

# Institutional Research, Assessment, & Policy Studies: Supporting Faculty With In-Depth Analysis of Direct and Indirect Evidence

Erin Toolis, Rose Grose, & Anna Sher

UC Santa Cruz



UCSC SYMPOSIUM ON ASSESSMENT  
OCTOBER 17<sup>TH</sup>, 2014

# SUPPORTING FACULTY THROUGH THE ASSESSMENT PROCESS

## IRAPS:

- Explaining the UCSC Guidelines and analytical framework for PLO assessment
- Assisting with designing PLO studies and rubrics
- Assisting with analysis of data collected by faculty
- Providing analysis of indirect evidence (survey data)
- Supporting online collection (e-rubric) of direct evidence
- Designing new questions to collect indirect evidence via campus surveys
- Assisting with preparation of annual PLO reports

# DIRECT EVIDENCE

Sources of Direct Evidence collected by instructors using an analytic rubric:

- Embedded class assignments in senior seminars
- Student portfolios
- Capstone experiences
  - Senior theses
  - Exhibitions and recitals
  - QE and Dissertation Defense for Graduate Program assessment

# DIRECT EVIDENCE FROM ACADEMIC PROGRAMS

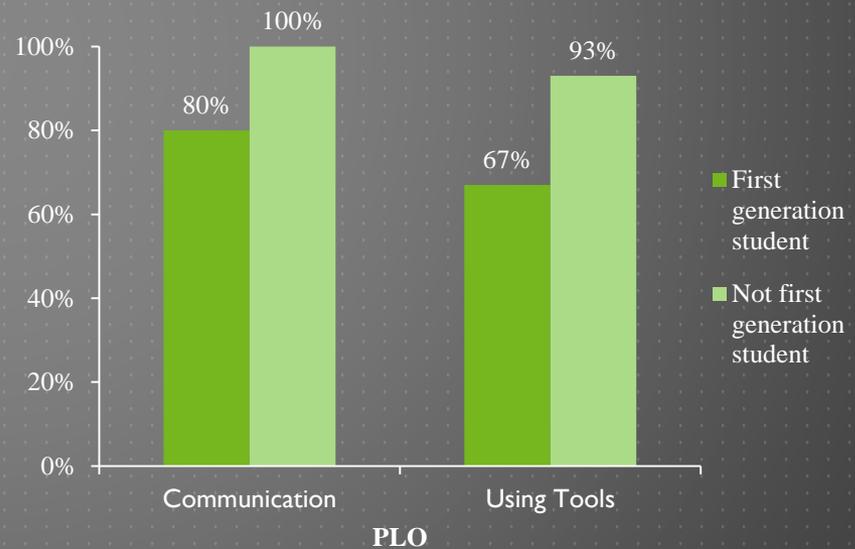
	Does not meet expectations (1)		Almost meets expectations (2)		Meets expectations (3)		Exceeds expectations (4)		Meets or Exceeds expectations (combined)		Total N
	Count	%	Count	%	Count	%	Count	%	Count	%	
<b>Organizational Structure: Organize the presentation in a way that communicates effectively.</b>	Demonstrates inadequate organization of the writing.		Demonstrates some organization of the writing.		Demonstrates adequate organization of the writing.		Demonstrates skillful organization of the writing.				
	2	2%	8	10%	30	36%	43	52%	73	88%	83
<b>Coherence and Clarity of Expression: Develop a coherent presentation in which ideas are expressed clearly and appropriately to the purpose.</b>	Demonstrates inadequate abilities to articulate ideas clearly and in a coherent way.		Demonstrates satisfactory abilities to articulate ideas clearly and in a coherent way.		Demonstrates very good abilities to articulate ideas clearly and in a coherent way.		Demonstrates excellent abilities to articulate ideas clearly and in a coherent way.				
	2	2%	15	18%	26	31%	40	48%	66	80%	83

