spartan green

ETHNOGRAPHIC RESEARCH REPORT

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Original Design Challenge

How can the team increase student recycling?

Revised Design Challenge

How can the team motivate on campus students who are prone to poor recycling habits to increase their recycling output?

INITIAL PERSONA

quick look

Sarah

age: 19
location: Grand Rapids, MI
lifestage: First-year
major: Journalism
family size: 2-5

MOTIVATIONS
live a happy and fulfilling live
contribute to society
earn good grades
party!

MINDSETS
vulnerable: new to the setting
impressionable: easily influenced due to displacement
ambitious: looking to achieve new goals

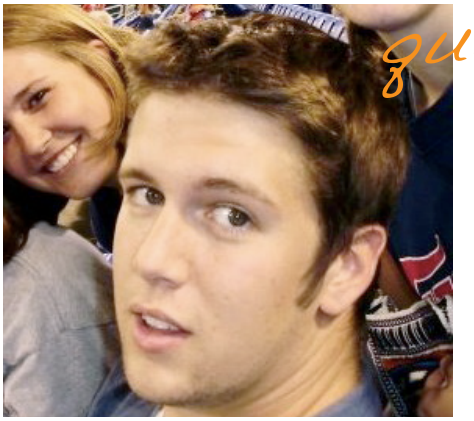
NEEDS
integrating school spirit
expanding social circles
adapting to new lifestyle

BEHAVIORS
jogging / working out
hanging out with friends
social media
reading fashion news

> *"I'm so excited to start my new life as a Spartan! Go Green! Go White!"*

The initial persona, while still mostly fitting with the goals of the application, was in need of a rework - or at least an additional persona.

REVISED PERSONA



quick look

David

age: 22
location: Holden Hall
lifestage: Senior
major: Computer Sciences

MOTIVATIONS
lining up a full time job out of graduation;
completing large scale school projects;
getting the most out of what he puts in (effort vs reward)

RECYCLING MINDSETS
tries to recycle when he can, but with a busy lifestyle tends to lack the motivation;
doesn't feel his contribution would make a difference anyway

NEEDS
input equals output
ways to save and penny pinch

BEHAVIORS
uses free time for video games, drinking, and and working on projects

> *"I know I should recycle, but it just doesnt seem worth the time or effort."*

The revised persona focuses on David, a seemingly indifferent student when it comes to recycling. David would often be one of the "trashers" we will come to explain in our findings. He isn't completely against recycling, but currently it just doesn't seem worth the trouble.

EXECUTIVE SUMMARY

Purpose

The initial reasoning for conducting this ethnographic research was to get a sense of how many students were correctly using current on campus recycling options. However, after the initial testing, a revised approach of focusing on those who were not recycling ("trashing") was adopted. The reasoning for this change was to guage how many people were throwing out material that they might have easily recycled. In essence, how much room for improvement is there in individuals who don't recycle?

Methods

Two stages of research were implemented. The first included a quantitative look at students in both *Owen* and *Holden* halls, on campus student housing dormatories at Michigan State University. The research team split into three, each covering a different portion of the respective dorms. From there, a coding method was devised for those that used the trash cans (they will be referred to as "trashers"). The main distinction the team was looking for was "correctness." In other words, correct "trashing" would be throwing away items that could not be easily recycled at the location. In addition, the amount of trash being thrown away, whether or not the trashers were in groups, and whether or not the trashers displayed hesitation was coded. These additional codings were meant to give more insight to motivations of the trashers. The team spent approximately one hour at each location.

The second stage of the conducted research was a series of interviews aimed at students living on campus. The questions aimed at discovering two behaviours the team had deemed critical to the design's success.

These behaviours included both the individual's current recycling habits and motivations, and their social life and experiences within the dorms.

Findings

While at one point, recyclers seemed to be the target audience for this project, data revealed that it would be more beneficial to focus on trashers. Of those who correctly threw away just trash, the amount of waste tended to be smaller, while much larger in those who incorrectly threw away recyclables. There is also a connection between people in groups and the correctness of trashing; those who were not in a group were more likely to correctly trash items and even hesitate before trashing. The same target group also displayed reluctance towards revealing negative recycling habits, but are also not too familiar with recyclables and locations for recycling. However, the participants may have wanted to please the interviewers and given answers they believed would be more appealing. Nonetheless, these same people also felt greater camaraderie with their floors more often than with dorms, leaning towards a more individualized, or floor-centric project future.

