

Complexity in Practice of Campus  
Climate Surveys: Design,  
Implementation, Analysis, and Reporting

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# A Campus-Wide Climate Study

***Level of IR's involvement :***

***from low (e.g., occasional consulting)***

***to high (direct involvement in every stage of the process)***

Stages	Low involvement	High involvement
Design	Use existing instrument for the entire campus	Design instruments specific to main constituencies
Implementation	Use external survey agency	Set up and run own data collection
Analysis	Basic descriptive analysis	Comparative, multivariate analysis
Reporting	Frequency tables	Work with campus members to prepare an action-oriented assessment specific to each constituency

# A Campus-Wide Climate Study: Design

**Learning, teaching, and working environment specific to each of four main constituencies**

**Campus-wide climate**

## **4 survey instruments:**

- **Undergraduate students:** the Diverse Learning Environments (DLE) Survey, HERI (UCLA)
- **Graduate students:** UCSC biennial Graduate Student survey
- **Faculty:** UCSC survey
- **Staff:** UCSC survey

## **COMMON MODULE**

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- Multidimensional theoretical framework
  - Inclusive participation (each survey is a census)
  - Coordinated effort to collect data (concurrent surveys)

# Common Module

- used across the campus' four populations: undergraduates, grad students, faculty, and staff
  - included questions about perceptions of campus environment for people with different backgrounds and beliefs,
  - sense of belonging, inclusion, and respect by others,
  - and about institutional actions and commitment to diversity reflecting the *UCSC Principles of Community*
  - reviewed by the campus-wide council and pre-tested
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# UCSC Graduate Student Survey

- Administered by the UCSC IR every other year since 2004
- Focuses on student satisfaction with the program's quality, faculty's teaching and mentorship, TA training, and research experience
- Includes self-assessment of outcomes (preparedness to conduct independent research, to publish, to teach etc.)
- Data is analyzed on departmental and divisional levels
- The report is included in external program review and is made available for departmental self-study

## **New sections added in the 2011 campus climate study:**

- For TAs: Teaching diverse student populations
- Availability and demand for professional development workshops (on job search, publishing)
- Child care challenges and services
- **Common Module**

# A Campus-Wide Climate Study: Implementation

- **Both Student Surveys** began and closed on the same date
  - **Response rates: 31% undergraduates, and 51% graduate students**
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**Based on our student surveys, we've learned that to run a successful publicity campaign we need**

- ***A general weblink to the survey*** where students can be directed to log in with their student ID
- ***Strategies to promote the surveys*** specific to undergraduates and graduate students
- ***Early start*** (2<sup>nd</sup> or 3<sup>rd</sup> week) of Spring quarter rather than in the middle of the quarter

## Examples of effective strategies for undergraduates:

1. **A website** describing the importance of every student's participation in the survey and the campus-wide study with examples of how the findings will be used, and providing weekly updated response rates by college, information about prizes, and prize winners (with their consent)
2. **Student-run publicity campaign** (e.g., professionally designed posters are good but student-designed small flyers distributed by students themselves are very effective)
3. Engaging **all kinds of student organizations and student affairs** staff in publicity efforts
4. **College-centered competition** for a \$600 award towards student programming
5. **Diversifying individual prizes** offered during data collection (\$50 gift cards, iPods) and Grand prizes (iPads) at the end.

## Examples of effective strategies for graduate students:

1. Using a survey tool whose primary purpose is of direct ***importance to the majority of students***: in our study it was the biennial survey that provides a unique opportunity for student feedback to be included in external evaluation of graduate programs.
2. Sending an email explaining all steps taken to ensure ***strict confidentiality*** of student responses (in addition to having this information on the first or second screen of the actual survey).
3. Identifying programs with low response and ***informing students about their low participation*** relative to other graduate programs as well as informing department chair and/or graduate program director.

Note: Each of these strategies may be effective for faculty and staff surveys.

# A Campus-Wide Climate Study: Analysis and Reporting

**Steps to reduce data complexity and provide informative results of comparative analysis**

## **1. Define comparative groups**

Example: Race and ethnicity (3 questions) + Citizenship (foreign student) status for the grad student population

