



Outline

- Introduction
 - Takeaways
- History of CCARG
 - Our Mission
 - External Value
- Our Data
 - Methods, Findings, Implications
- Closing

Takeaways

- External Value of Student Sustainability Research
- STARS literacy assessment
- Understanding our data

Research Opportunities: Few and Far Between

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CCARG

Who are we?

-Fall 2016

-Undergrad students

Getting up and running

-Our secret to success

Our Mission

*“ To provide
undergraduate students
research experience
opportunities producing
meaningful climate
change action research”*

Value of on Campus Sustainability Research Groups



Past research

- Climate Change Aptitude Survey *Spring 2017*
- Sustainability courses and college rankings
- Wildfires and perceptions
- Self and peer attitudes

Survey Overview

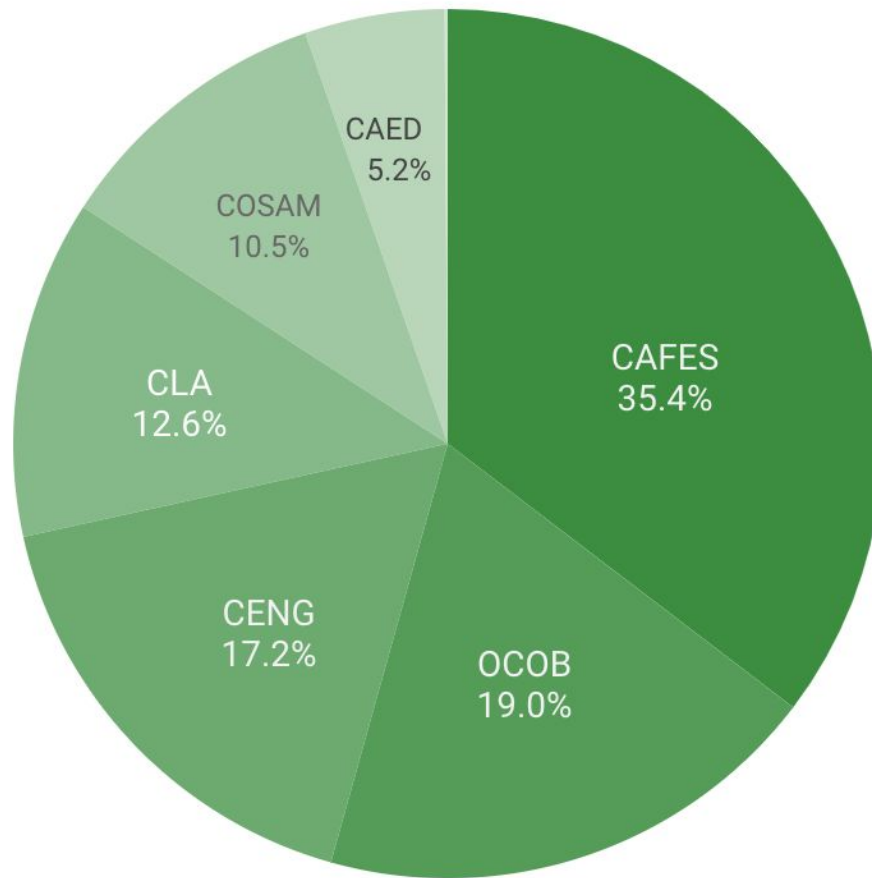
STARS 2018-2019
Waste Audits 2018-2019

STARS

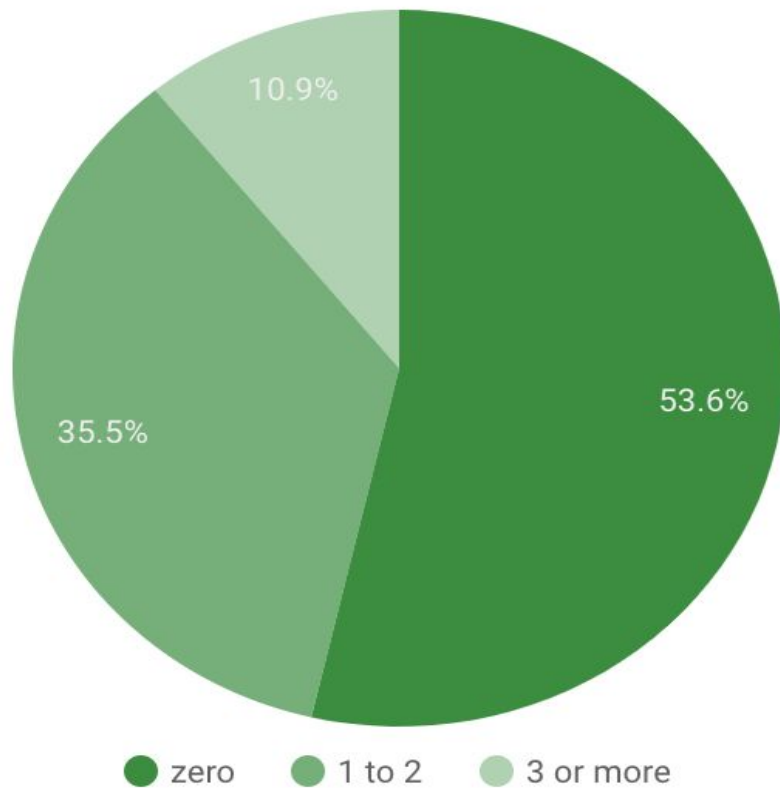
- October 2018 at Cal Poly
- 867 students participated in survey
- STARS explored student sustainability knowledge, and assessed student perceptions of climate change

Overview of Methods

- Conducted the survey in general education classes
- Composed of 16 multiple choice and free response questions
- Representative sample of each College at Cal Poly

