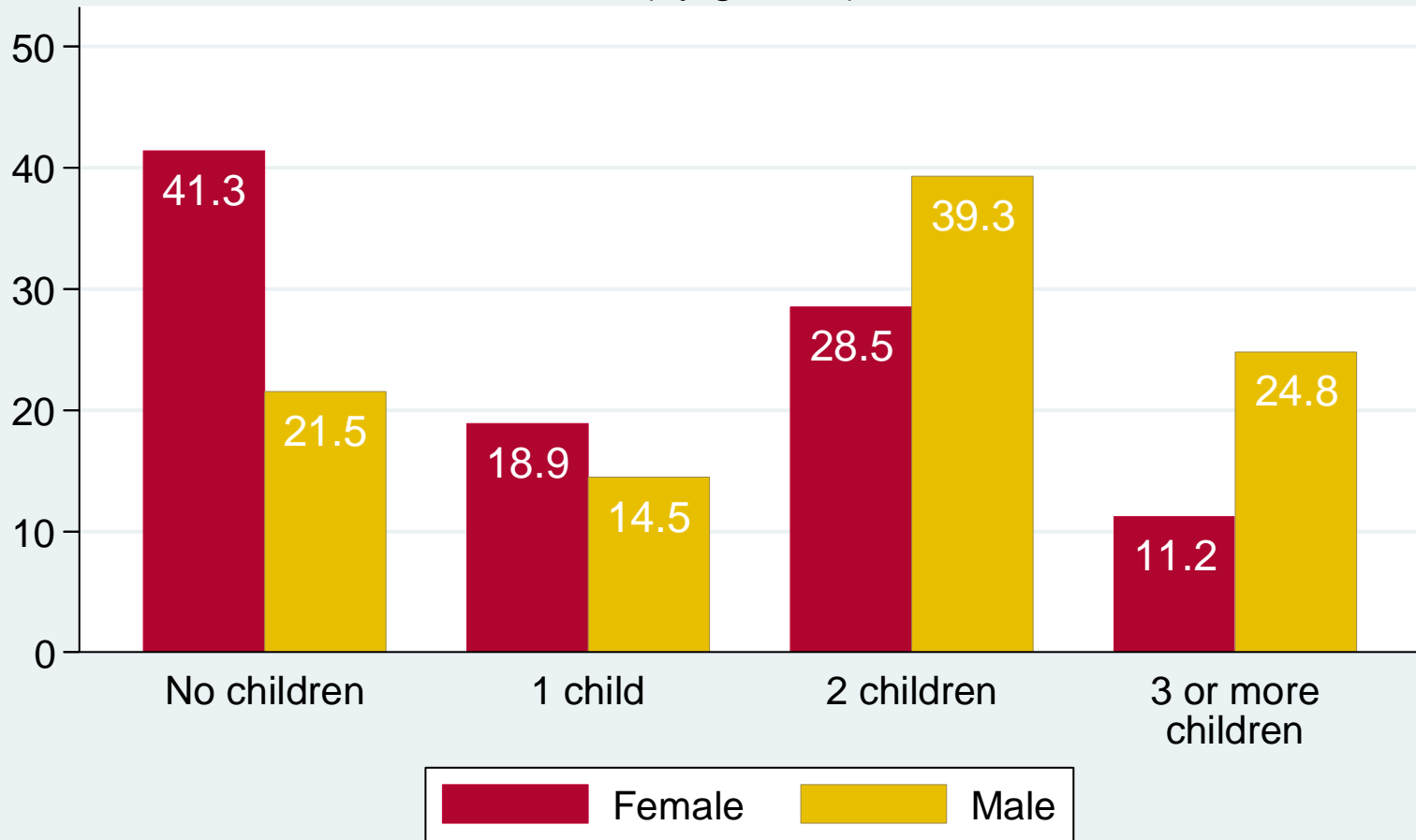
# Criteria for promotion and/or tenure are clearly communicated

(by College)



Responses for tenured and tenure-eligible faculty only  
Source: ISU AAUDE Faculty Satisfaction Survey 2008

## How many children do you have? (by gender)



Source: ISU AAUDE Faculty Satisfaction Survey 2008

# AAUDE Faculty Satisfaction Survey

- Executive VP/Provost report to Faculty Senate
- Write-up in local newspaper
- Deans requesting special reports
- ADVANCE networking event
- ADVANCE benchmarking



# Briefly - ISU ADVANCE Program's Collaborative Transformation Efforts.

- Interviews, focus groups with faculty in nine “focal” STEM departments about institutional and departmental cultures, structures, and practices.
- Identification of prospective concerns such as isolation or information/policy transparency. Qualitative analyses of empirical data.
- Findings can be paired with AAUDE survey findings such as departmental fit (e.g., integration/isolation) measures and knowledge of P&T processes (e.g., degrees of transparency).

