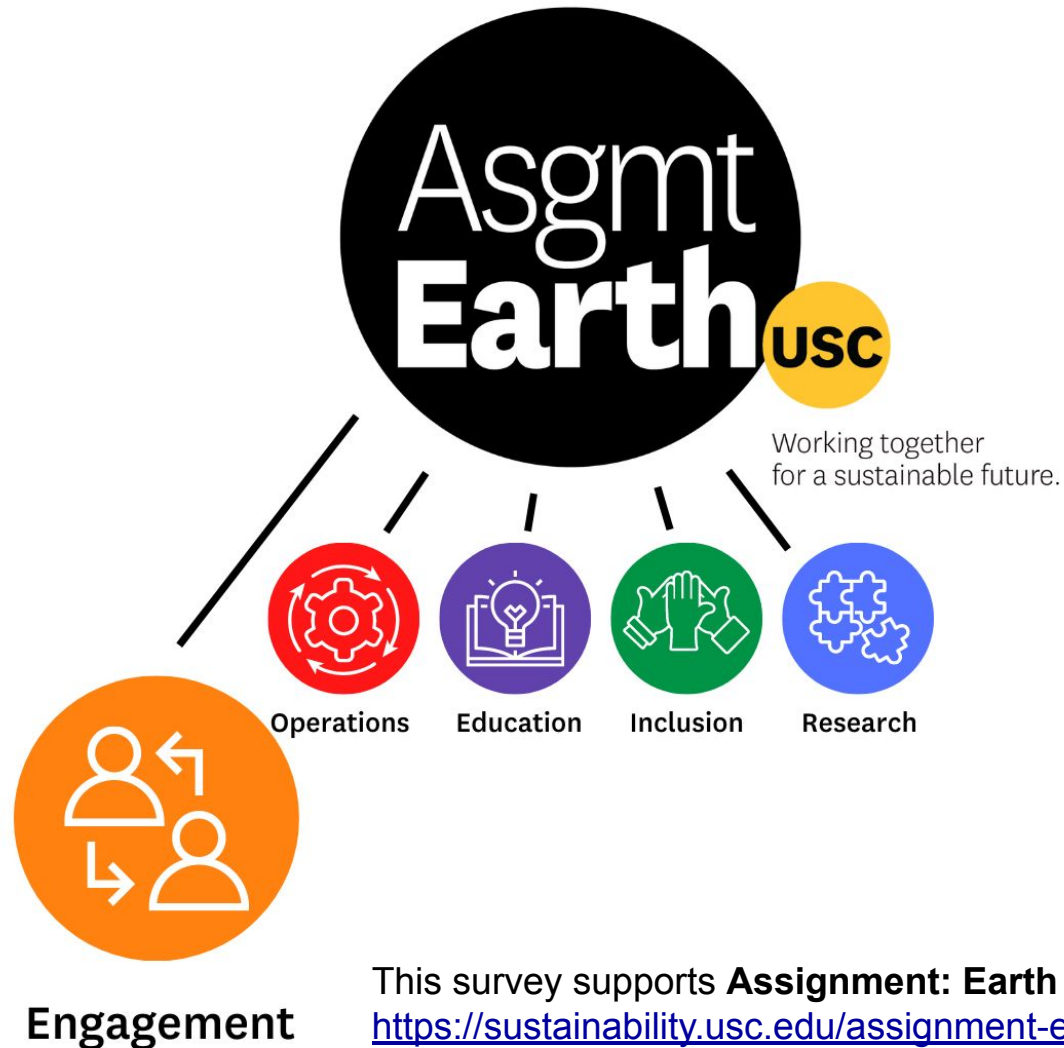


USC Sustainability Survey 2022 Report

August 22, 2022

Introduction- Assignment: Earth



Assignment: Earth is USC's plan for a greener campus and planet. It establishes a vision, aspirations and goals for USC across five domains: Education, Research, Equity and Inclusion, Operations, and Engagement. This plan formalizes USC's commitment to addressing climate change and creating a more sustainable future. It will guide our actions through 2028 and beyond and enable us to adapt to innovations and new solutions as they emerge.

SUSTAINABILITY LITERACY, BEHAVIOR & CULTURAL SURVEY

- USC administered its first annual sustainability survey in April 2022 to help inform engagement and education programs that will increase sustainability knowledge and behaviors at USC, and to establish a baseline for measuring progress towards [Assignment: Earth](#) goals.
- The survey is comprised of three main sections that gauge sustainability literacy, culture, and behaviors of USC students, postdocs, faculty, and staff over time.



SURVEY HIGHLIGHTS

- **5,486 respondents** completed the survey
- There is a **significant positive effect of sustainability education and engagement on literacy and behavior scores** of respondents.
- **Top scoring literacy questions** indicated **high climate change awareness**.
- **> 50% of respondents** have a moderate or strong interest in learning more about sustainability practices.
- **47% of respondents** are interested in getting involved with USC sustainability efforts or groups but have not yet done so.
- **> 50% of respondents** 'usually' take actions to: **reduce energy use, reduce plastic waste, carefully sort waste, conserve water, and conserve paper.**



SURVEY RESPONSES

USC Role	USC Population	Survey Responses	% of Sub-Population
Faculty	6,760	541	8%
Staff	17,301	2,119	12%
Postdoc or Visiting Scholar	747	88	12%
Graduate/ Professional	28,311	1,632	6%
Undergraduates	20,790	1,269	6%

Breakdown of the 5,649 survey respondents by their role and the percent representation of the corresponding USC population. Of the 6,600 people who entered the survey portal, 5,649 completed the background and sustainability literacy survey sections and 5,486 completed the full survey. *USC population numbers were obtained from USC's Office of Institutional Research (Undergraduate and Graduates as of Fall 2021), and from HR, iVIP IT, Postdoctoral Association (Staff, Faculty, Postdocs & Visiting Scholars as of Spring 2022).*

SURVEY SCORING & ANALYSIS

Survey Category	Available Points	Mean (%)	SD (%)	Responses
Literacy	10	61.5	18.2	5649
Behavior & Culture	43	52.3	13.3	5486

Scoring: Points were assigned to survey responses in the USC Qualtrics^{® XM} platform.

