



# Using Incentives to Change Social Practices Surrounding Litter

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## INTRODUCTION

### The Problem

According to the concept of the Tragedy of the Commons, when a space has no designated owner, people feel free to use or abuse it as they please, leaving others to bear the brunt of the effects (Hardin, 1968). Regarding litter, this means that when one individual litters, everyone who shares the space has to deal with the consequences. This is a problem because litter can affect everything from crime rates (Kingdom, n.d.) to productivity (Huangfu, Lv, Sheng, & Shi, 2017). Litter is an issue that is prevalent everywhere, including Palo Alto.

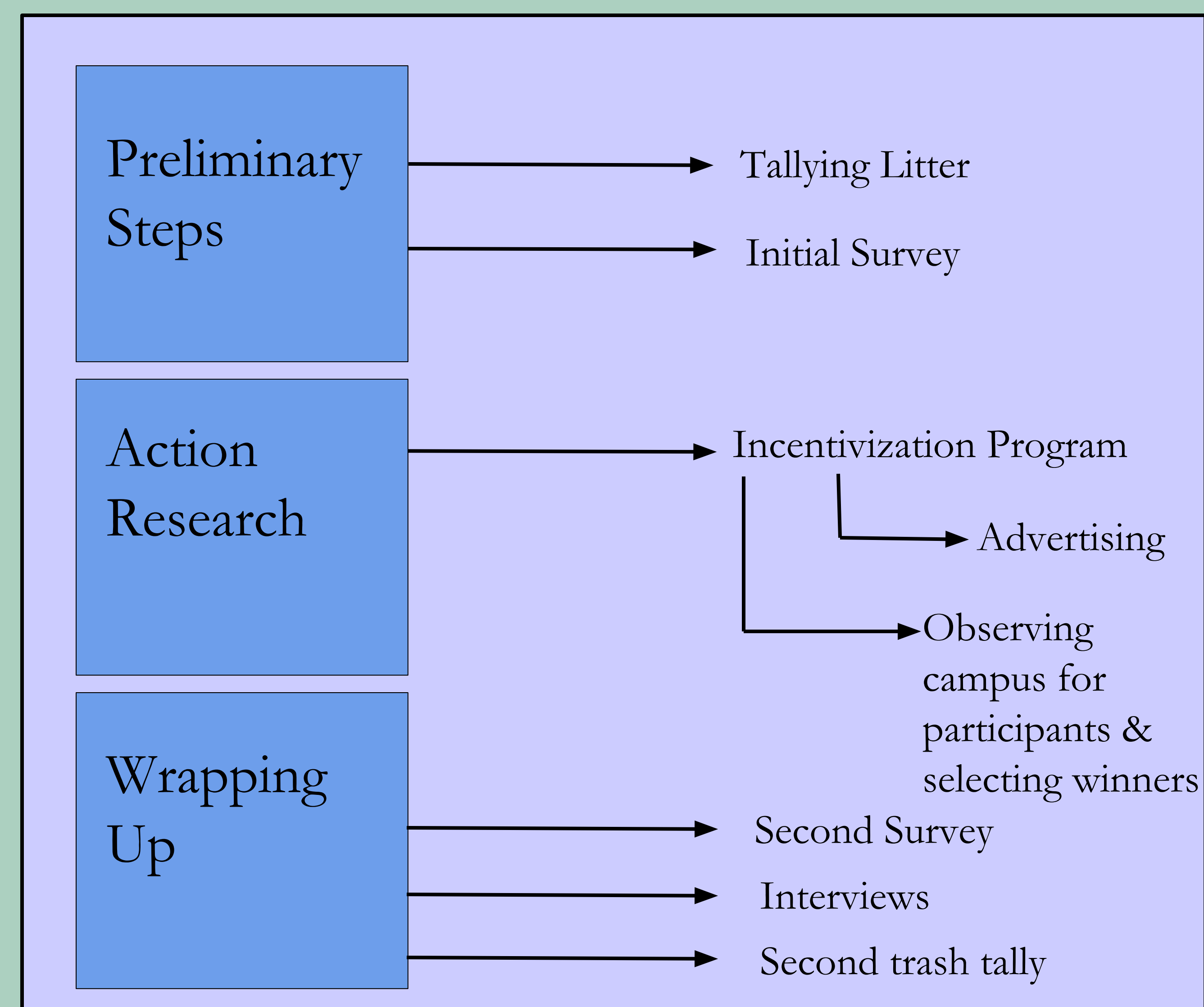