Recommendation

Based on the team's observation, the original design may need to tweaked to stay current with the findings of the observational ethnographic research.

Purpose

To reiterate, the team's initial purpose was to discover how many students were recyling and if they were doing so correctly. This, however, was changed when it was noted how few people were actually recycling when compared to simply using the trash can. This lead to a knew approach, one focused on only those that were using the trash cans ("trashers"). The reasoning for this was why bother at all with people who already have a right enough mind to at least attempt recycling. "Correct" recycling isn't the problem, the problem is that not enough people are recycling at all. With this renewed purpose, the team set out to discover more about the use of the trash cans.

METHODS

Quantitative Study *1st attempt*

There were two studies that were devised. The team took an iterative approach, and the first study informed the second. The first study was an observation of Holden Hall students with the purpose of discovering recycling habits. At first, only recyclers were coded. However, as it became more apparent that they were few and far between, the same method was adopted for “trashers.”

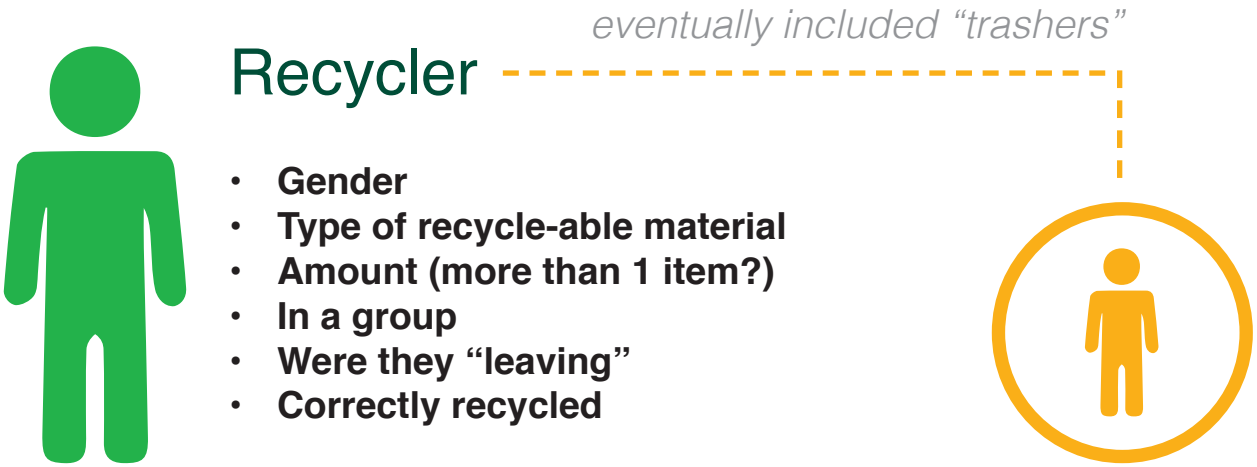
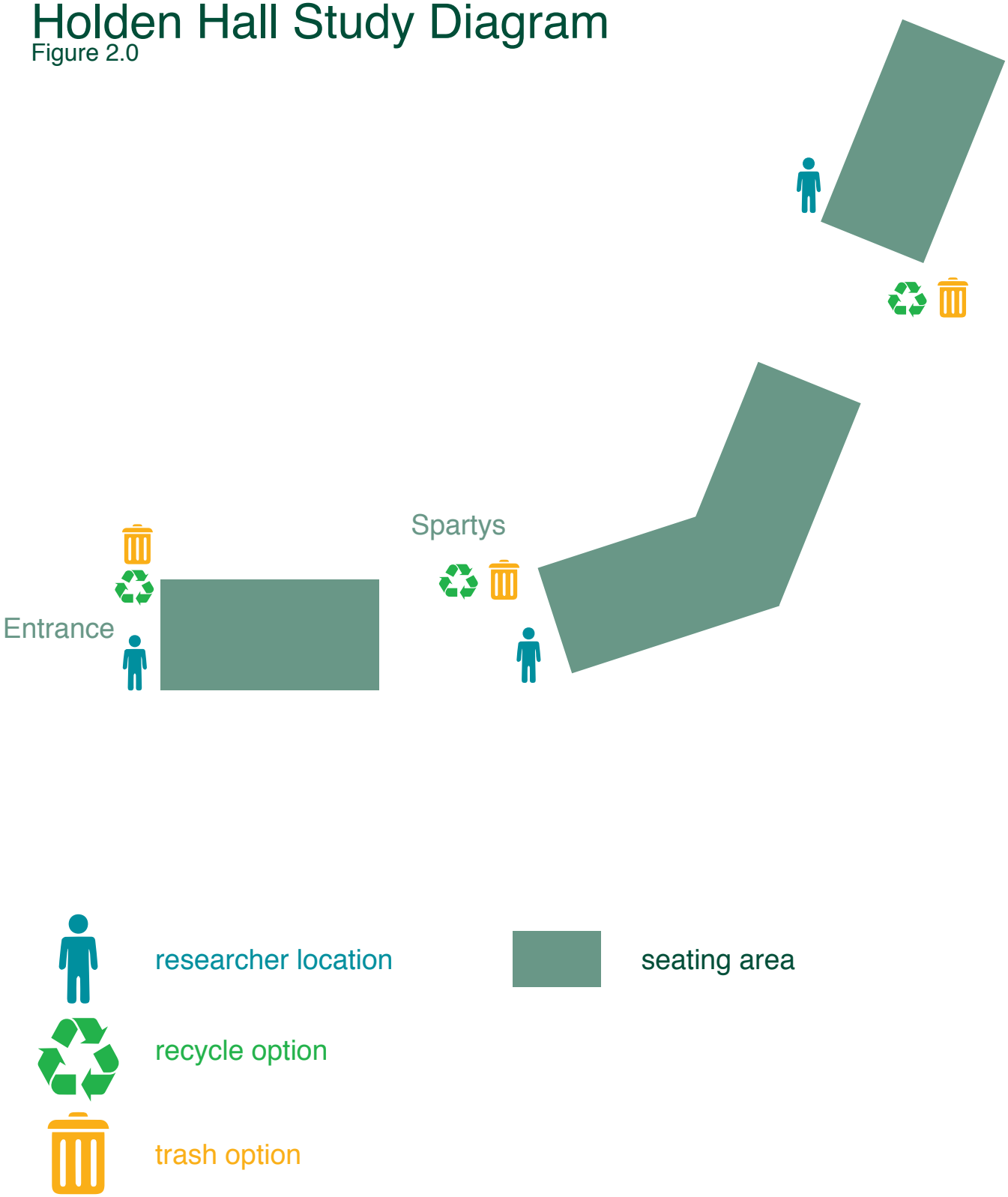