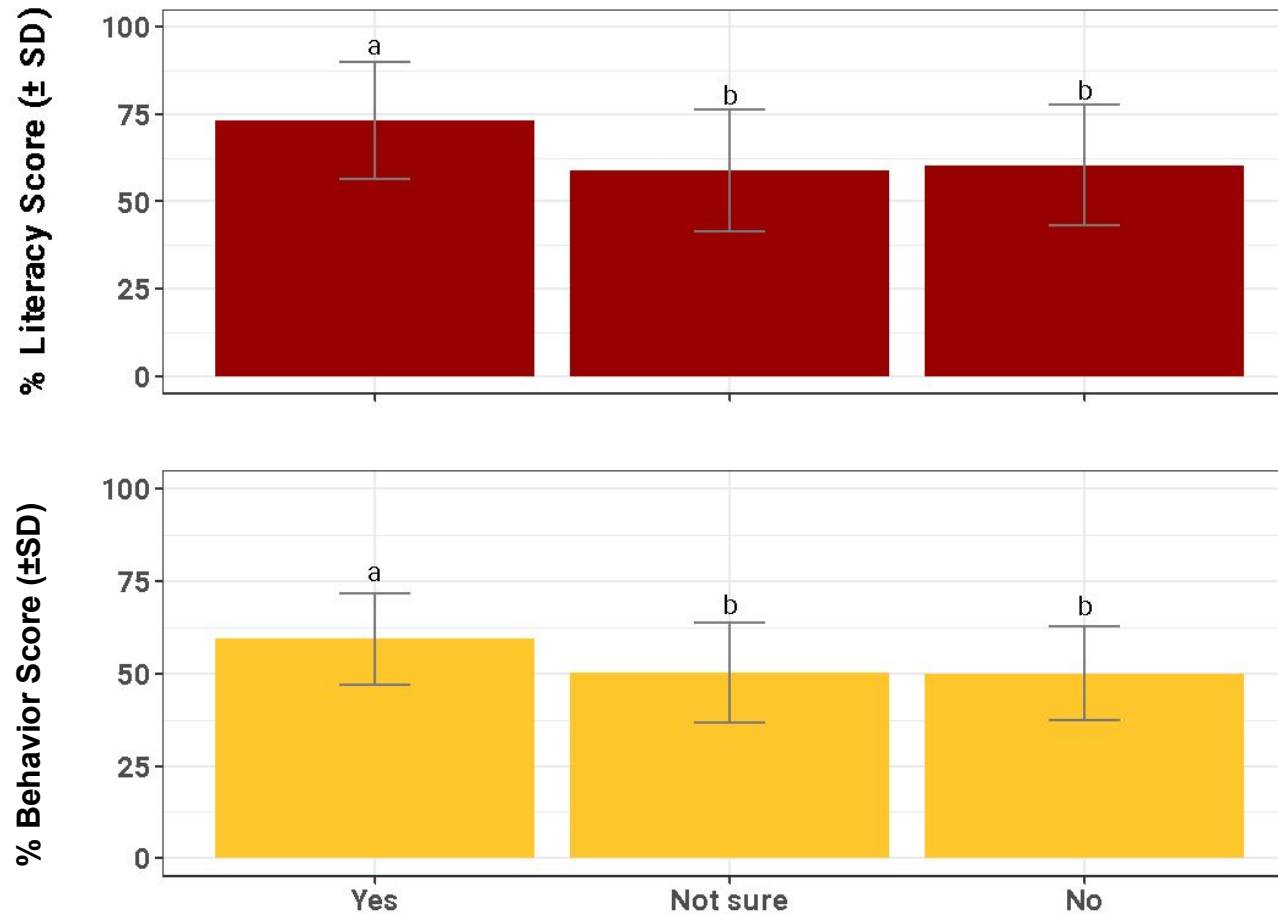
- 10 sustainability literacy questions addressed knowledge of general sustainability focused issues.
- 9 point-based questions in the sustainability behavior & culture survey section comprised of:
 - Culture questions that addressed awareness of sustainability initiatives at USC.
 - Behavior questions on the participation of respondents in sustainability related activities, their frequency engaged in certain sustainability related behaviors, and their sense of belonging to nature.

Analysis: Anonymized data were analyzed in R version 4.1.2.

- We conducted data quality checks, cleaned text entries and reformatted the data for analysis.
- To analyze behavior and culture, data was subset to the 5486 respondents that completed the full survey.
- Raw (unweighted) data were used for analyses and visualizations.