# ISU ADVANCE Scholar Program

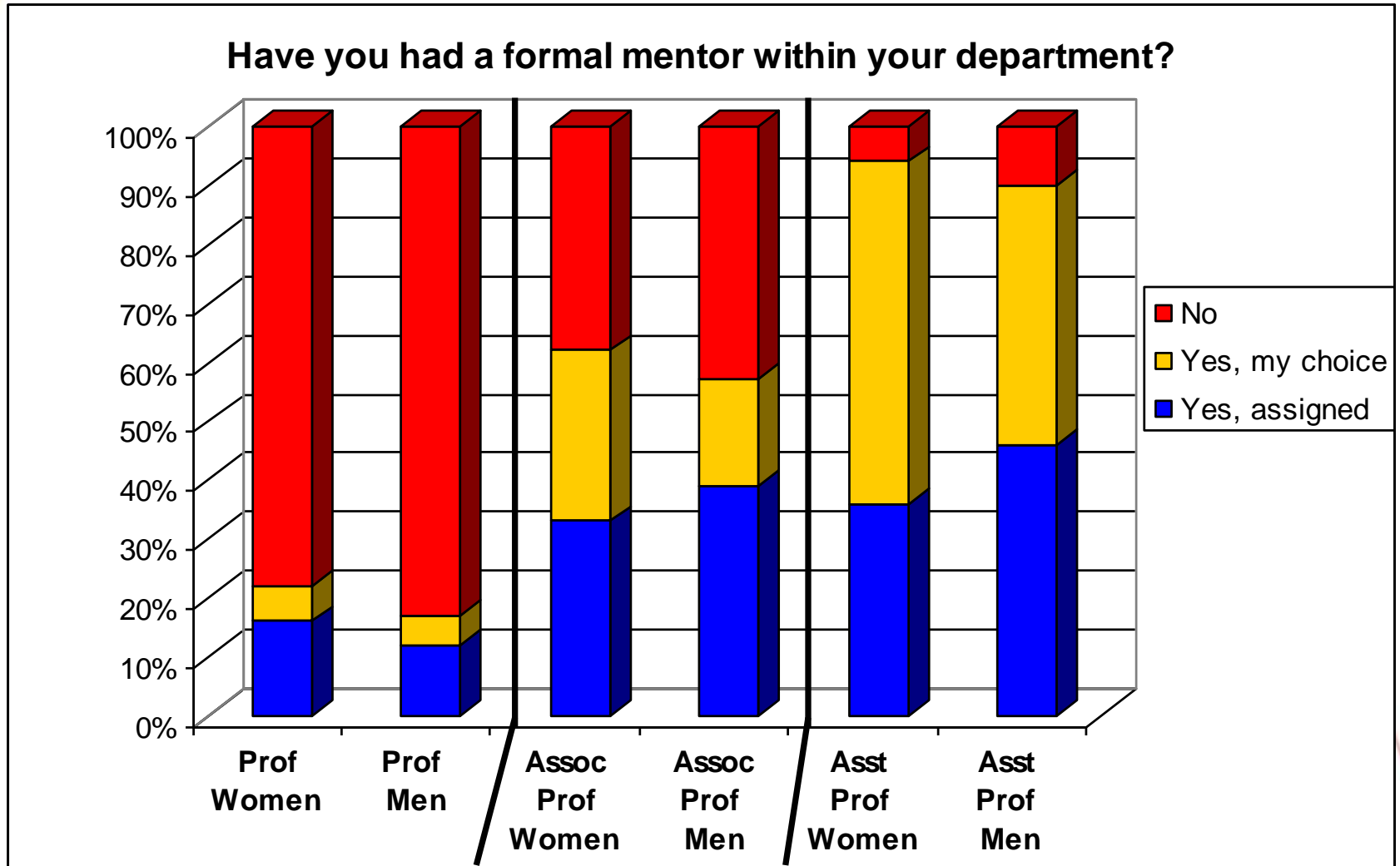
- Women STEM faculty of color: assistant, associate, non-tenure track.
- Pair with eminent scholar in field/discipline.
- Reciprocal visits funded to present research or seminars and for consultations.
- Program Goals: networking, collaborations, mentoring.
- Examine faculty mentoring within contexts of institutional and academic cultures (Zellers, Howard, Barcic, 2008).
- Faculty perceptions: mentoring available? worthwhile?
- AAUDE data related to faculty experiences with mentoring. \*\*Institutional faculty mentoring program since 1993.