Figure 1.0

The hope of this study was to understand more about those that do recycle. More importantly, do they recycle correctly? The additional figures that were taken into account include whether or not the recyclers were in a group and if they were on their way out of the building at the time. The motivation for this was to discover if a social dynamic was connected to recycling/trashing. Lastly, was recycling the sole purpose for the visit, or were these people recycling on their way to a target destination other than Holden Hall?

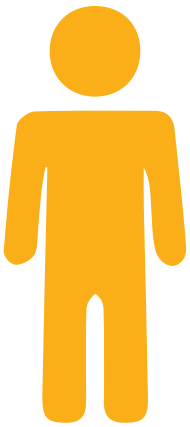
Holden Hall Study Diagram

Figure 2.0



Quantitative Study *2nd attempt*

After learning from the first study, a second was conducted. In this study, only trashers would be coded. Motivations behind this were to target only those who are not currently displaying our target behaviour. The team also tweaked and simplified the coding form to include only relevant information.



Trasher

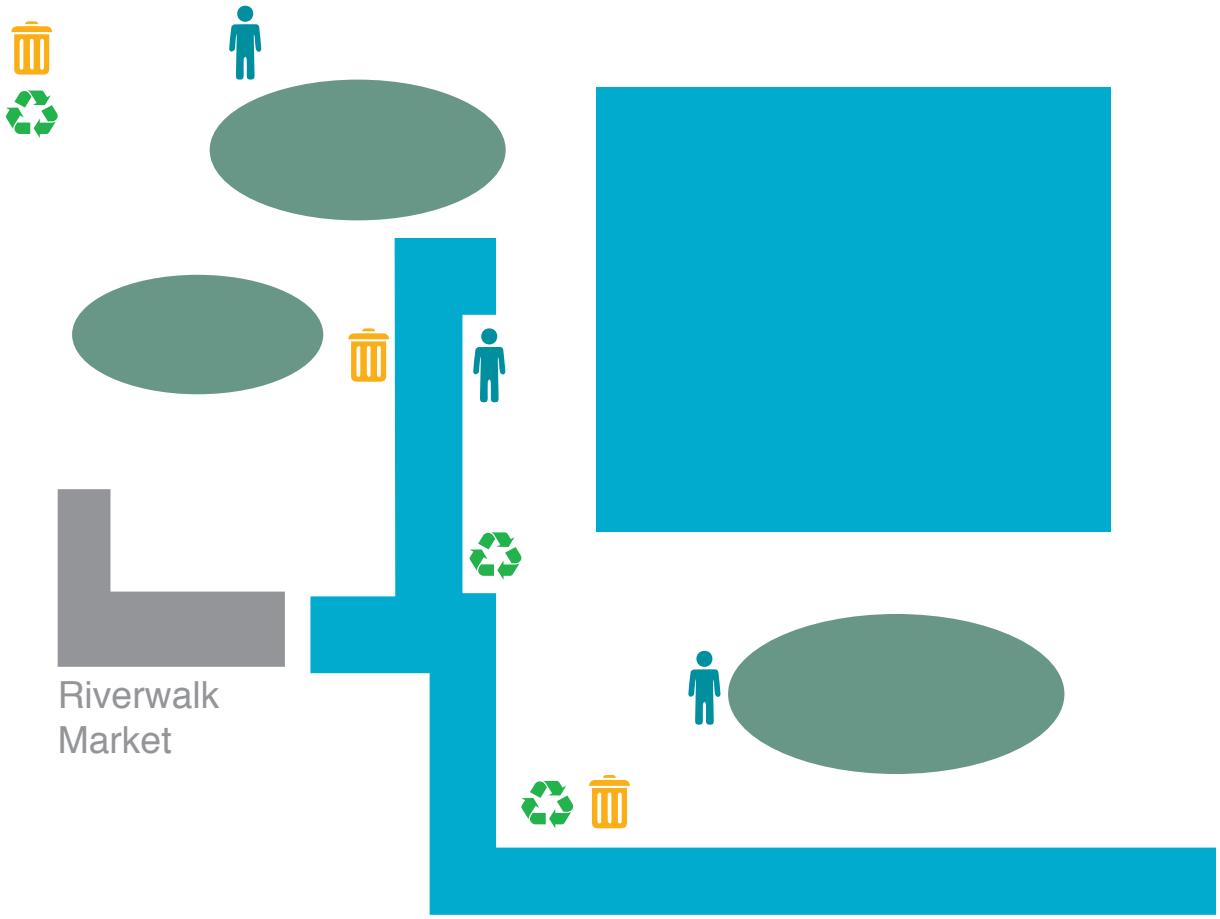
- **Correct or Incorrect**
- **The amount of trash (in items)**
- **Grouped or Individual**
- **Hesitation demonstrated**

Figure 3.0

This study was a much more focused approach centered around identifying how much potential gain there is to be had by improving “incorrect trashing.” If nothing else, it would help prove a need for the proposed design system. The same social dynamic motivation was maintained, however, a new component was added. A person’s hesitation was coded as an attempt to identify whether or not this person had intially thought about recycling the item, but after a quick glance or two gave up and decided it was not worth it - ultimately throwing the item away in the trash.

Owen Hall Study Diagram

Figure 4.0



researcher location

recycle option

trash option

seating area

wall / obstruction

Interviews

In addition to collecting pure raw data, the team was also interested in delving into the reasons behind it. For this, a series of interview questions were created and asked to qualifying candidates.

Qualifying candidates were only students who were living on campus in an effort. A total of SIX interviews were conducted, each lasting roughly five to ten minutes in length. One team member would ask the questions while the other two recorded answers and observations.