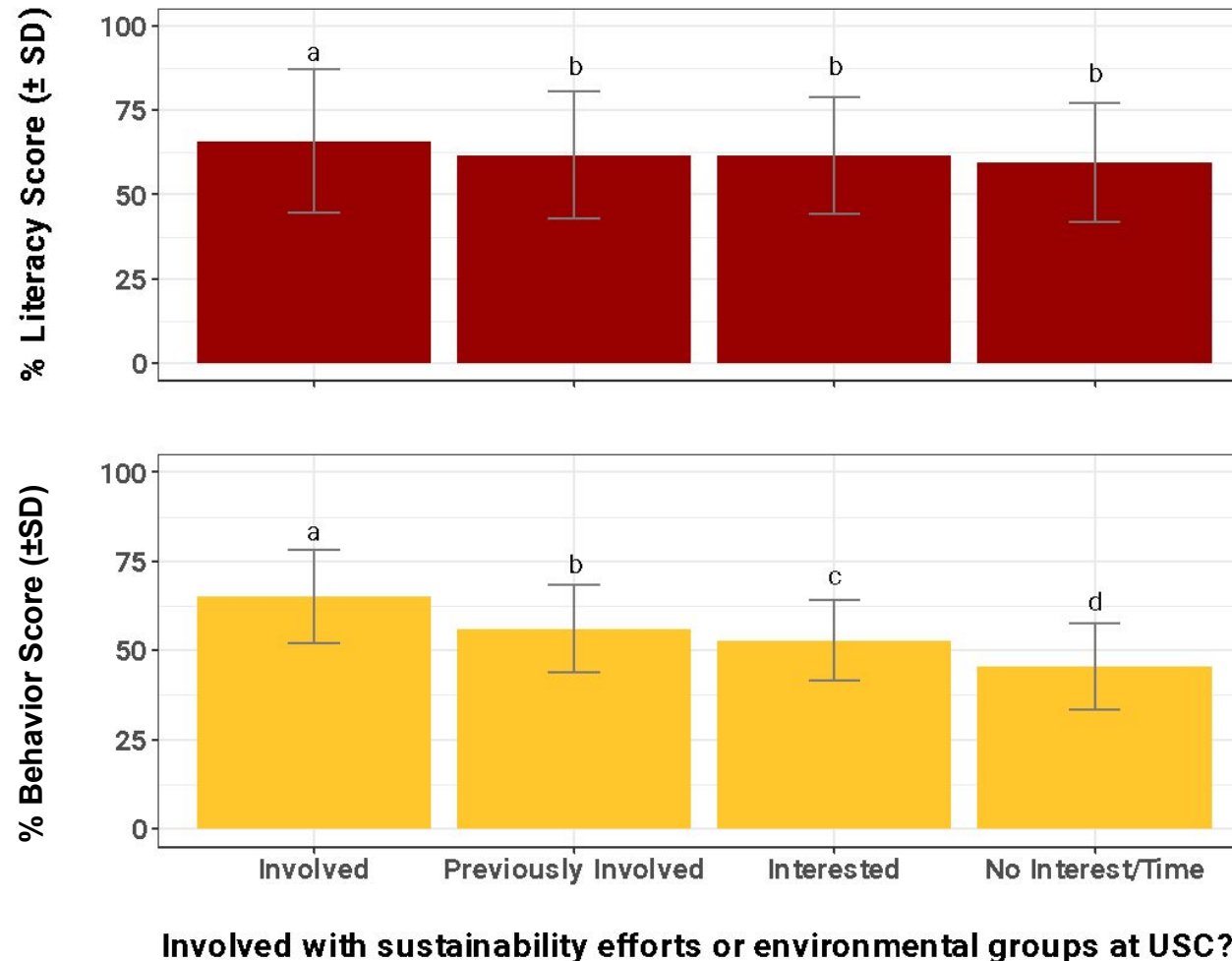
SUSTAINABILITY EDUCATION ASSOCIATED WITH HIGHER SCORES



Students and faculty who took or taught a sustainability-related course had significantly higher sustainability literacy and behavior scores compared to those that did not. (ANOVA, Literacy: $F_{2,3425} = 167.60$, $P < 0.001$; Behavior & Culture : $F_{2,3329} = 154.10$, $P < 0.001$).

Figures: Mean scores (% ± SD) of student and faculty respondents for the sustainability literacy (top bar graph) and sustainability behavior and culture (bottom bar graph) sections of the survey. Scores from the literacy section were analyzed separately from the behavior & culture scores. **Letters above the bars represent significant differences among the respondent groups for each survey section.** (TukeyHSD, $P < 0.001$).

SUSTAINABILITY ENGAGEMENT INCREASED SCORES

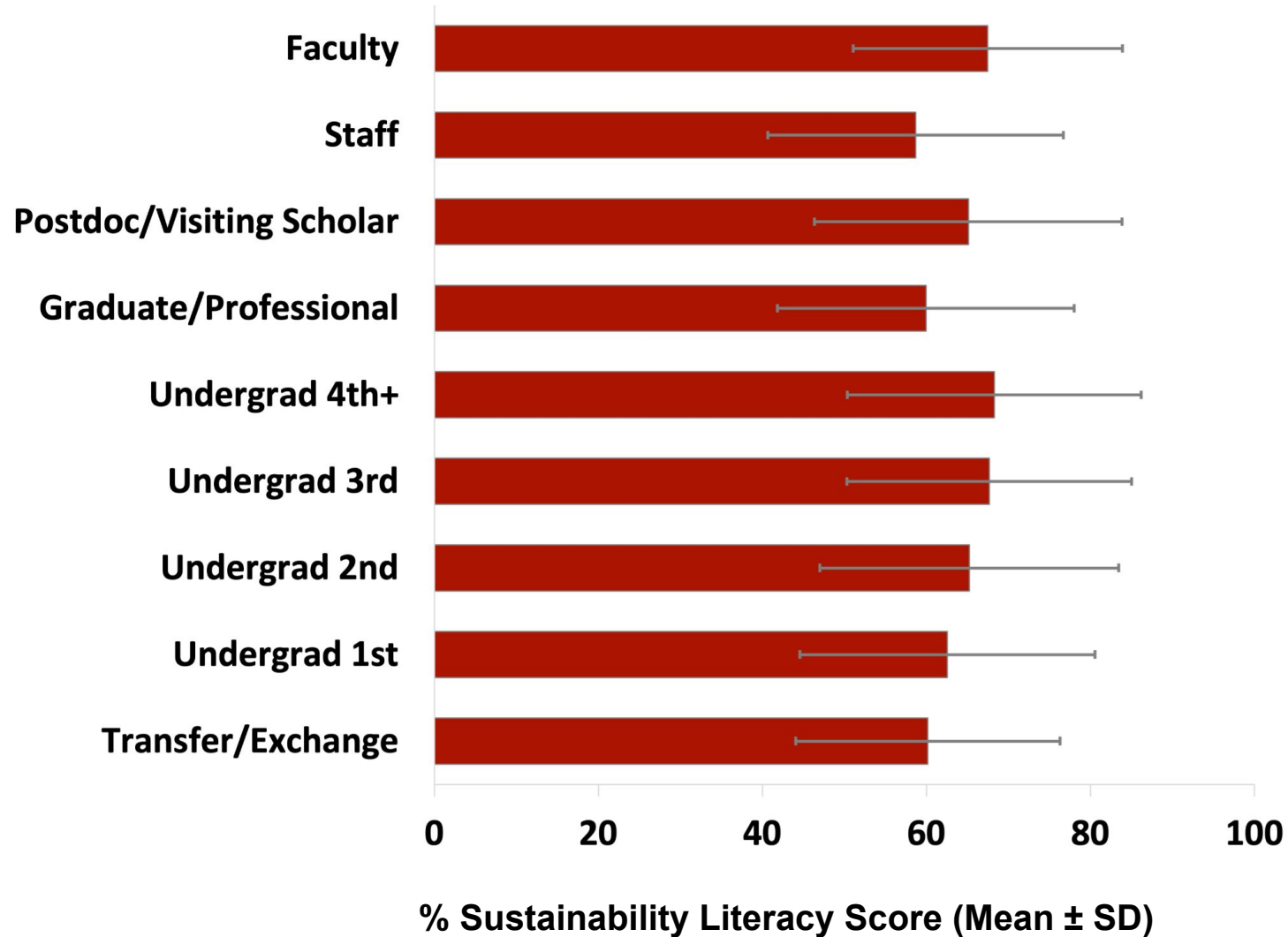


Respondents who were more engaged in sustainability-related efforts and groups affiliated with USC had higher sustainability literacy and behavior scores.