# DIRECT EVIDENCE: CONFIRMING THAT THE SAMPLE IS REPRESENTATIVE

Respondent Characteristics				
Characteristics		Sample Count	Sample %	Graduating seniors %
<b>Gender</b>	Female	5	10%	10%
	Male	46	90%	90%
<b>Transfer Status</b>	Started as Freshmen	36	71%	76%
	Transfer	15	29%	24%
<b>First Generation Status</b>	First Generation	15	29%	27%
	Not First Generation	28	55%	57%
	Unknown	8	16%	16%
<b>Race/Ethnicity</b>	African American or Black	1	2%	3%
	Asian American	16	31%	31%
	Hispanic or Latino	10	20%	14%
	Non-Hispanic White	17	33%	40%
	American Indian/Alaskan Native	0	0%	1%
	Unknown	7	14%	10%
	<b>Total</b>		51	100%

# ANALYSIS OF EQUITY

- ▶ Analyze student performance by gender, transfer status, first generation status, race/ethnicity, GPA
- ▶ Determine statistically significant differences (Chi-Square for met/exceeded versus did not meet/almost met)
- ▶ Explore possible explanations of the findings (student performance by race/ethnicity and GPA)
- ▶ Identify disparities and necessary actions at the program level



# INDIRECT EVIDENCE

Sources of Indirect evidence: Self-reported competencies and skills

- Focus groups
- Self-evaluations and self-reflection papers
- Student surveys

# INDIRECT EVIDENCE

## FROM 2 STUDENT SURVEYS

### 1. **UCUES** (University of California Undergraduate Experience Survey)

- Biennial UC-wide survey
- Large, representative sample (40% responded at UCSC in 2014)

### 2. Graduate Student Survey

- Biennial UCSC survey
- Large, representative sample (50% responded at UCSC in 2013)
- Connected with institutional data



# INDIRECT EVIDENCE FROM UCUES

## ➤ Students rate their skills

- When they started at UCSC
- At the time of the survey (e.g., spring of senior year)
- Gains calculated



### **Examples of Skills**

**Analytical and critical thinking skills**

**Ability to be clear and effective when writing**

**Ability to read and comprehend academic material**

**Quantitative (mathematical and statistical) skills**

**Ability to speak clearly and effectively in English**

**Ability to participate in research or creative projects specific to your field of study**

**Ability to prepare and make a presentation**

**Ability to work with people from other cultures**

### EXAMPLE:

PLO statement: “BA graduates will demonstrate an ability to communicate effectively.”

Survey question: “Evaluate your ability to be clear and effective when writing “

# INDIRECT EVIDENCE OF CURRICULAR SUPPORT

- Measure how well the curriculum supports student learning

**How frequently during this academic year have you...**

Extensively revised a paper before submitting it to be graded

Sought academic help from instructor or tutor when needed

Talked with the instructor outside of class about issues and concepts derived from a course

Made a class presentation



# INDIRECT EVIDENCE FROM THE GRADUATE STUDENT SURVEY

- Students rate the quality of their preparation to do several academic activities

## **Examples of Competencies**

### **Preparation to ...**

**Conduct independent research/scholarship**

**Teach undergraduate or graduate students**

**Write proposals to obtain funding**

**Write scholarly articles for publication**

**Adhere to research and/or professional ethics**

**Make a presentation to academic audiences**

**Work with people from diverse backgrounds**

## **EXAMPLE**

**PLO:** “Students will demonstrate an understanding of professional, legal, and ethical obligations”

**Survey question:** “Rate the quality of your preparation to adhere to research and/or professional ethics “

# INDIRECT EVIDENCE FROM THE GRADUATE STUDENT SURVEY

Disciplinary knowledge and field-specific skills and other program specific questions can be included in the 2015 Survey.

For a PLO “ Students graduating with a PhD will demonstrate knowledge and ability to critically evaluate current research in one or more subfields of oceanography relevant to a selected research specialty.”

Survey questions may include:

- Self-evaluation of their preparation to critically evaluate...
- What courses and assignments helped them develop these skills
- What the department could do to improve student achievement in this area

# SUMMARY OF SERVICES

IRAPS provides the following services to UCSC faculty:

- PLO study design consultation
- Rubric design consultation (Check out our example rubrics online!)
- Online data entry for faculty (e-rubrics)
- Analysis of direct & indirect evidence
- Survey question design and data collection
- Focus group facilitation (to collect additional indirect evidence)
- Report drafting

CONTACT US!

<http://planning.ucsc.edu/irps/>

[Dr. Anna Sher: asher@ucsc.edu](mailto:asher@ucsc.edu)