Sustainability Assessment of College Undergraduates

Edgar Castro Tello, Amanda Faunce, Kristen Garcia, Catalina McEachern, and Cody Sparaco
Alaina Bernard and Jennifer Elliott

UCFARBORETUM

UCF Landscape & Natural Resources

– Objective –

To determine if a correlation exists between undergraduate students' academic College at UCF and their sustainability knowledge and between their academic College and environmental attitude.

– Introduction –

- Sustainability encompasses three pillars; the environment, the economy, and social equity.
- By combining these three pillars, sustainability meets the needs of people today without negatively affecting future generations or the environment.
- Knowledge about sustainability is crucial to shaping the future of the planet.
- To assess current knowledge of sustainability and environmental attitudes, we surveyed undergraduate students at the University of Central Florida (UCF).

Hypothesis

With the notion that a student's academic College would affect their answers, we expected to see a correlation between academic College and their sustainability knowledge and environmental attitude.

– Methods –

1. Created survey which directly focused on the three pillars of sustainability
   - Included one free-response question: personal definition of sustainability
   - Followed with 15 Likert questions: 5 concentrated from each pillar
   - Gathered demographic data: biological sex, year in school, and academic college
2. Conducted surveys: online and in-person, on campus
   - Collected 435 surveys
3. Analyzed data from surveys
   - Computed Likert scores
   - Scored free response answers based on number of pillars addressed (0-3)
   - Performed one-way ANOVA: College/Likert scores and College/Pillar scores and a Chi-squared on Pillar scores
     - Independent variable: UCF academic College
     - Dependent variables: Pillar scores, Likert scores

– Results –

- There is a significant correlation between both College and pillar scores and College and Likert scores.
- ANOVA gave a 0.001 significant p-vaule for Likert scores (Figure 1)
- ANOVA gave a 0.0001 significant p-value for Pillar scores
- Chi squared test gave a 0.0346 significant p-value for Pillar Scores (Figure 2)

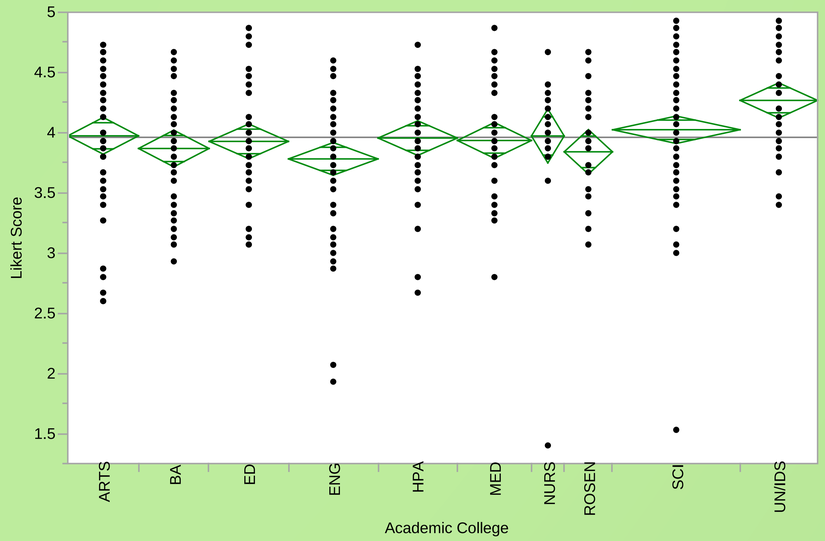

Figure 1: Distribution of Likert Scores Per College. The middle line in the diamond represents the College's mean score. The height of the diamond represents confidence and the width represents number of responses.

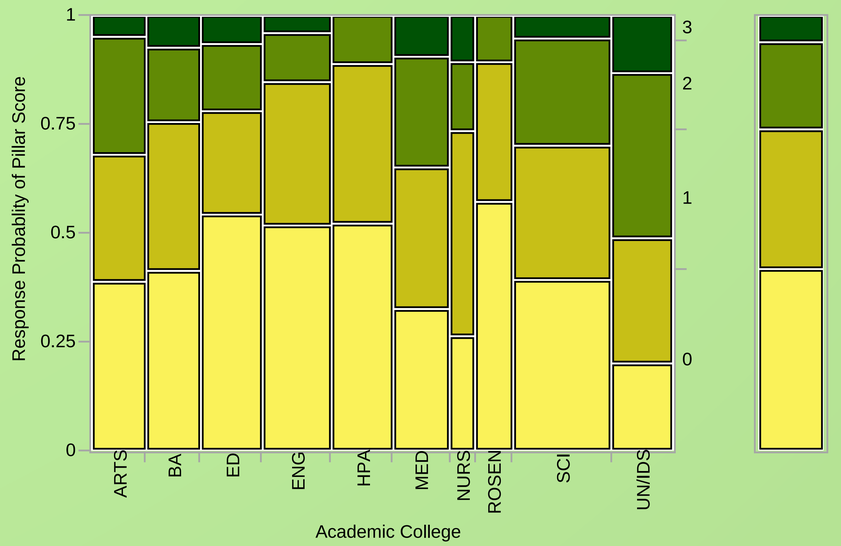

Figure 2: Distribution of Pillar Scores Per College. Color represents how many pillars mentioned. Width represents number of responses. Height shows response probability with the entire sample equaling 1. The right side column shows the proportions for all Colleges combined.

– Discussion –

- Evidence supports hypothesis.
- There is a correlation between academic College and sustainability knowledge and College and environmental attitude.
- Figure 3 shows how each pillar plays into the College's view of sustainability.
- Based on the data, we can see that the College of Undergraduate Studies (IDS) scored the highest, most likely due to the large number of Environmental Science majors.
- Further research can be focused on identifying which UCF Colleges present the most knowledge of sustainability and offer methods of improving sustainability education.

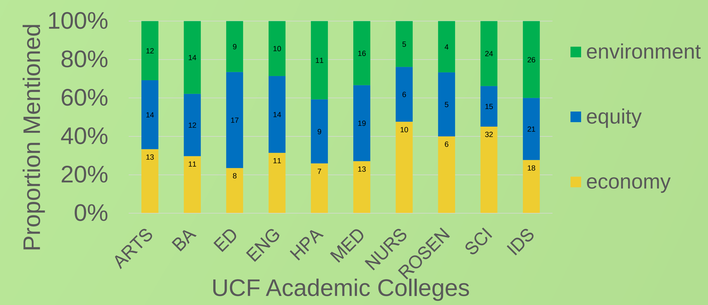

Figure 3: **Distribution of Pillar Categories Mentioned Per College**.

– References –

- McFarlane, Donovan A. and Agueda G. Ogazon. Fall 2011. "The Challenges of Sustainability Education." *Journal of Multidisciplinary Research.* Vol. 3 p.81-107.
- Rideout, Bruce E. August 2013. "The liberal arts and environmental awareness: Exploring endorsement of an environmental worldview in college students." International Journal of Environmental & Science Education. Vol. 9
- Opp, S. M., & Saunders, K. L. (2013). Pillar Talk: Local Sustainability Initiatives and Policies in the United States--Finding Evidence of the "Three E's": Economic Development, Environmental Protection, and Social Equity. *Urban Affairs Review*. Vol 49. p. 678–717
- Burns, H. (2013). Meaningful Sustainability Learning : A Study of Sustainability Pedagogy in Two University Courses, *25*(2), 166–175.