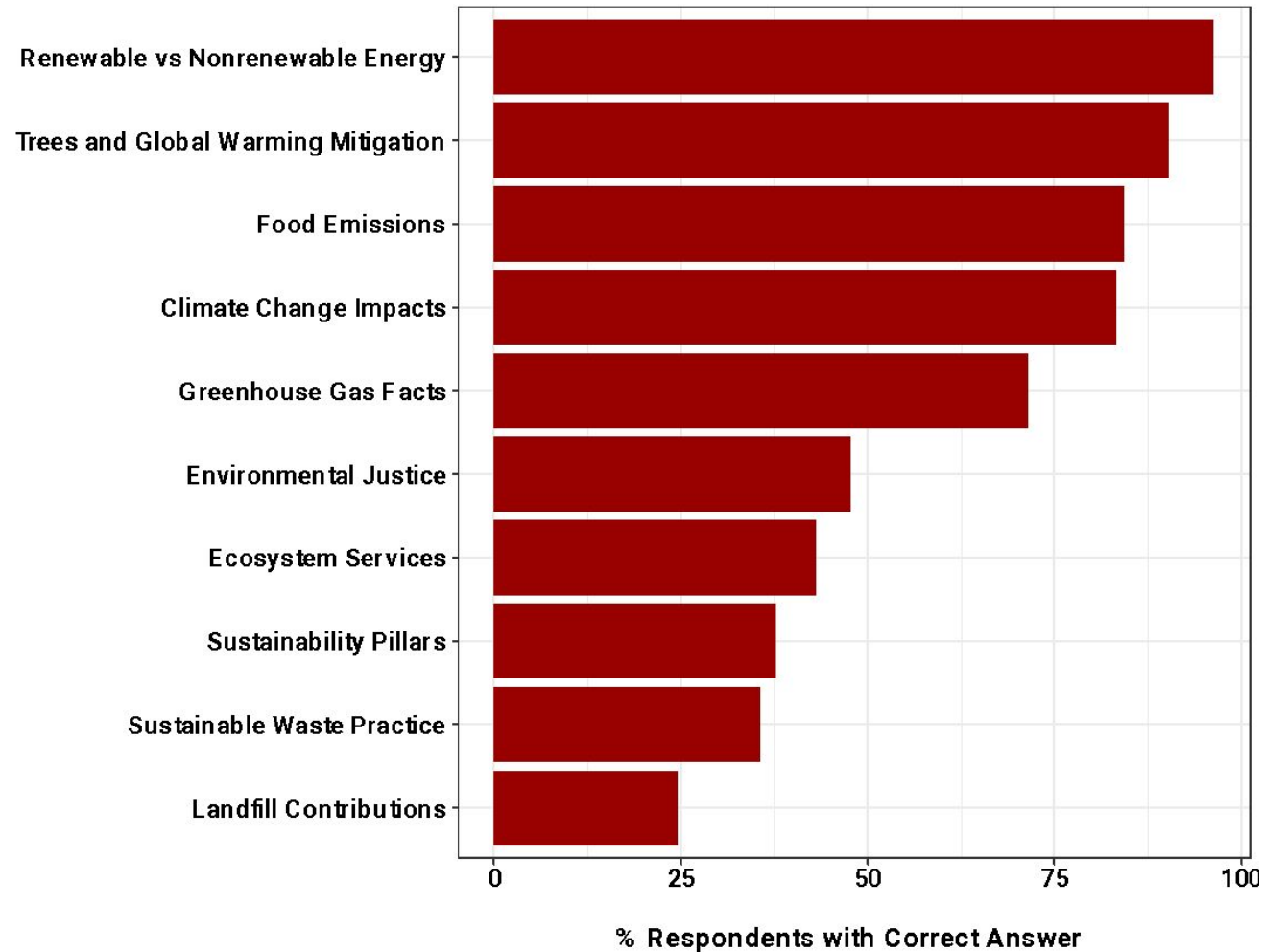
(Kruskal Wallis Test, Literacy Scores: $\chi^2 = 52.06$, $df = 3$, $P < 0.001$; Behavior & Culture Scores: $\chi^2 = 997.28$, $df = 3$, $P < 0.001$).

Figures: Mean scores (% \pm SD) of respondents for the sustainability literacy (top bar graph) and sustainability behavior and culture (bottom bar graph) sections of the survey. Scores from the literacy section were analyzed separately from the behavior & culture scores. **Letters above the bars represent significant differences among the respondent groups for each survey section.** (DunnTest (Šidák), $P < 0.001$).