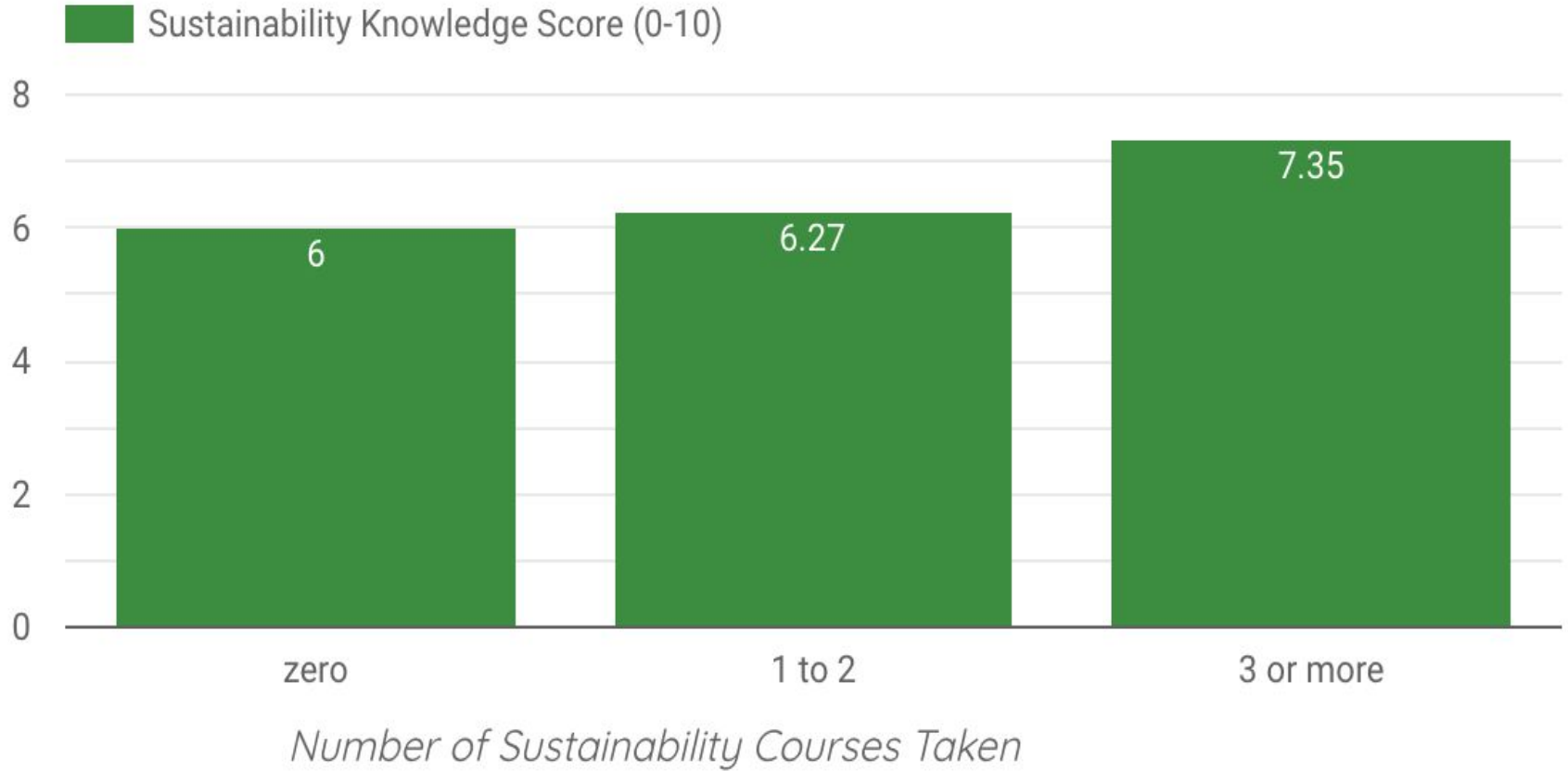


% Participants From Each College

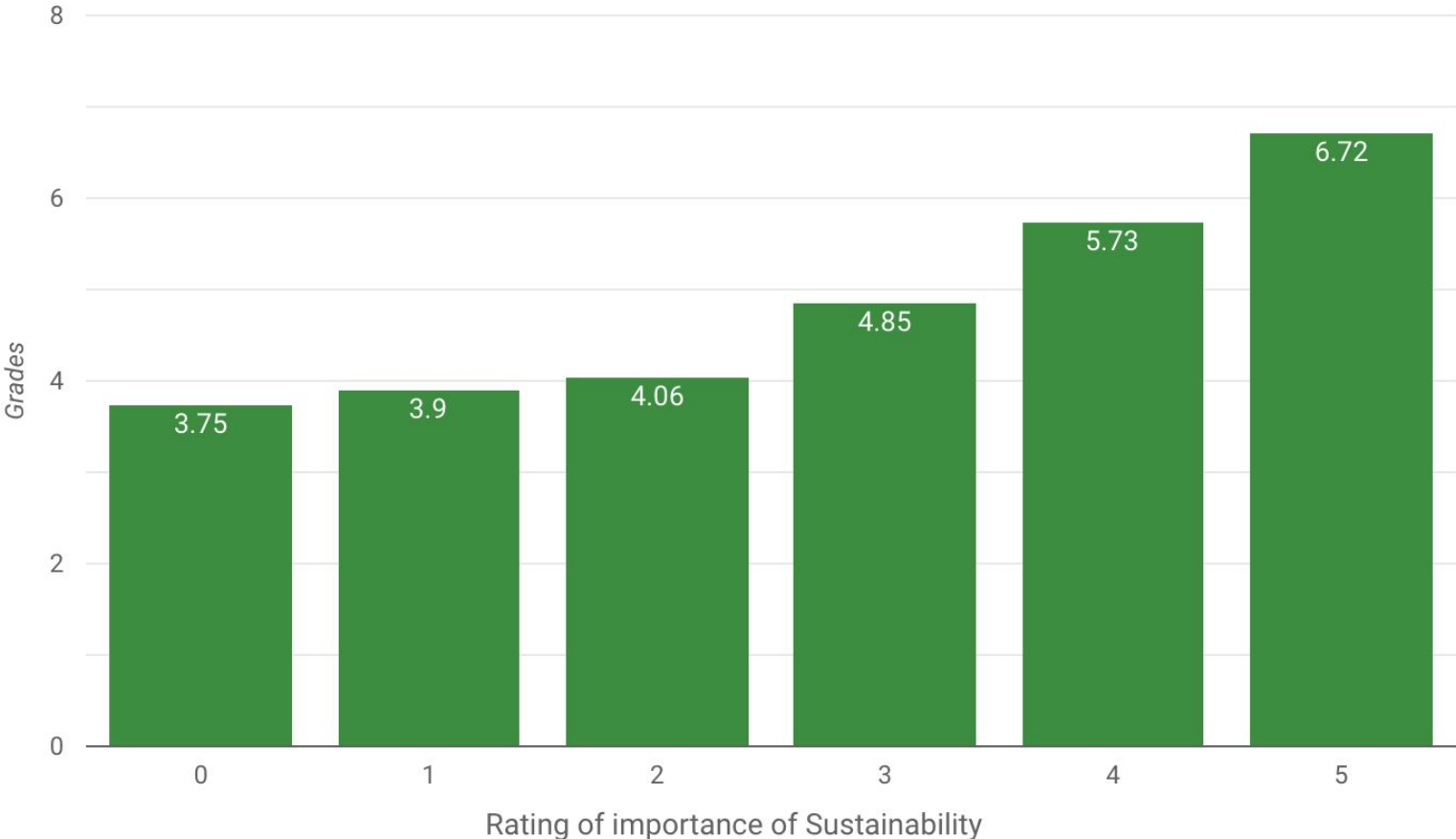


Self-Reported Number of Sustainability Courses Taken

Relationship Between Sustainability Knowledge Score and Courses Taken



Relationship Between Sustainability Knowledge and Importance



"What are some ways to infuse sustainability education in the classroom at Cal Poly? (choose up to 3)" Response Count