# AAUDE Survey – Mentoring items:

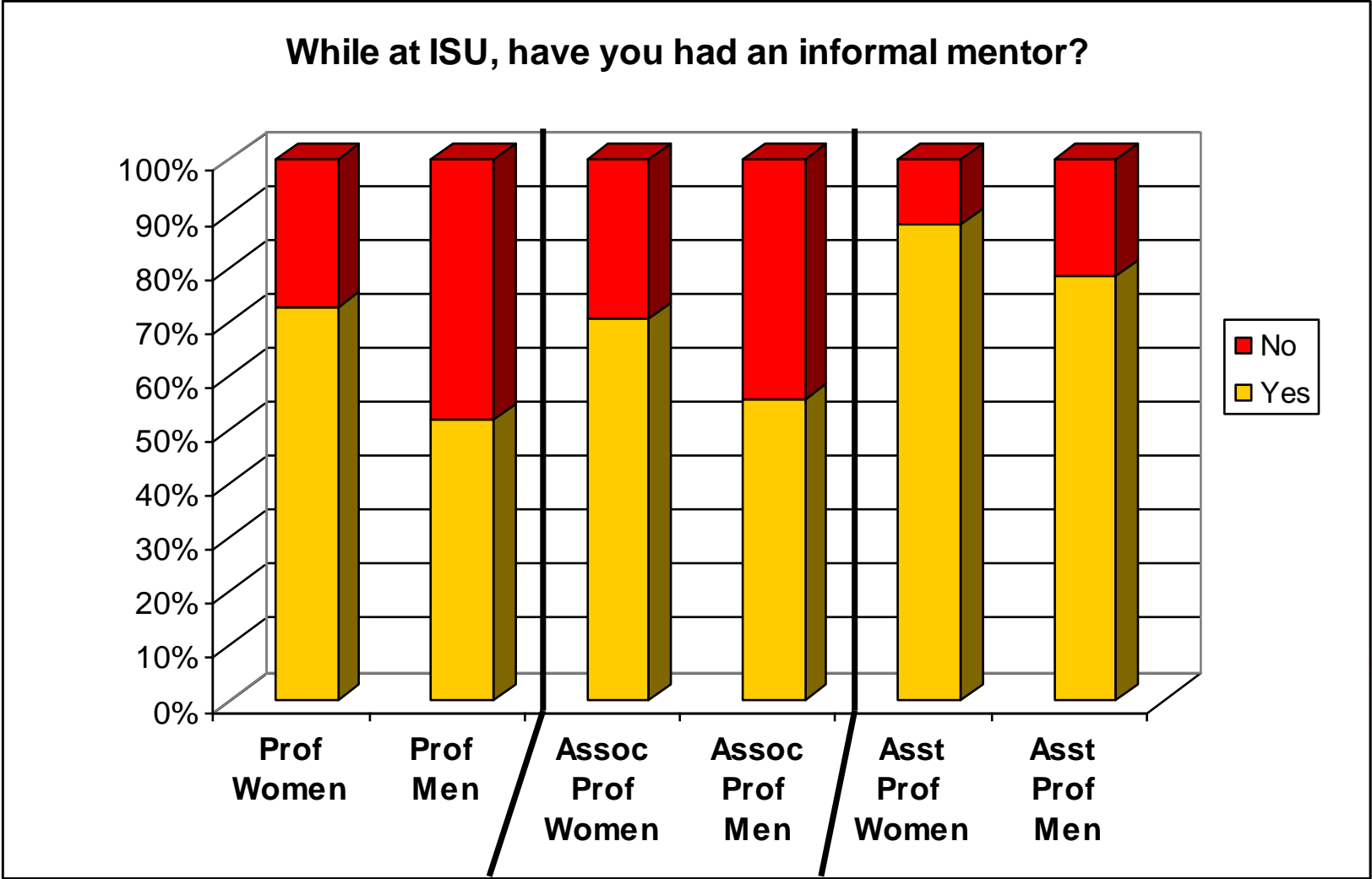
- *Mentoring* (formal and informal) received by faculty
- *Judgments* of helpfulness of mentoring received
- *Demographics* including Sex, Rank, & Ethnicity