SUSTAINABILITY LITERACY SCORES BY ROLE



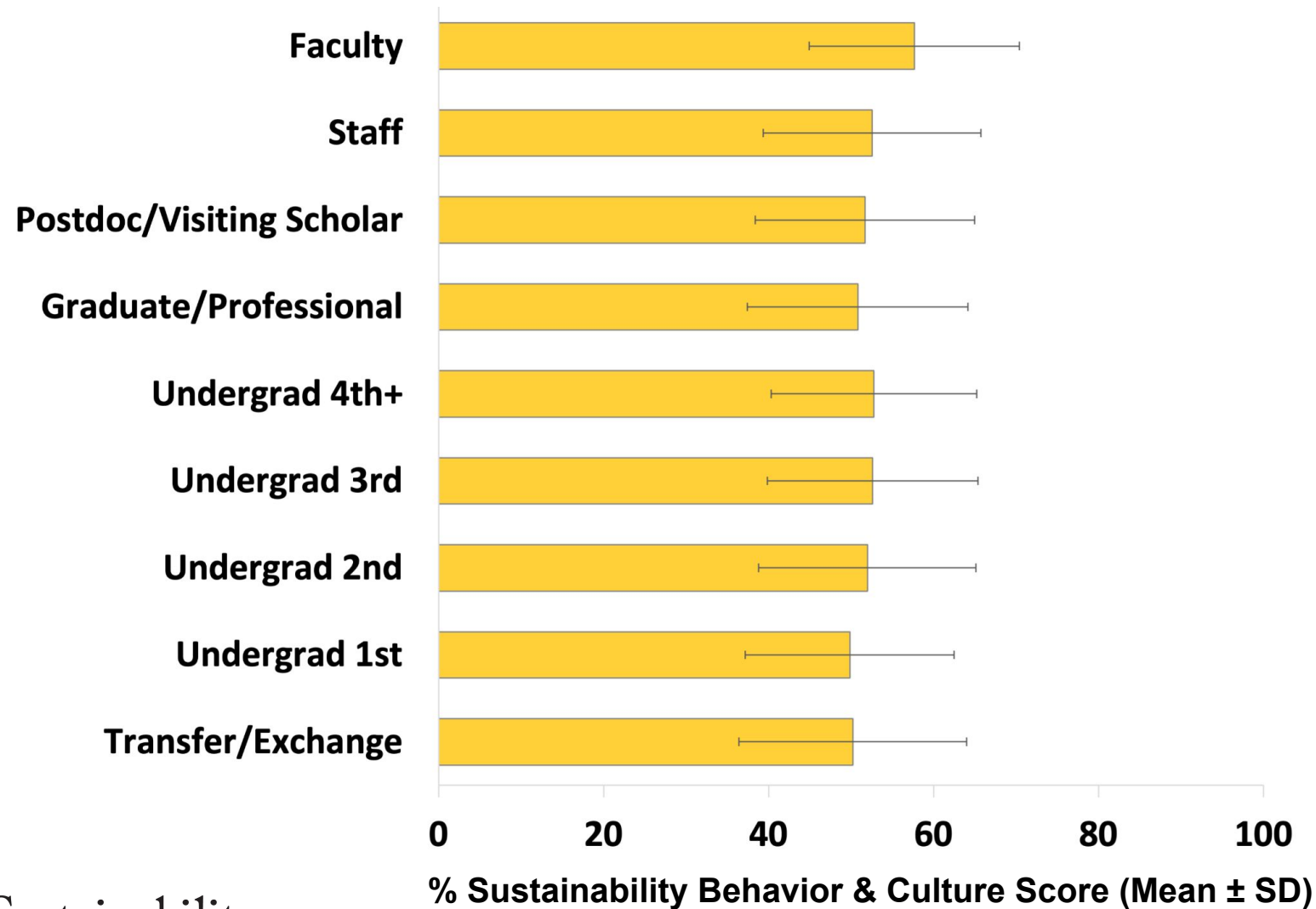
TOP SCORING LITERACY QUESTIONS



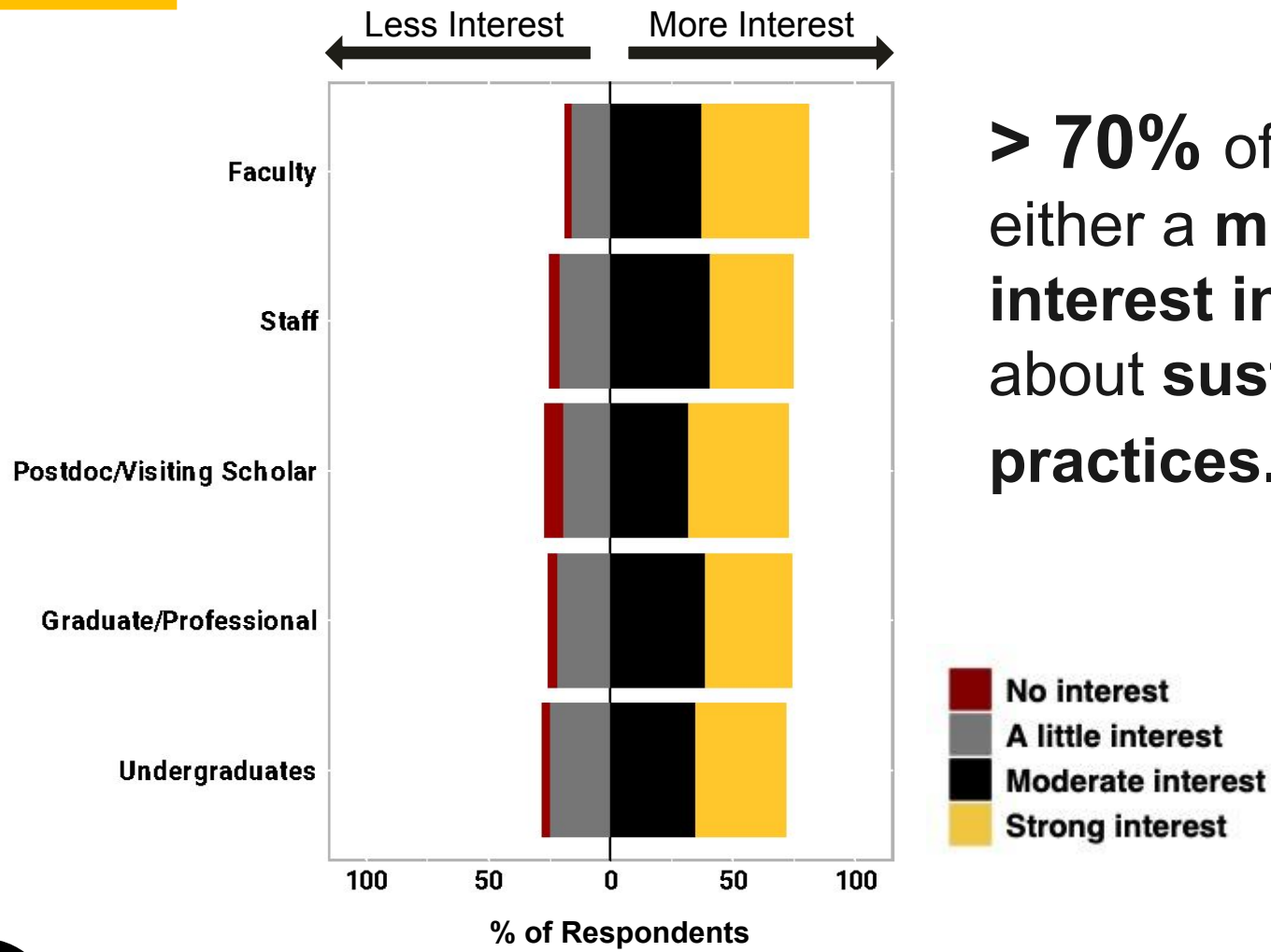
Top scoring literacy questions related to energy, greenhouse gases, and climate change, indicate high climate change awareness.

Figure: % of survey respondents that provided the correct answer for each of the 10 sustainability literacy questions.