Integrate sustainability topics into already existing classes: 553

Make sustainability a GE requirement: 432

Advise how sustainability education relates to career opportunities: 340

Better marketing of sustainability classes: 268

The University should make it a priority by allocating more funds to sustainability education: 234

Add first year sustainability education opportunities: 214

Offer more sustainability classes in major: 197

Professors should allocate more time to sustainability education: 136

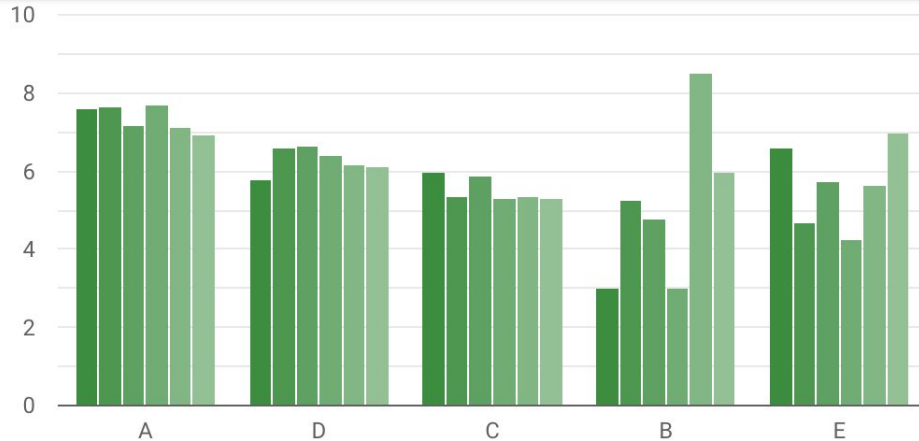
I don't think we should make sustainability education more accessible: 36

Most Missed Question:

Which of the following is a leading cause of the depletion of fish stocks in the Atlantic Ocean?