An exact list of interview questions will be listed in the appendix, but as a general guide, the questions revolved around discovering two pieces of behaviour. The first being the student's recycling knowledge, motivations, and habits. Second, was to find out how about social dynamics within the dorms. Did students form social connections within their dorm, their floor? How strong were these connections?

FINDINGS

Findings Introduction

The following findings, observations, and data were collected from two separate observation events. At first, subject coding was much more detailed, but after the first observation, a new coding variable came to light, which resulted in the need for future observation. However, the data from both of these observations has been included in order to show where observations started and where they eventually led. The data, then, will be displayed in chronological order.

From the findings within both observations, certain inferences can be applied, which have both supported and challenged the final product—Spartan Green.

Holden Hall Study

Observation at Holden Hall originally began by coding only "recyclers," or people who are recycling items, due to the fact the Spartan Green will be targeting dorm students who already participated in various recycling initiatives. However, as observations were taken, very few recyclers appeared, leaving only a multitude of "trashers," or people who were tossing trash. The realization to code trashers unfortunately came midway through recording. Therefore, the data for Holden includes the few recyclers that appeared as well as the trashers.

In the future observation, recyclers were removed from the observation list as a result of the data from Holden Hall. The target audience—dorm residents—

seemed to be more trashers than recyclers, meaning that there became a need to know more about the trashers, their habits, and motivations. Data from Holden Hall, however, was helpful in a variety of ways:

RECYCLERS VS. TRASHERS

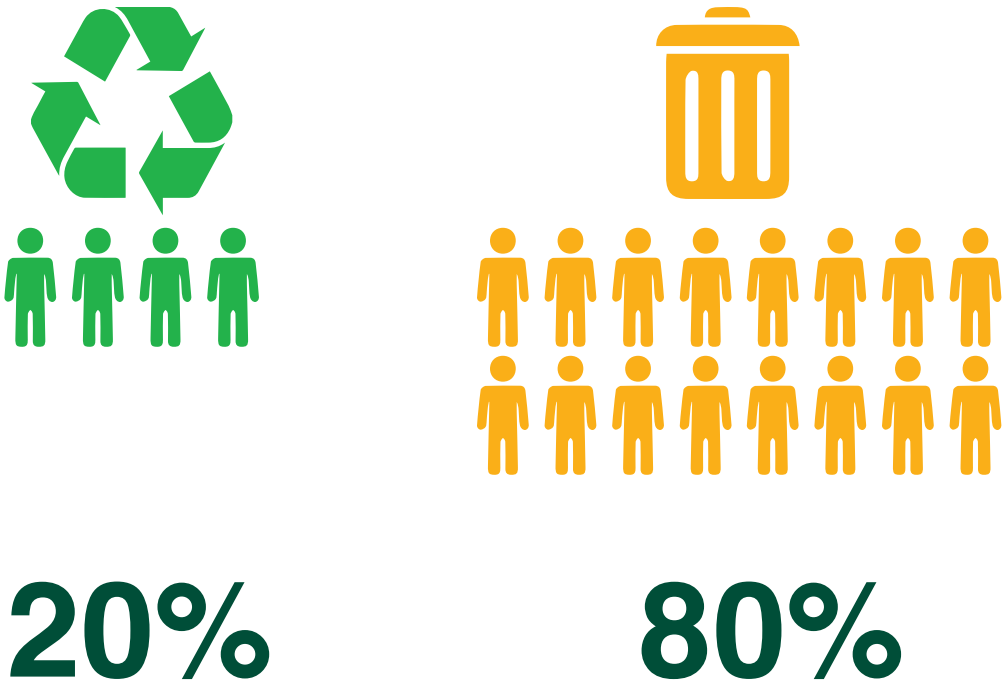


Figure 5.0

Figure 5.0 illustrates the incredible gap between recyclers and trashers at Holden Hall. Let it be known that the area where some of the observations were held included a restaurant, Sparty's, which featured a prominent recycling area just outside, which was larger and more convenient than the small trash bin. However, the results indicate that people were more interested in throwing recyclables regardless.

It is also of note to mention that much of the trash being thrown away at Holden was recyclable, and included mainly plastic cups, paper plates, and most famously, straws and straw wrappers. In future observations, this led to coding for correctness in the trashing material.