BEHAVIOR & CULTURE SCORES BY ROLE

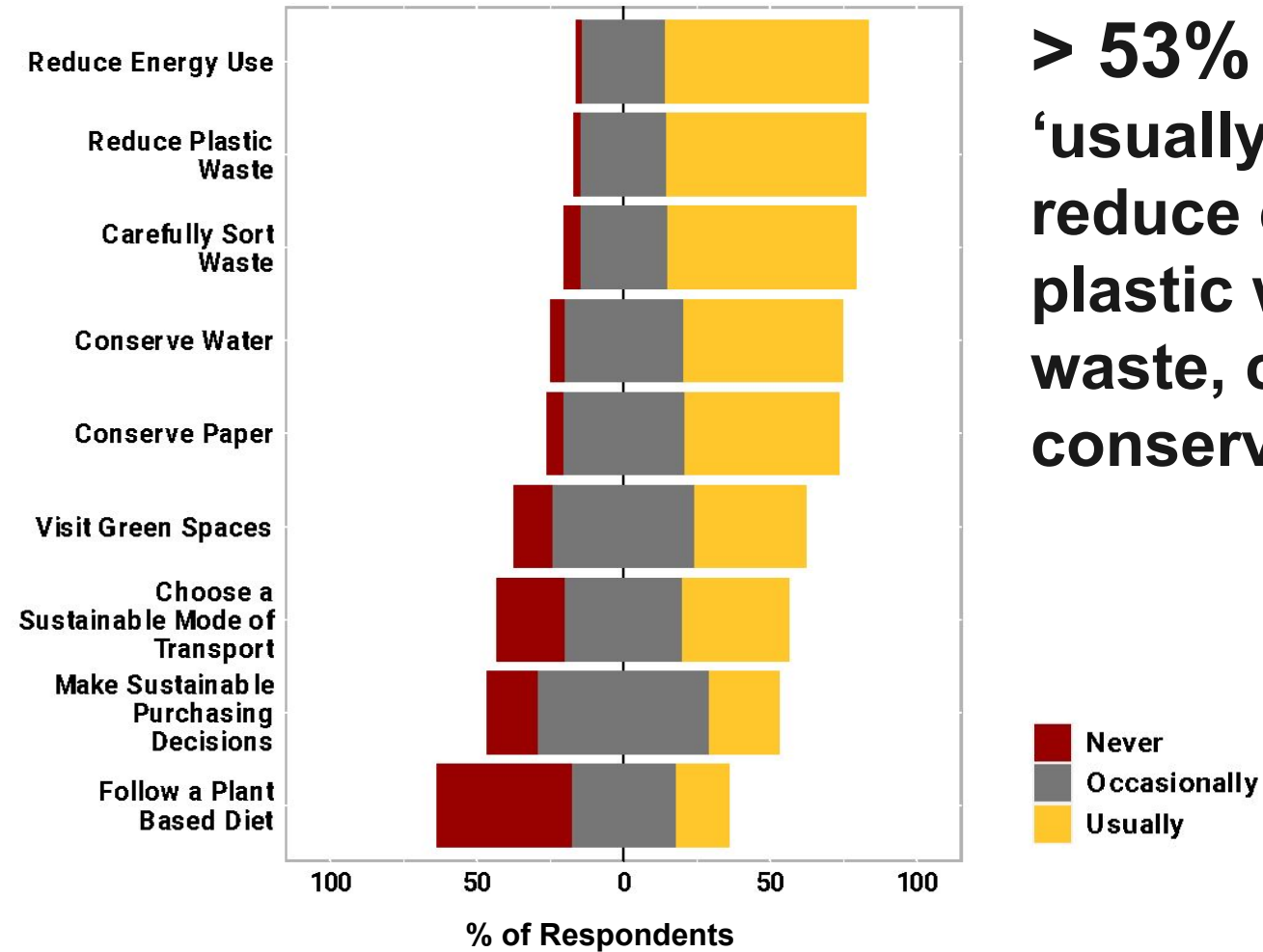


INTEREST IN SUSTAINABILITY PRACTICES



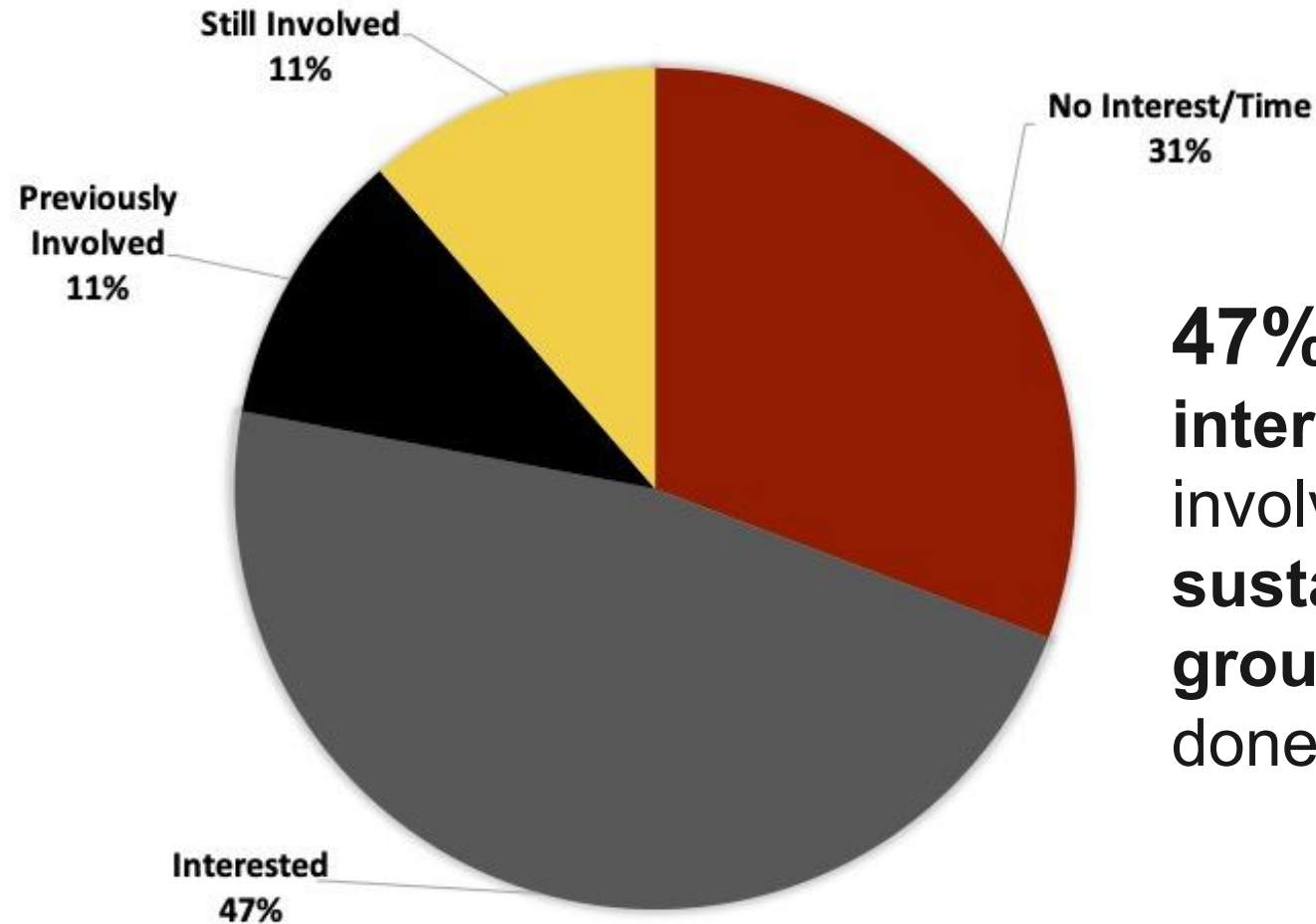
> 70% of respondents have either a **moderate or strong interest** in learning more about **sustainability practices**.

FREQUENCY OF SUSTAINABILITY ACTIONS



> 53% of respondents
‘usually’ take actions to:
reduce energy use, reduce plastic waste, carefully sort waste, conserve water, and conserve paper.