### Addressing the Problem

To reverse the consequences caused by the Tragedy of the Commons, I decided to look to historically extrinsic motivations like incentivization and public acknowledgment of the issue (Gneezy et al., 2011) as a way to encourage behavior modification. Thus, my research question is:

***How can we implement an incentivization program to most effectively persuade people to engage in anti-littering behavior?***

## METHODOLOGIES

My research consisted of two main components: preliminary observation/survey distribution and action research. My project also included a follow-up portion after my action research was complete.



## DATA AND RESULTS

### 1. Trash tally results (before and after)



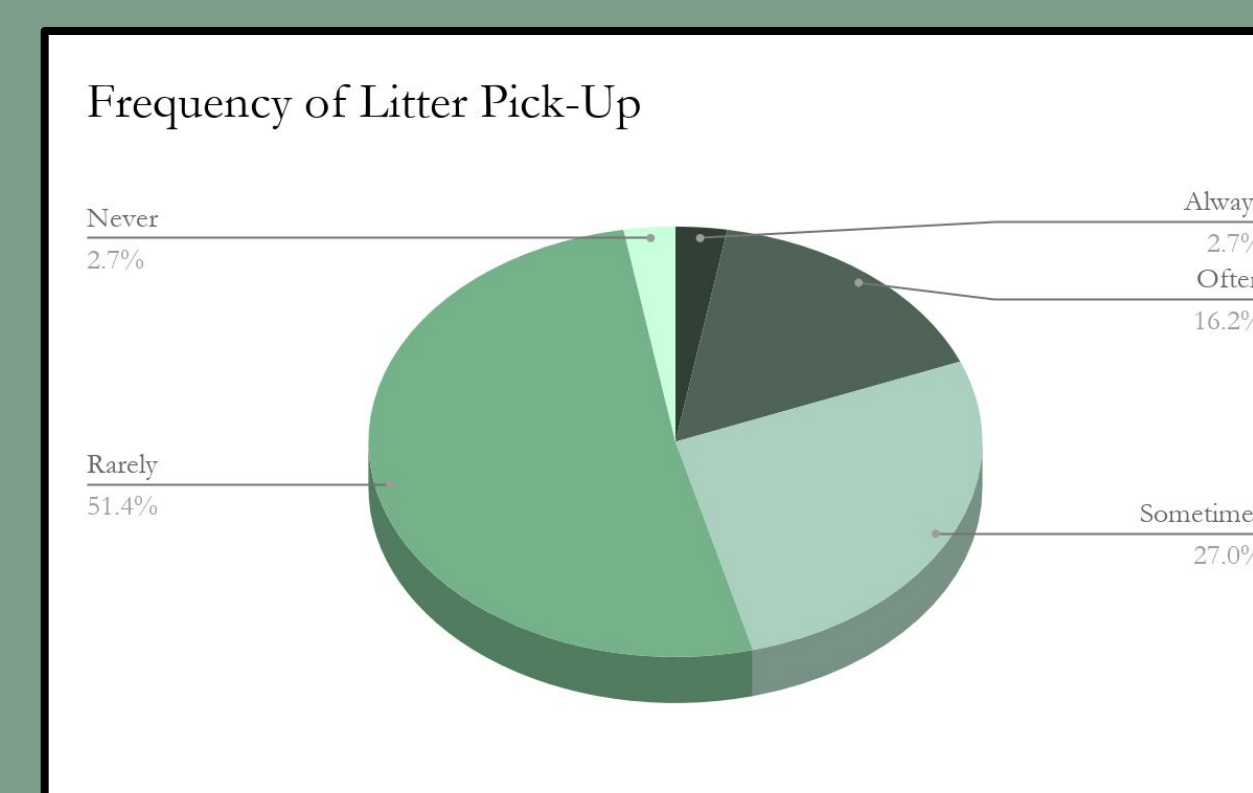
### 2. Survey responses (36 individuals):

