

The Problem

What are practical ways to increase recycling on campus?

What effect do informative visual cues have on increasing recycling levels?

Does a higher level of recycling receptacle transparency lead to more recycling?

H_0 = There will not be a difference in recycling levels of receptacles with differing opacities.

H_1 = There will be a difference in recycling levels of receptacles with differing opacities.

Method

This research used a single sample within-subjects design and compared the recycling preferences of individuals in the Arkansas Union over the course of seven days. Two ClearStream BeverageMax recycling receptacles (Figure 1) were placed on opposite sides of the Union living room with either an opaque or transparent bag.



Figure 1. Photo of the ClearStream BeverageMax¹ recycling receptacle used for this study.

Sustainability

This research strongly focuses on both the social and managed systems of sustainability. The social system² seeks to understand how humans respond to and interact with their environment and what causes individuals to act in sustainable or unsustainable ways, while the managed system² focuses on applying sustainable practices in institutional settings. By examining recycling behaviors among students, and finding simple and practical solutions to maximize recycling habits on campus, the University of Arkansas can not only optimize its sustainability goals, but can also save some of Earth's valuable resources.

Being able to use my sustainability minor in a real world setting has significantly enhanced my experience here at the University, and has given me practical skills to use in the field of sustainability. This research has also showed me the vital role that individuals play in terms of conservation and sustainability.

References

1. ClearStream Recycling. (2012). ClearStream BeverageMax. Retrieved from <http://www.clearstreamrecycling.com/ClearStream-Recycling-Container-p/77085.htm>.
2. The Office for Sustainability and Academic Programs. "Systems Areas." Retrieved from <http://sustainability.uark.edu/academics/systems-areas.php>.

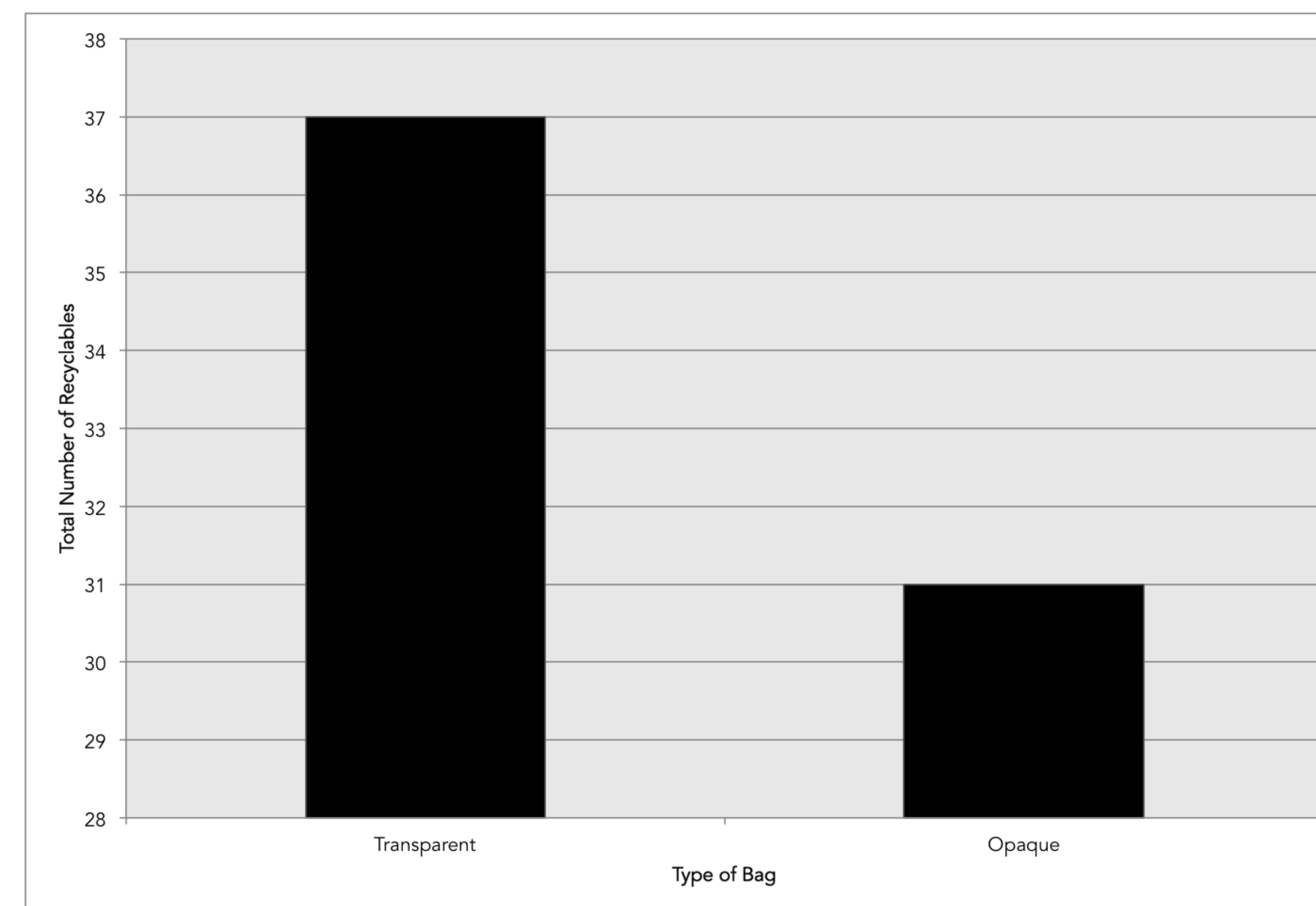


Figure 2. Bar graph showing difference in total number of recyclables collected from transparent and opaque experimental condition, respectively.

Results and Discussion

The data showed that there was not a measurably significant difference in the two styles of receptacle bags used. The transparent bags did have 8.8% more recyclables than did the opaque ones (Figure 2), but upon performing a single sample t test to compare the differences in the sample ($N = 68$, $M = 0.46$, $SD = 0.50$) to those of the test value (0.50), the data proved to be insignificant, supporting the null hypothesis, $t(67) = -0.73$, $p = 0.47$, 95% C.I. [-0.17, 0.08]. This could be due in part to the small sample size; however, further research with larger samples could potentially yield significant results.