- A- Fishermen seeking to maximize their catch
- B- Reduced fish fertility due to genetic hybridization
- C- Ocean Pollution
- D- Global Climate Change
- E- Don't Know

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Waste Audit Data

- Waste Audit Spring 2018: percent contamination of trash, recycle, and compost; specific item counts
- Waste Audit Fall 2018: how signs and people helping affect percent contamination in the dining hall

Waste Audit Methods

	Sample Waste Stream	
Weight (lb)	Landfill	Recycle
Initial	50	50
Recycle	25	
Food Waste	10	15
Landfill		10
Items of Concern		
Plastic Straws		
Plastic Utensils		
Plastic Bottles		
Red Radish Bowls		
Starbucks Hot Cups		
Starbucks Cold Cups		
Starbucks Clamshells		
Shake Smart Bowls		
Shake Smart Cups		
Sambazon Bowls		
Plastic Film/Wrappers		
Other Plastic Cold Cups		
Other Hot Cups		
Aluminum Can		

	Composition (lb)					
Sample Waste Stream	Recycle	Food Waste	Landfill	Sample Total	% Contamination	
Landfill	25	10	15	50	70%	
Recycle	35	5	10	50	30%	
Total	60	15	25	100		
% Composition	60%	15%	25%			

Roles:

- (1) Recorder - on laptop or printed spreadsheet, records weights and tallies throughout audit.
- (2) Sorters - remove contaminants from waste stream and count items of interest.

Directions:

Lay out tarp and gather materials.

Take initial weights of landfill and recycle sample bags. Record initial weights (cells B5, C5).

Using gloves and grabbers, open landfill sample bags and sort recyclables into new recycling bag and food waste into new compost bag.

Weigh and record the weights of recycle and food waste bags (cells B6, B7).

Repeat with recycling sample bags, sorting landfill into new landfill bag and food waste into existing food waste bag (cells C7, C8).

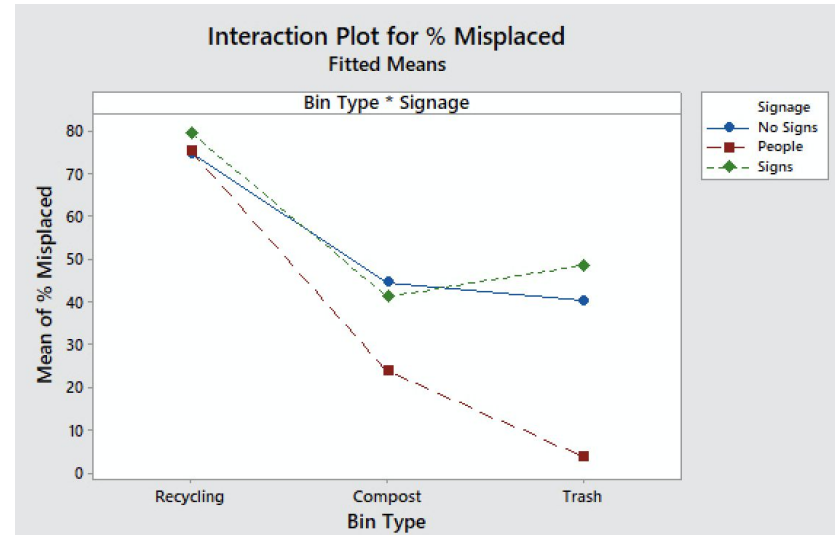
Waste Audit Results

- Waste Audit Spring 2018:

- The trash bins around campus are, on average, 66% recyclable or compostable goods
- The recycle bins around campus are, on average, 45% trash or compostable goods
- The most found items in all the waste bins were plastic utensils, plastic straws, and Starbucks cold cups

- Waste Audit Fall 2018:

- Recycle hovered at about 80% contamination for all three methods
- Compost bins were about 45% contaminated with or without using signs, but dropped to about 25% contamination when volunteers were helping
- Trash also was about 45% contaminated with or without signs, but dropped to 3% contamination with volunteers helping



Takeaways

- External Value of Student Sustainability Research
- STARS literacy assessment
- Understanding our data

Information Flow

Email us:

ccarg@calpoly.edu

Our Website:

bit.ly/CCARG

Thank You!

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Questions?

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