*Some descriptive findings - - -*

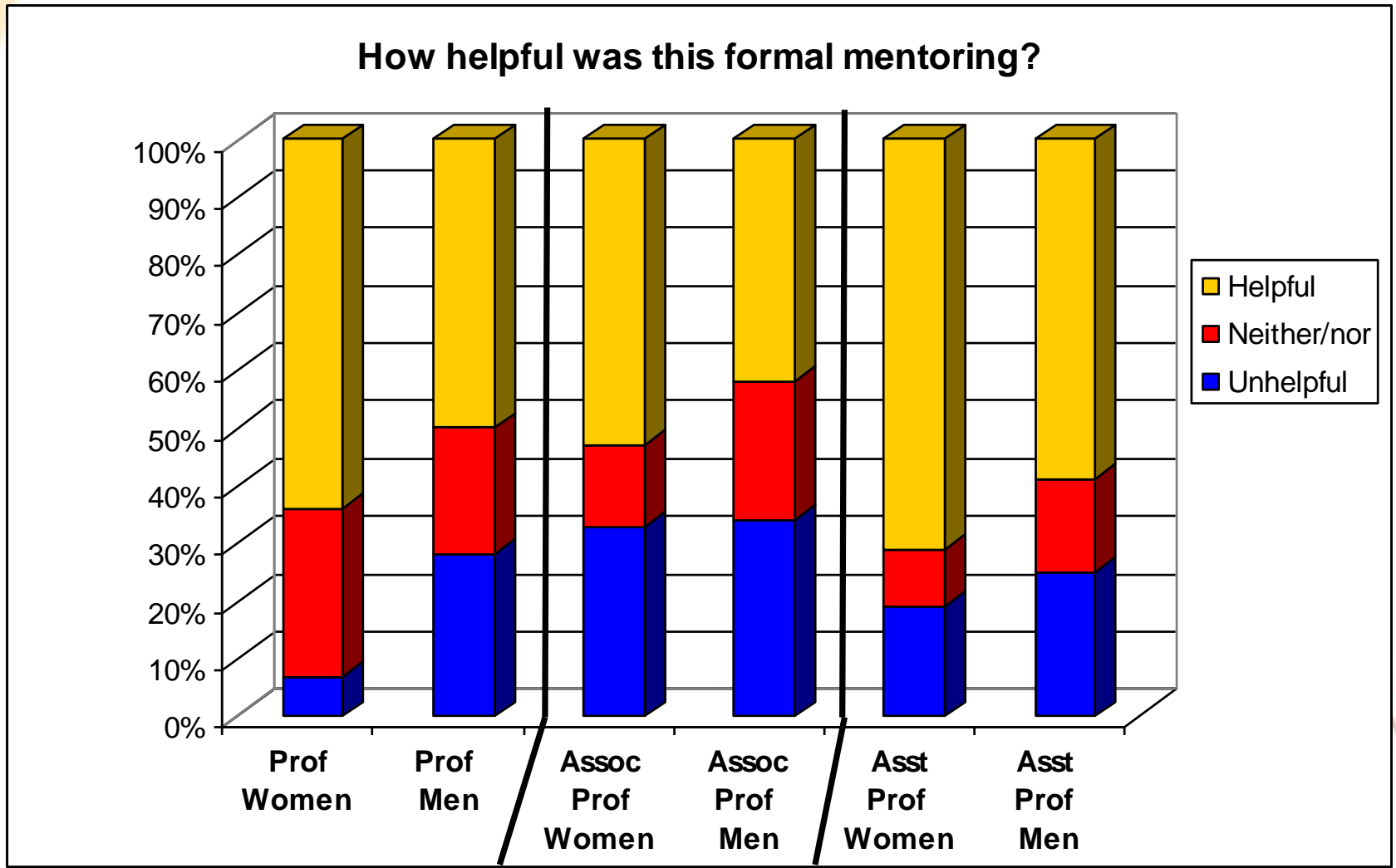
# Findings:



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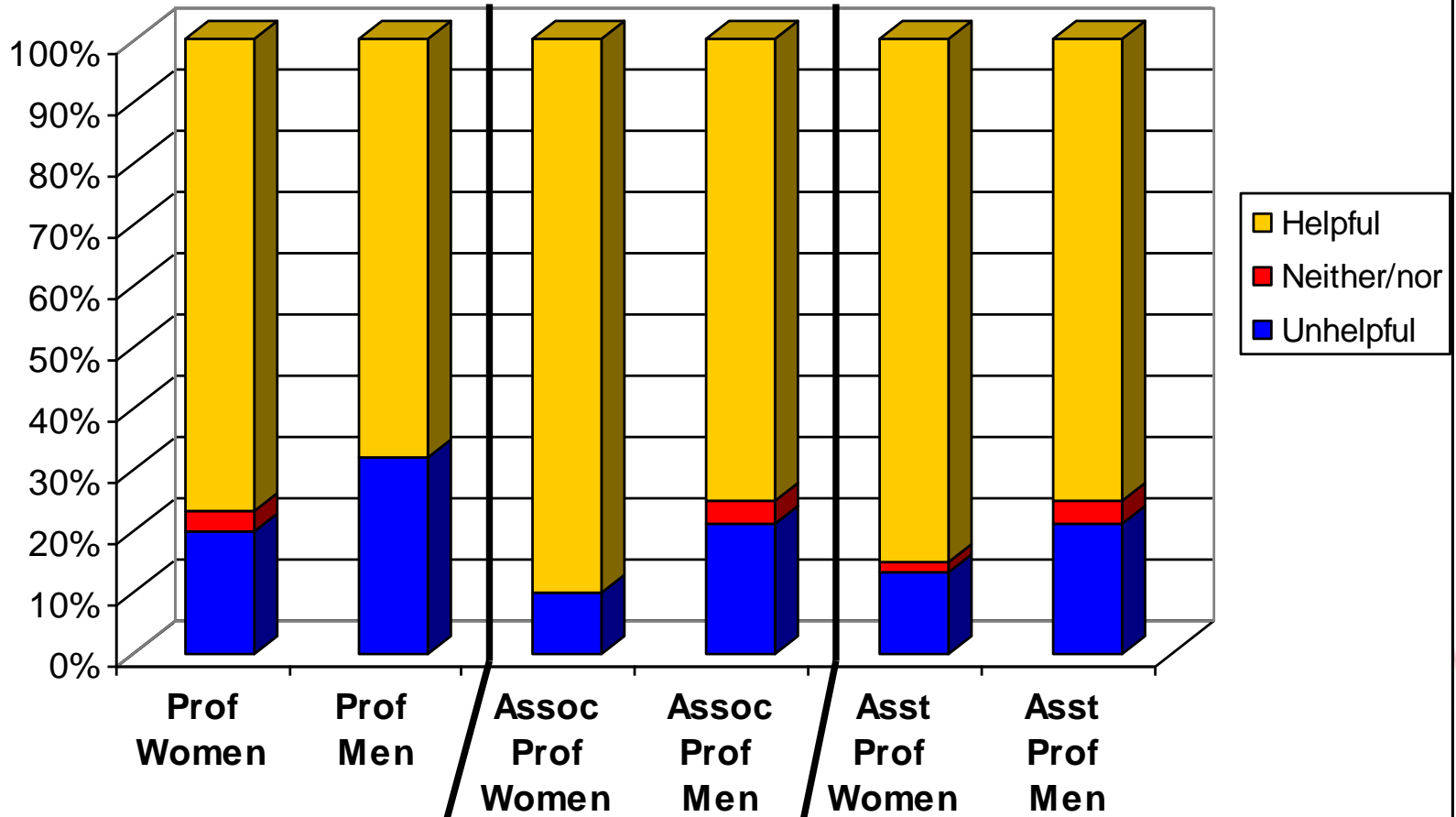