CORRECTNESS

Figure 6.0

Despite the sudden change in coding variables, the data led to interesting conclusions on the correctness of trashers and recyclers. The above chart is an accurate prediction for future data at Owen Hall, which will be detailed shortly. Interestingly enough, in this scenario, 100% of recyclers observed correctly deposited their items, whereas 44% of trashers threw items away that could have been recycled.

Owen Hall Study

Data from Holden Hall directly led to observations in Owen Hall, particularly surrounding Riverwalk Market, the prime eatery for Owen Hall residents. The key motivation for this observation stemmed from the discovery of trashers, previously. This data, then, is only concerned with trashers and their habits when leaving the establishment. The data pool consisted of 45 trashers in total. The following data provides interesting conclusions.

CORRECTNESS OF TRASHERS

Figure 7.0

Similarly to Holden Hall, there was an interest in the amount of trashers who correctly or incorrectly threw away their trash. This became an interesting concept because most people don't consider what the definition of trash constitutes besides the obvious dirty versus clean, reusable item. As one can see above, only 22% of trashers correctly threw away waste. The correct trashers can be further broken down into several of the coded variables—grouped, amount of trash, and hesitation.

INCORRECT TRASHERS - BREAKDOWN

HESITATION

2 out of 35

MEDIUM OR LARGE AMOUNT

9 out of 35

SMALL AMOUNT

26 out of 35

GROUPED

20 out of 35

Figure 8.0

Due to the high amount of trash generated by incorrect trashers, interest grew about this particular group. As one can see, many of the incorrect trashers were in groups. While most of them produced very little trash, there were many more incorrect trashers who produced large quantities of trash than correct trashers.

CORRECT TRASHERS - BREAKDOWN

HESITATION

2 out of 10

MEDIUM OR LARGE AMOUNT

2 out of 10

SMALL AMOUNT

8 out of 10

GROUPED

4 out of 10

Figure 7.0

Of the correct trashers, many of them were throwing away a small amount of trash, meaning one to three items. For the most part, they were ungrouped, which may account for the amount of waste generated.

Overview

Observing trashers over recyclers is an important aspect of narrowing down the target audience for this application. The data that has emerged based on the observations of the trashers has led to the conclusion that much of the target audience does not think about recycling, as evident by the absence of hesistation before throwing trash away. It is also apparent that trashing in groups or singly is important to the overall project. Both correct and incorrect trashers, however, produce a similar ratio of waste.

Insights

Based on the previous data, it would seem that people overall hesitate less while in groups, which can be due to a slew of factors—distractions, space, ability to reach receptacle, and so forth. Correctness of items also decreases while in groups. It may then be safe to speculate that it would be more beneficial to the product to focus more on single goals and objectives rather than group goals. Amount of trash also suggests that people may be more likely to recycle things that are on hand rather than needing to collect items, meaning that a system of points based on weight may be detrimental to users.

Interview Findings

Observing trashers over recyclers is an important aspect of narrowing down the target audience for this application. The data that has emerged based on the observations of the trashers has led to the conclusion that much of the target audience does not think about recycling, as evident by the absence of hesistation before throwing trash away. It is also apparent that trashing in groups or singly is important to the overall project. Both correct and incorrect trashers, however, produce a similar ratio of waste.

	Recycling Habits	Recycling Familiarity	Types of Recycled Materials	Factors Preventing Recycling	Familiar with Recycling Locations?	Convincing Methods?	Camaraderie	Participation in Dorm Sponsored Events?
The Non-Recycler	Not recently	Somewhat	Plastic bottles	Convenience	N	Save the world	With floor	Sometimes
The Laidback	Not recently	Very	Bottles/Cans	Convenience	Y	Recycle to buy and recycle more	Dorm, more with floor	Never
The Flash	Recently	Not much	Bottles	Convenience	N	It's easy	Dorm, more with floor	Often
The Guilty	Recently	Not much	Bottles/Newspapers	Convenience	Y	Recycling bins are there	Dorm and floors	Very often
The Quiet	Recently	Not much	Bottles/Paper	Convenience	N	Wouldn't guilt trip	Floor	Often
The Social	Recently	Very	Black stick Bottles/ Cardboard	Not prevented	Y	It's easy	Dorm, more with floor	Very often

Because the main concern dealt with trashers, the interviews focused primarily on people who did not recycle often. However, even though some of the interviewed participants had been seen incorrectly throwing trash away, they did not admit that they rarely or never recycle. As such, over half of participants stated that they had recycled frequently. This may or may not be affected by a bias in which they seek to please the interviewer. The interviewers, in this case, did not tell the participants beforehand that the perfect participant would be one who did not recycle frequently or recently. This may have affect the first column of results above, which may or may not be accurate, based on the participants.