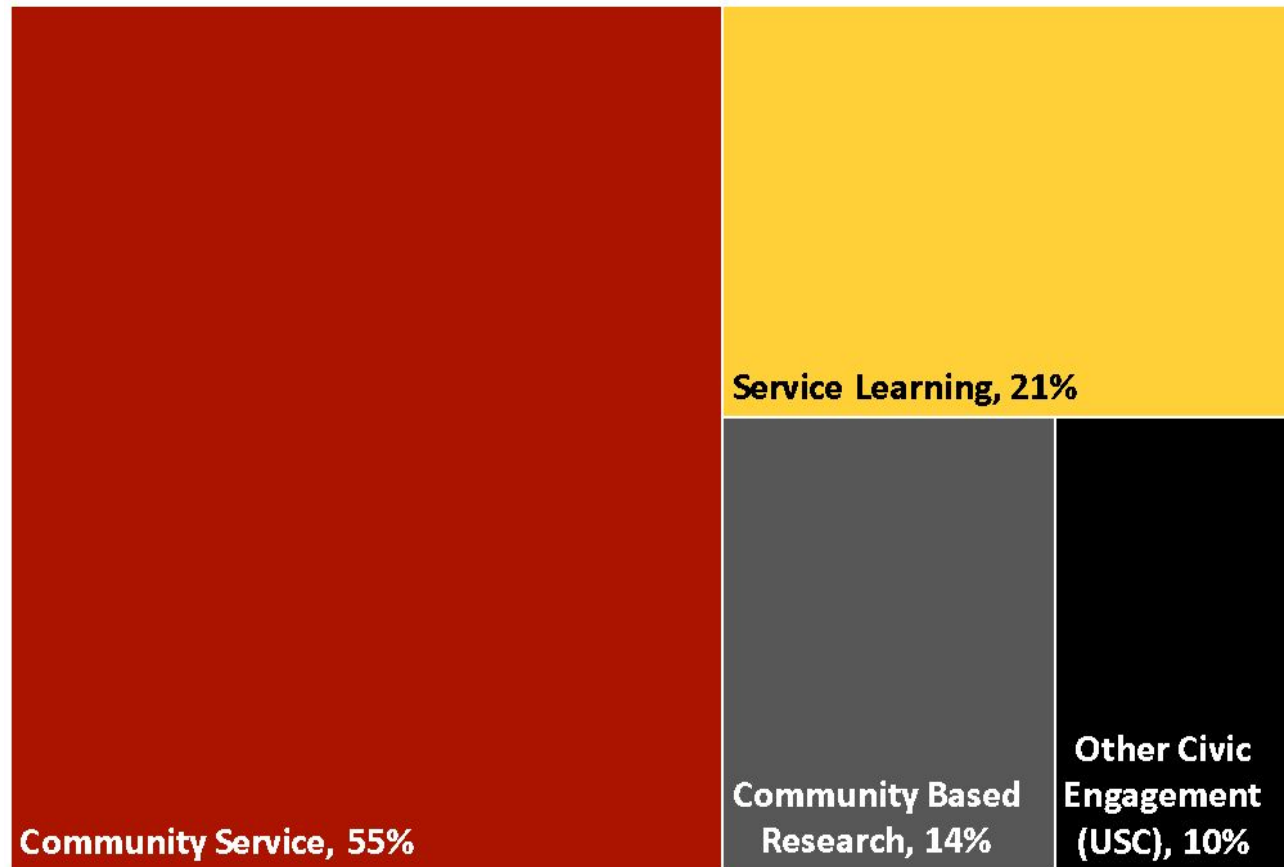
INVOLVEMENT IN SUSTAINABILITY EFFORTS OR GROUPS



47% of respondents are **interested** in getting involved with **USC sustainability efforts or groups** but have not yet done so.

PARTICIPATION IN CIVIC ENGAGEMENT ACTIVITIES

% Participation by Civic Engagement Activity

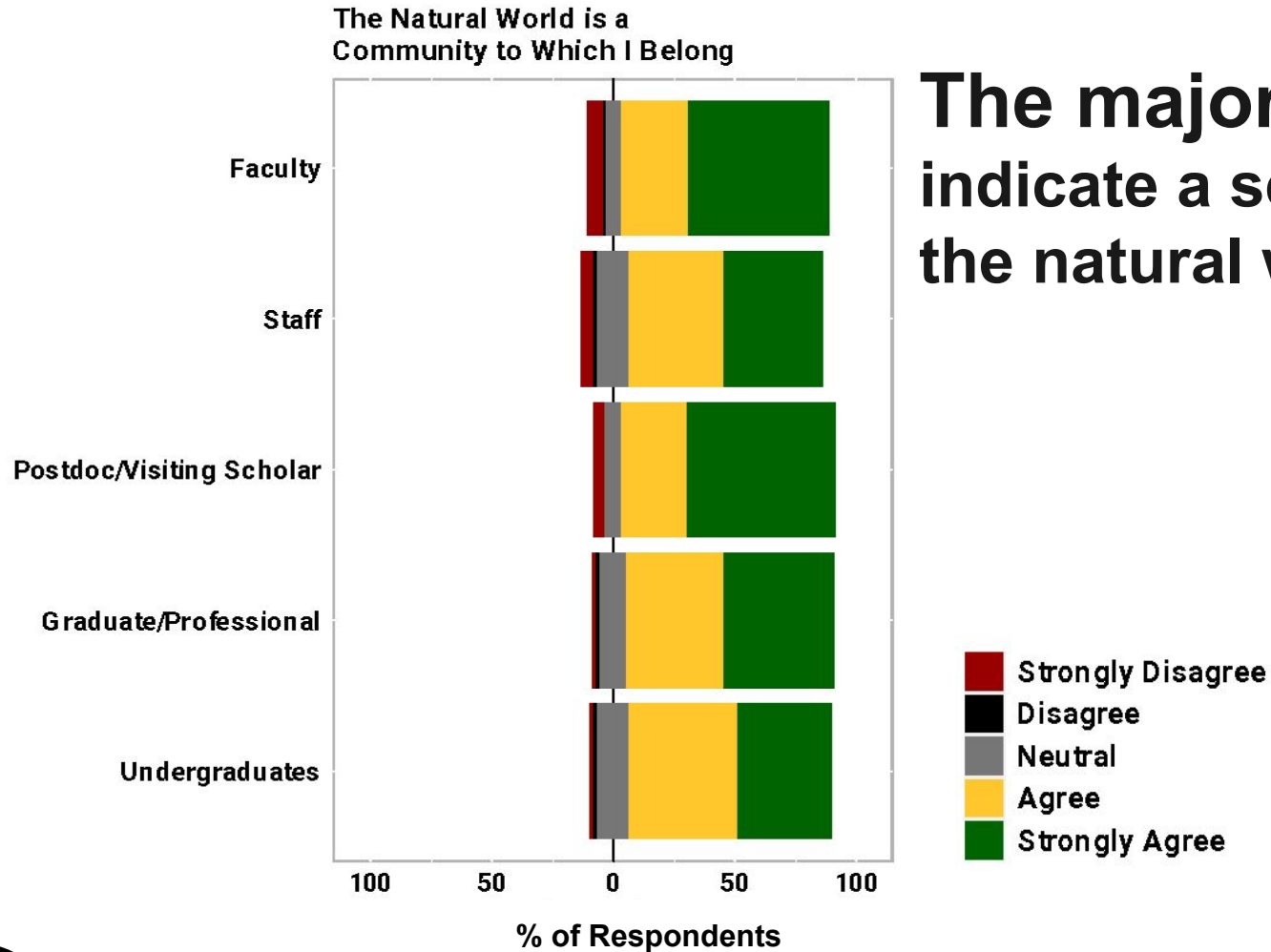


2,600 Respondents
Participate in Civic
Engagement Activities

(out of 5,486 who completed the full survey).

Of these participants, 55% conducted community service, 21% participated in service learning, 14% conducted community-based research and 10% participated in civic engagement projects sponsored by USC. **Some respondents participated in more than one type of civic engagement activity*

SENSE OF BELONGING TO THE NATURAL WORLD



The majority of respondents indicate a sense of belonging to the natural world.