Possible problem: small N for URM and foreign students

## **2. Select appropriate tests of group differences**

Note: Data on campus climate are not normally distributed

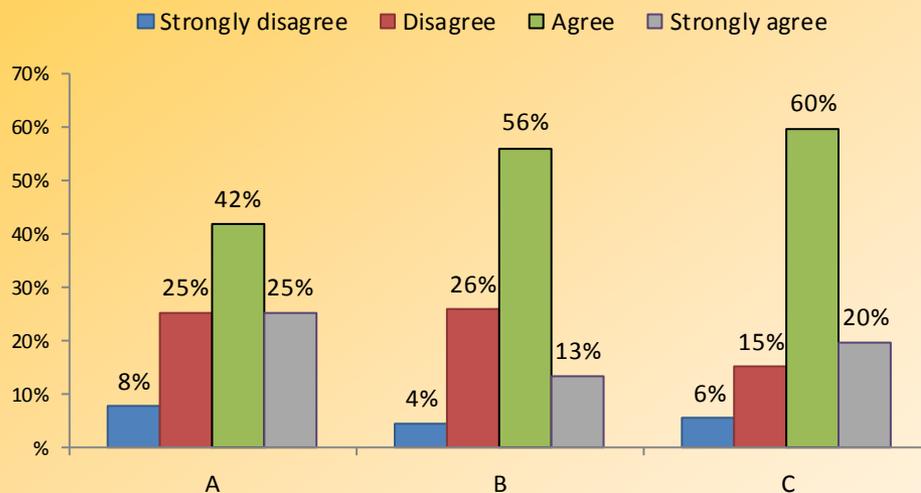
Recommend: Non-parametric methods/tests of association based on chi<sup>2</sup> and comparing column proportions (z-test).

## Appropriate tests for differences among 3 or more groups when output variables are not normally distributed and some groups are relatively small

Three groups: group A is URM (n=91), B is Asian-American/Asian (non Hispanic) (n=89), and group C is White (non Hispanic) (n=325).

**Item:** Indicate the extent to which you agree or disagree that your graduate program provides a supportive environment for students from a low income background.

**Responses:** 1=Strongly disagree, 2=Disagree, 3=Agree, 4=Strongly agree.



### Reporting results:

Percent “Disagreed/strongly disagreed”:  
URM 33%,  
Asian-American/Asian 30%,  
White non Hispanic 21%.

URM students’ responses varied the most: the highest (25%) proportion of “strongly agreed.”

TESTS. There is an association between race/ethnicity and different perceptions of whether the graduate program provides a supportive environment for students from a low-income background (Cramer’s  $V = 0.12$   $p < .02$ ).

URM students were more likely to report lack of supportive environment compared to White, non Hispanic students ( $\chi^2 = 7.8$   $p < .02$  using Bonferroni adjustment)

## Multivariate analyses

To examine climate dimensions measured by multiple items, conduct factor analysis and calculate scores for climate and academic experience factors.

Factor scores work great in multivariate regression analyses (variables do not have to be normally distributed).

### Factor scores may be used to

- Identify most relevant predictors of an “unsupportive” view of the campus environment (using a factor as an outcome or dependent variable in multivariate regression)
- Provide a socio-demographic profile of the most dissatisfied students (comprising the bottom quartile of the climate factor score(s))
- Examine relationships between several factors

# Logistic regression may be used to identify important predictors of perceptions of climate. The outcome has to be binomial (agree/disagree).

## Example from Graduate Student Survey Factor “Relationship with advisor” consists of seven items

Do you agree or disagree that your advisor...

- Provides useful advice on academic matters
- Discusses my research with me on a regular basis
- Is approachable
- Provides constructive criticism on my work
- Returns my work and provides feedback promptly
- Helps me identify potential sources of financial support
- How satisfied are you with your overall professional relationship with your primary advisor?

### Findings:

- Students who are satisfied with their relationship with advisor are less likely to perceive unsupportive climate.
- There are important differences among academic divisions, racial/ethnic groups, social class background.

Perception of <u>unsupportive</u> environment for students from a low income background		
Factor	Satisfactory relationship w/ advisor	Odds
		<b>0.7**</b>
Academic Division	<b>A</b>	<b>4.9***</b>
	B	0.7
	<b>C</b>	<b>3.5***</b>
	<b>D</b>	<b>2.4*</b>
	<b>E</b>	<b>reference group</b>
Race/ethnicity	<b>URM</b>	<b>2.1*</b>
	<b>Asian-American/Asian</b>	<b>2.3**</b>
	<b>White, non Hispanic</b>	<b>reference group</b>
Social class background	<b>Upper-middle/Upper class</b>	<b>reference</b>
	Middle class	1.6
	<b>Working class</b>	<b>2.2*</b>
	<b>Low income</b>	<b>3.0*</b>
Gender	Men	0.6
	Women	reference
	<b>Other gender identities</b>	<b>5.7**</b>
Nagelkerke R2		0.22
N of respondents		411

\*p<.05, \*\*p<.01, \*\*\*p<.001