# Findings:

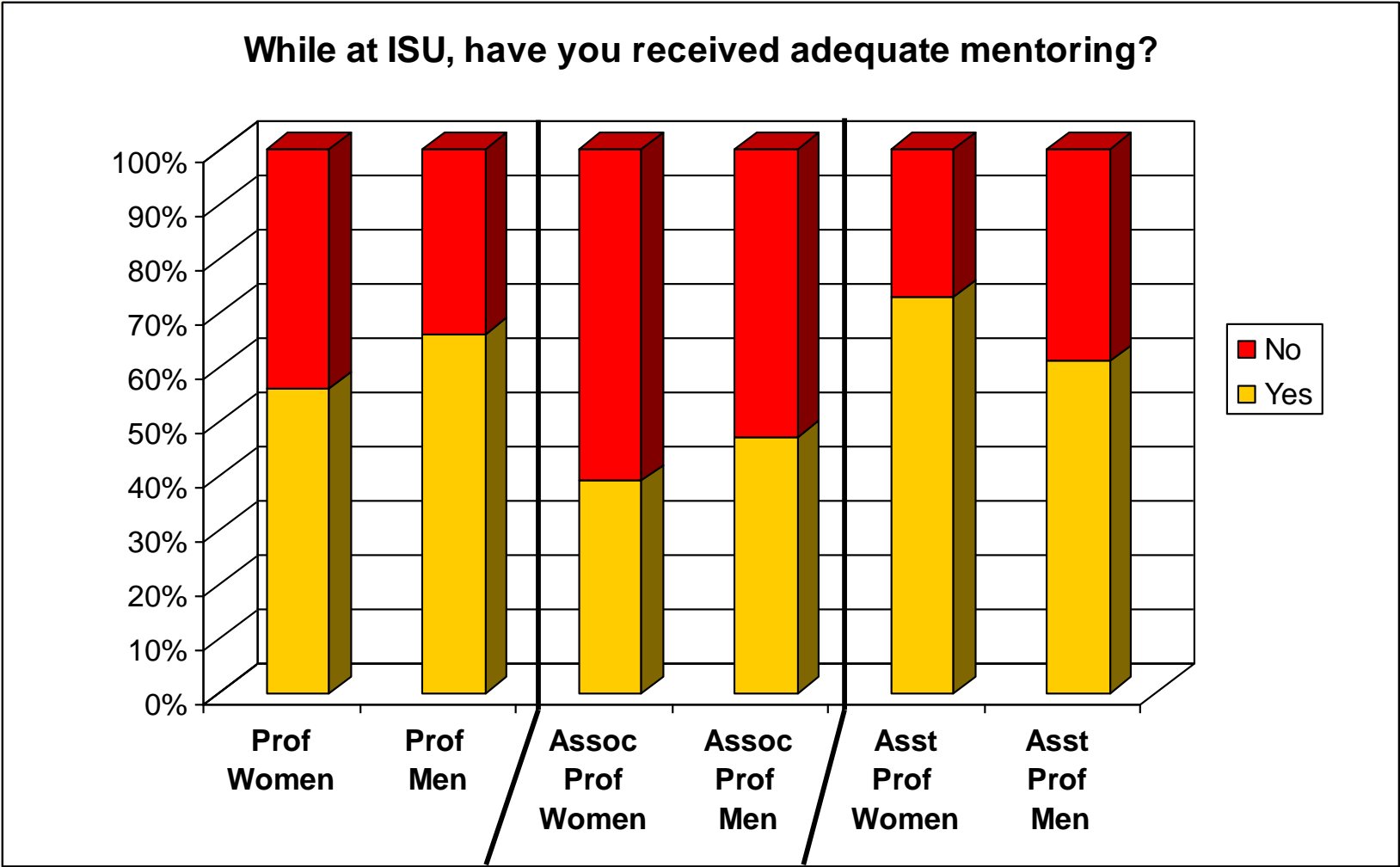


# Findings:

How helpful have you found this informal mentoring?



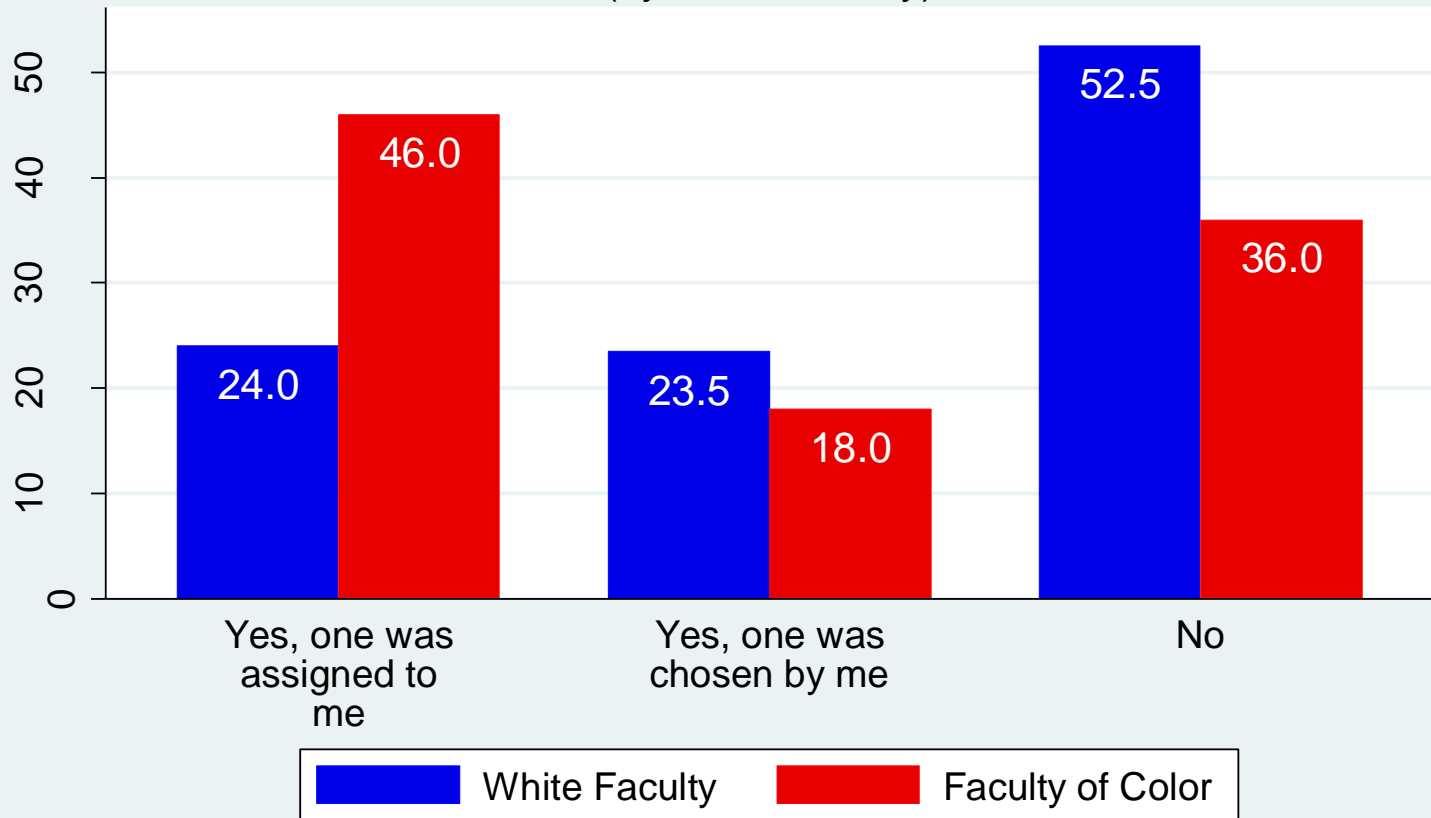
# Findings:





# Findings:

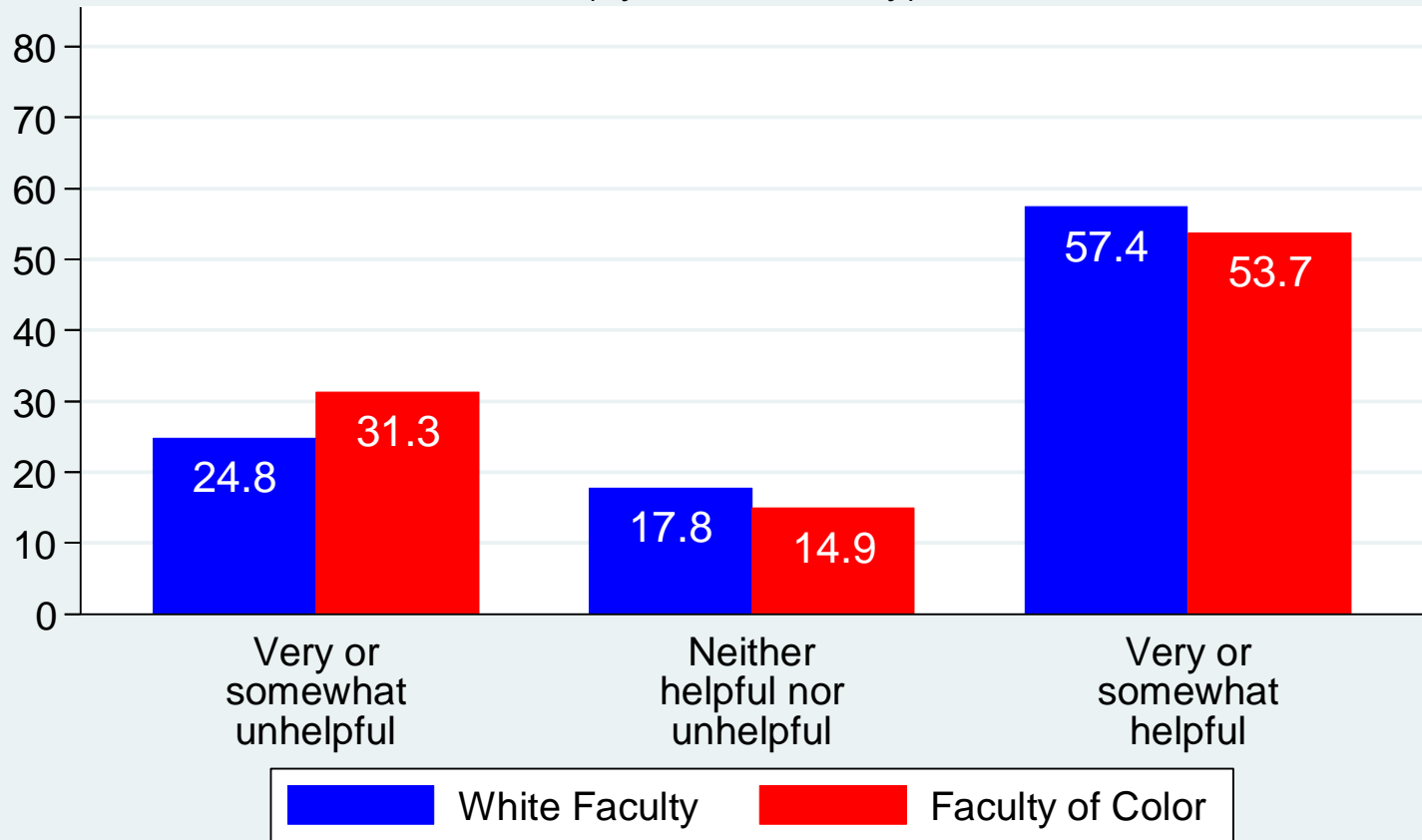
Have you had a formal mentor within your department?  
(by race/ethnicity)