- Initial survey:

i. *Do you think litter is a problem at Paly?*

87% of respondents answered YES

ii. *How frequently do you pick up trash (that doesn't belong to you) from around school?*



- Second survey:

i. *Did you participate in the litter incentive program?*

25% of respondents replied YES

ii. *Has your perspective on litter changed since the last survey?*

68% of respondents said that the program changed how they will act in the future

They said they will “be more aware of [their] surroundings” and will “pick up litter when [they] see it”

### 3. Interview results

Interviewee 1: Participated in program knowingly, says he thinks “it’s ugly when trash is around.” He appreciated the valuable incentives.

Interviewee 2: Participated in program unknowingly, picks up trash normally but still thinks incentives are helpful.

## ANALYSIS AND IMPLICATIONS

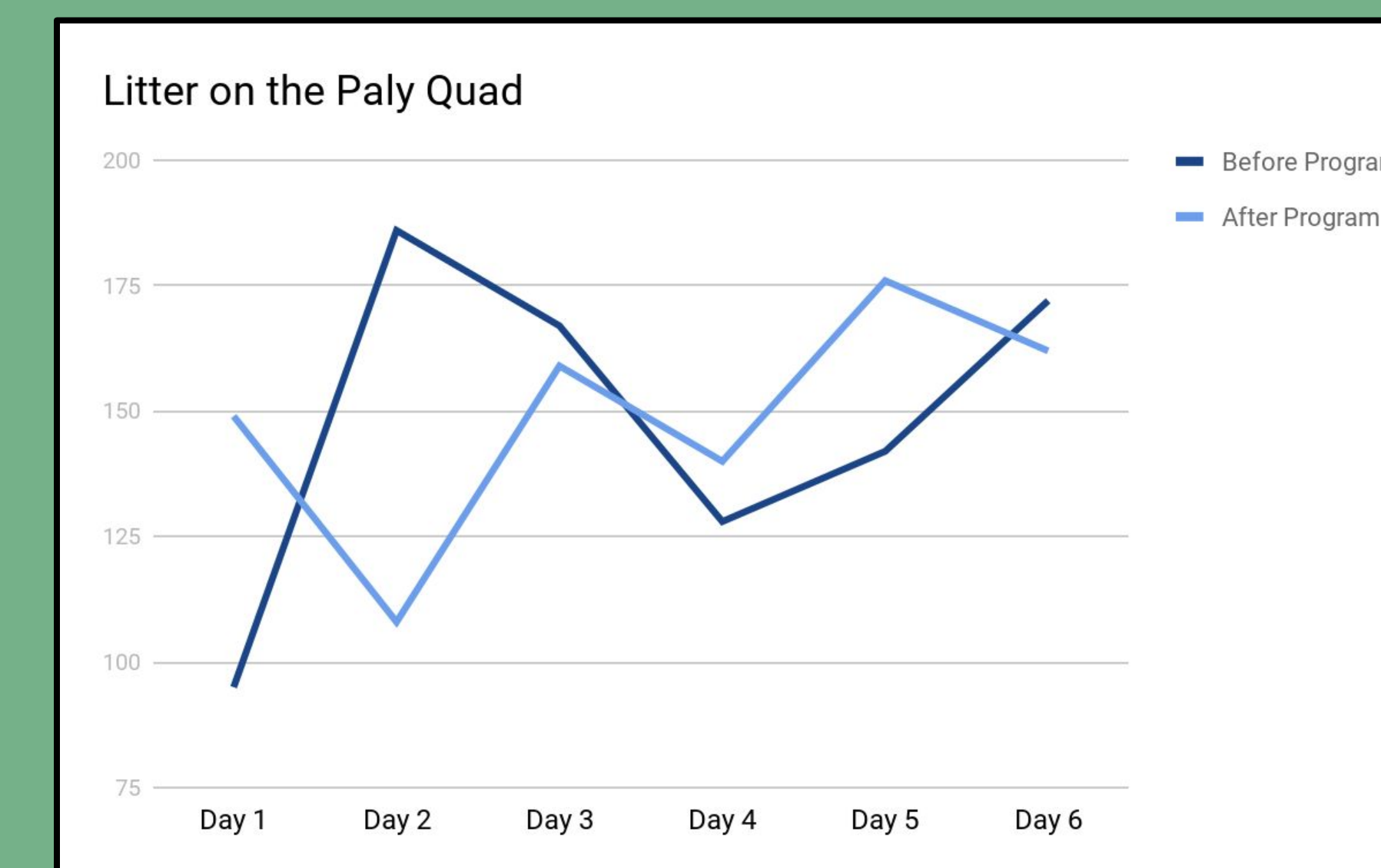
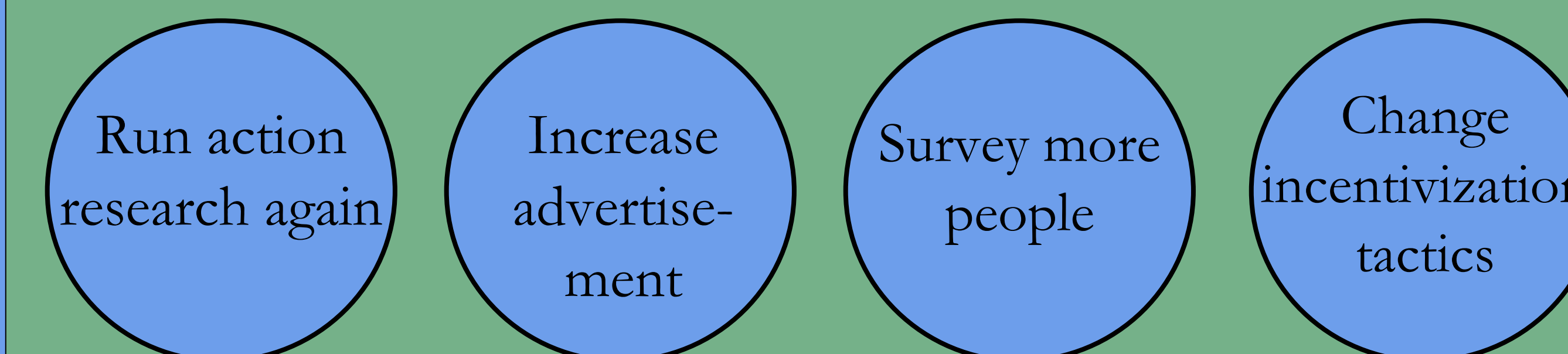


Figure 1: I counted trash at Paly for six days over a period of two weeks, before and after the incentivization program. The levels of litter did not fluctuate significantly between days or between periods.

### Coming to a Conclusion

- Analysis: My action research yielded generally inconclusive data
  - Conclusion: More advertisement was necessary in order to get the word out. I did not reach a large enough audience.
- Analysis: People *do* believe litter is a problem at Paly, but only some act on this belief
  - Conclusion: Increasing awareness will lead to action, but one survey is not enough to increase awareness in the long term.
- Analysis: Extrinsic motivation can be effective, but it is not clear whether or not it was in this case.
  - Conclusion: On small scales such as this one, it is better to offer many smaller prizes rather than a few expensive ones

### Next Steps



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