“Germination” by Ricardo Levins Morales

10. *Journal of the American Medical Association*, 2000; 284: 1039-1044.



Comment Category	Freq.
More Engagement Needed	249
Good Job	230
Waste/Recycling	156
Thank You	155
More Sustainability Efforts	67
Public Transport Support	62
Survey Improvements	61
Survey as an Engagement Tool	51
HSC-related	37
EVs and EV chargers	34
Pro-Remote Work	32
Campus Landscaping	25
Housing/Dining	24
Single-Use Plastics	24
Local Community	23
Sustainability Literacy	22
Heal the World	22
Energy Waste	20
Solar Panels	20
Water Stations	19

CONTACT INFORMATION



Please email: OoSData@usc.edu with any questions or comments regarding this annual sustainability survey.



USC Sustainability

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USC's Office of Sustainability would like to thank several key organizations and people in the development and distribution of this survey:

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Arunima Kolekar	Detlof Von Winterfeldt	Jill Sohm	Miguel Gonzalez	PWG Education Committee
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Christine Wang	Ivette Gomez	Lauren Martinez	Olivia Heffernan	Victoria Campbell-Arvai
Christopher Manning	Janielle Cuala	Linda Chilton	Paula Swinford	Will Hunt
		Luisa Brasil	President Carol Folt	Zachary Ellison
				Zelinda Welch



2022 Report Appendix

SURVEY DEVELOPMENT, DISTRIBUTION & ADDITIONAL RESULTS

APPENDIX: SURVEY DEVELOPMENT

- This survey was developed by Dr. Julie Hopper and USC's Office of Sustainability (OoS).
- OoS staff and interns reviewed sustainability literacy and cultural surveys from > 30 [STARS-reporting universities](#).
 - Common questions were selected and modified for further clarity and relevance to USC.
 - Additional questions were created and incorporated to best serve USC's sustainability goals ([Assignment: Earth](#)).
- Selected students, postdocs, staff and faculty at USC reviewed the initial and final survey drafts.
- All feedback was incorporated into the survey, which was then sent for external review to sustainability staff at Arizona State University, California Institute of Technology and the University of California, Los Angeles.
- All comments and edits were addressed in the final version of the survey.

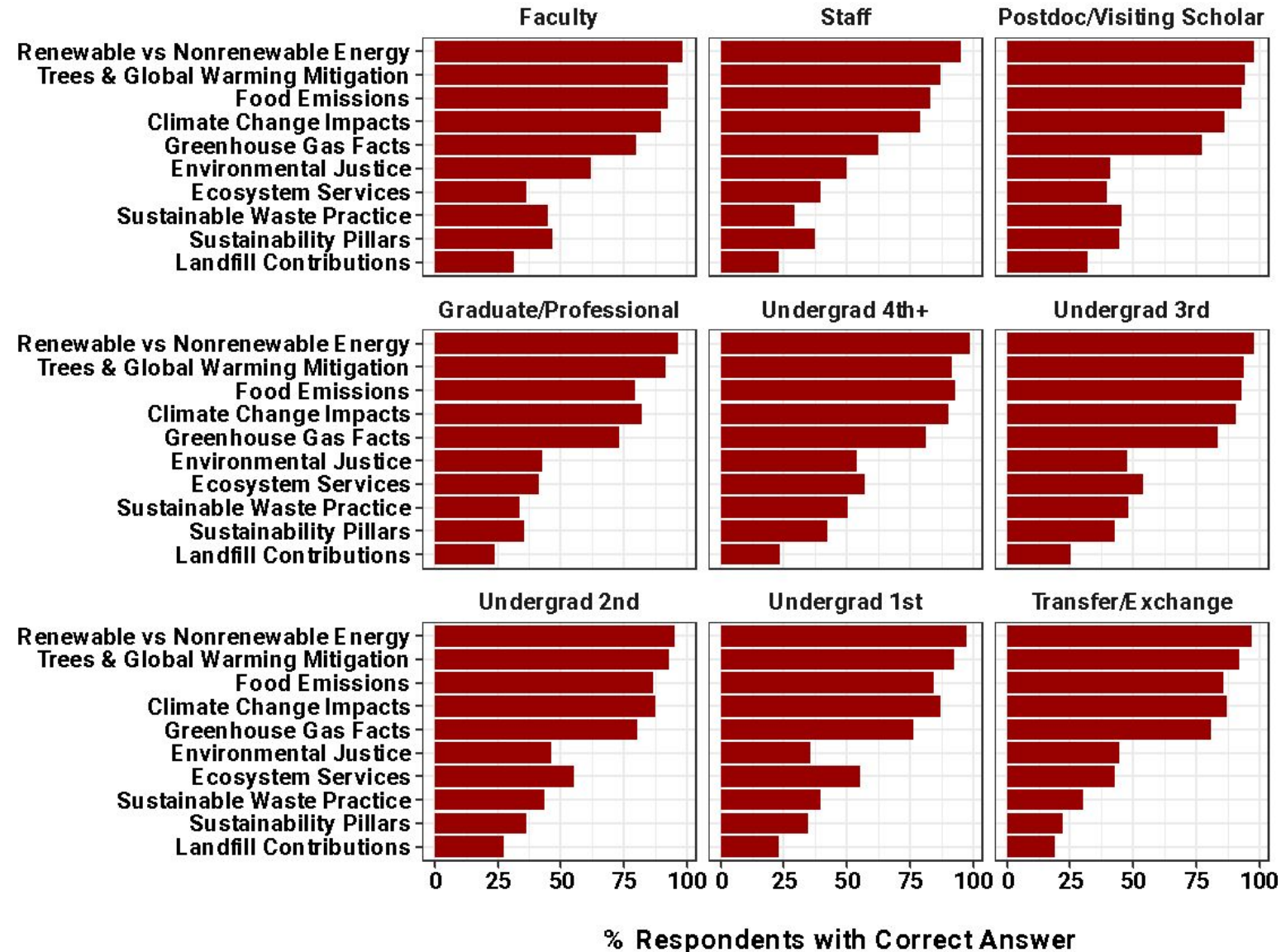


APPENDIX: SURVEY DISTRIBUTION

- The survey was launched through USC Qualtrics via an anonymous link option on 4/11/22 and closed on 4/30/22.
- Mass emails were distributed to all USC students, postdocs, staff and faculty (UPC, HSC and satellite campuses) by the Office of the Senior Vice President for Administration and the Office of Sustainability.
- Additional emails and fliers were sent out by USC organizations and units to their members.
- Signs were put up around USC UPC campus.
- Incentives included a chance to win one of twenty \$100 USC Bookstore gift cards. Gift cards were distributed to the 20 lucky survey participants in May 2022.



APPENDIX - BREAKDOWN BY USC ROLES: LITERACY QUESTION SCORES BY USC ROLE



APPENDIX - BREAKDOWN BY USC ROLES: AWARENESS OF SUSTAINABILITY INITIATIVES AT USC