Responses for tenured and tenure-eligible faculty only  
Source: ISU AAUDE Faculty Satisfaction Survey 2008

# Findings:

How helpful have you found this formal mentoring?  
(by race/ethnicity)



Responses for tenured and tenure-eligible faculty only  
Source: ISU AAUDE Faculty Satisfaction Survey 2008

# Next steps for analyses using AAUDE data:

## Inclusion and Transparency variables:

- Exclusion from informal department networks.
- Navigating unwritten department rules for faculty.
- Clarity of promotion and tenure criteria (among assistant professors).
- Clarity of promotion and advancement criteria (among associate professors).

## Collaboration and Fit variables:

- Opportunities to collaborate with dept faculty.
- Opportunities to collaborate with faculty in other units.
- Overall job satisfaction.
- Departmental fit.

# Faculty Data Reporting

## NSF Required Reports

- Faculty Headcount by Gender, Rank & Discipline
- Non-tenured Headcount by Gender & Discipline
- Promotion & Tenure Outcomes by Gender
- Years-in-Rank by Gender
- Attrition by Gender and Rank
- New Hires by Gender, Rank & Discipline
- Leadership Positions by Gender

## Resource Allocation

- Salary Equity Report
- Start-Up Cost Evaluation
- Lab and Office Space Quality

# Lessons Learned

- Grants provide opportunities for you to:
  - Collaborate on a bigger scale
  - Work with faculty
  - Improve the university
- Help with IR research efforts
- Great for training Graduate Assistants
- Be careful what you wish for!

# Contacts

- Sandra W. Gahn 515.294.8539 ([sgahn@iastate.edu](mailto:sgahn@iastate.edu))
- Florence A. Hamrick 515.294.9628 ([fhamrick@iastate.edu](mailto:fhamrick@iastate.edu))
- Jason Pontius 515.294.8061 ([jpontius@iastate.edu](mailto:jpontius@iastate.edu))
- ISU ADVANCE Program:  
<http://www.advance.iastate.edu>
- NSF ADVANCE Institutional Transformation Grants:  
[http://www.nsf.gov/funding/pgm\\_summ.jsp?pims\\_id=5383](http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=5383)
- NSF ADVANCE Institutional Transformation Awardee Websites:  
<http://www.nsf.gov/crssprgm/advance/itwebsites.jsp>

# MIZZOU ADVANCE

A National Science Foundation and University of Missouri – Columbia Program

## **2008 MidAIR Conference, Kansas City, Missouri**

November 13, 2008



# MIZZOU ADVANCE

- Partnerships for Adaptation, Implementation, and Dissemination (PAID) Grant
  - January 1, 2007 – June 30, 2010
  - \$500,000
- Focus of grant is the promotion of women associate professors in STEM fields to full professor
- IR's role is as a partner on the grant



# Institutional Data

- Process of providing data to grant initiatives on campus
- Issues that arise with providing data
  - Small N's
  - Grant personnel approach individual departments for data prior to approaching IR
  - Other groups on campus wanting similar data; keeping data provided consistent between groups

# **Benefits of IR Collaborations with Grants**

- Institutionalize data collection
- Data necessary to start conversations with others on campus
- Opportunity to work with faculty and administrators on campus

# Challenges of IR Collaborations with Grants

- Small N's
- Over reliance on quantitative/IR data
- Flexibility of grant makes process undefined
- Set reasonable priorities and time lines
- Not everyone involved in the grant understand quantitative analysis or data definitions

# Discussion/Contact Information

- Ann Patton ([PattonTA@missouri.edu](mailto:PattonTA@missouri.edu))
- Kathy Schmidtke Felts  
([FeltsK@missouri.edu](mailto:FeltsK@missouri.edu) )