Interview Overview

Overall, many of the participants admitted to having positive recycling habits, even in the case of those who had not recycled recently, with plastic bottles being the most recycled item. Nearly all of the participants claimed that convenience was the number one factor preventing them from recycling, should they not have recycled. The most common answer to how they would convince a fellow student to begin recycling was “It’s easy.” More than half of the participants were not familiar with recycling (i.e. what can or can’t be recycled). It follows, then, that more than half would also not be familiar with recycling locations.

As for camaraderie, most participants felt a connection with their dorms, but felt stronger camaraderie among their floors. These same students also had a high level of involvement in dorm-sponsored events held by a resident assistant or otherwise.

Interview Insights

One can conclude that are target audience values recycling, and yet, are not familiar with recycling or the locations where they can recycle. The types of materials most commonly recycled among them—bottles—suggest that the product focus first on these items as an introduction to the application and recycling. In general, camaraderie was felt more over floors than in dorms. This means that the product should be less focused on group competition across dorms and more focused on individual dorm competition and goals, with, perhaps, additional competition across dorms.

Overall Recommendations

Focusing on individual actions.
Both the observations showed that regardless the form as in groups or individually, trashing is about the same. Also, people overall hesitate less while in groups. What's more, correctness of items also decreases while in groups. Thus, we should set individuals as our target users units.

Providing a map of on-campus recycling facilities combined with LBS tech.
Since the biggest existing factor to motivate our target users to recycle is convenience, we should definitely maintain this trait with some possible enhance, like using this mobile app to navigate people find the nearest recycling spot or even by adopting the Location Based Service to help people become more familiar to recycling places on campus.

Focusing on single items rather than deposits.
Obviously, plastic bottles are the most frequent item people recycle, no doubt it's also the easiest thing to recycle. Plus, most people don't seem to have the habit of depositing items. These all suggest that focusing on single items like plastic bottles, paper food boxes are wise choice for our product, at least at the beginning, as introduced as a starter.

Focusing on floors more than dorms.
All of our interviewees express that they feel more camaraderie to floors than dorms. As smaller units, floors are also more feasible to hold activities. If we consider arrange some competitions among dorms, units in smaller scale is

more practical.

Demonstrate certain recycling knowledge in a fun way.
Though people are mostly positive to recycling, they are still lack of some knowledges in this area. Sometimes they don't do it in right ways is because they are not sure about what is the exactly right way to do so. While we still have to find an interesting way to show them so that people would like to learn about.

Overall, the team has concluded that after everything that was learned from the observational ethnographic research, there may be more of a need to target those who don't recycle very often in order to get the desire effect of total increased student recycling. Because of this, the application may need be either tweaked or redesigned to fit this need.

APPENDIX

Coding Forms

Male or Female (M/F)	More than one item (+)	Are they grouped? (G)	Did they leave the building? (L)	Did they correctly (✓) or incorrectly(X) recycle/trash?

Owen Hall Coding Form

Did they correctly (✓) or incorrectly(X) trash?	Amount of trash: Small(S): 1-3 items Medium(M): 4-6 items Large(L): 7+ items	Were they in a group of people? (G)	Did they hesitate? (H)

Interview Questions

1. As a student living on campus, what types of recyclable materials do you find yourself using most often?
How often do you actually recycle these materials?
How familiar are you with the types of recyclables?
How familiar are you with recycling locations?
2. When you don't recycle, what would you say are the largest factors that prevent you from doing so?
3. How would you attempt to convince a fellow student to recycle?
4. Do you feel any camaraderie with those from your dorm?
What about your floor?
5. How often do you participate in dorm-sponsored events?