

LFS 350: Put Waste in its Place

Project Proposal

by

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Introduction

The aim of Put Waste in its Place: The Zero Waste Station Challenge is to develop lid decals at selected waste stations and subsequently evaluate the effectiveness of these newly designed decals at the Kerrisdale Community Centre. This project requires collaboration between students, CityStudio, and the City of Vancouver.

The Zero Waste Station Challenge is an ongoing project that started in 2013. The project's main focus is to improve communication elements such as lid decal designs that increase awareness of waste sorting among citizens. CityStudio works with students to come up with innovative ideas that help to overcome sustainability challenges such as increase in landfills. Their vision is to build a strong local economy, vibrant and inclusive neighborhoods and an internationally recognized city that meets the needs of generations to come (Citystudio, 2017).

Significance

Along with food consumption comes the production of vast amounts of waste. There are both environmental and economic costs to waste such as air and water pollution as well as costs of collecting and disposing of waste (Zaman, 2015). In British Columbia alone each person deposits on average over 600kgs of waste every year (RCBC, 2017b).

According to the Recycling Council of British Columbia, Zero Waste is a goal and philosophy to reduce consumption as much as possible, make products and packaging recyclable, and using design for environment products to develop a more sustainable community (RCBC, 2017a). Metro Vancouver was one of the cities across Canada to adopt this Zero Waste philosophy in 2006 and aims to reach a 70% diversion rate of waste within the city (RCBC, 2017a). Diversion rate refers to the percent of total waste that is diverted away from landfills and incineration facilities and instead reused,

reduced, or recycled or composted (Song, Li, & Zeng, 2015).

This project in conjunction with the City of Vancouver and City Studio will be focused on a waste management strategy that works with developing eco-labeling and environmental awareness (Song, Li, and Zeng, 2015). There have been many studies done in cities across the globe on how to effectively design waste management systems to create 'Zero Waste' (Zaman & Lehmann, 2011). However there has been few that look at how designs on waste bin labels affect how people dispose of their waste. Our study will be the first to do this within the Kerrisdale community of Vancouver, British Columbia.

Objectives & Inquiry Questions

In our project, we aim to address the following two objectives to increase the waste diversion rate and strive achieve the goal of Zero Waste in Vancouver city:

1. To design 3 sets of decals with 3 different themes for the zero waste station.
2. To examine the effectiveness of newly designed lid decals at the Kerrisdale Community Centre.

This project is intended to address these inquiry questions:

1. How does the newly designed lid decals affect people's efficiency of sorting waste at the Kerrisdale Community Centre?
2. What items people are more likely to sort properly or improperly at the Kerrisdale Community Centre?
3. Does the identity of people such as, race and age, influence the accuracy of waste sorting at the Kerrisdale Community Centre?

Methods

Data Collection

Data ~~will be~~ is collected using two methods of data collection: naturalistic observation and a questionnaire (see observation table in appendix). On-site data collection is conducted before and after the implementation of our new decals. The first research takes place with at least three group members in Kerrisdale Community Center on Friday February 10th, 2017 and our follow-up visit (after implementing new decals) will also be performed on another day (to be determined). During a one hour observation period, investigators will carefully record 1) how long it takes for people to sort their waste after standing at a garbage bin station (~~if we successfully reduce the average time people spent on sorting their waste with new decals, then we consider in part that our decal designs effectively help people sort their waste and also it is helpful to identify what kind of items people get most confused of, thereby helping to refine our future decals~~) and 2) how accurate people dispose their waste, by recording what they throw away into which waste bins. Additional information on age group (Kids, Adults, and Seniors), gender (Male or Female), and race (Caucasian, Asian, Aboriginal, Others/Unknown) of waste sorters will also be collected ~~by simply looking at their appearance (somewhat subjective data)~~. The observation will be done without creating any suspicion by waste sorters since people behave differently when they feel being watched (Linden, 2011). In addition to the observation, we will approach people in the community center to ask their thoughts about our decals and the zero waste station to gain additional feedback. ~~A simple survey with a list of questions will be distributed to Kerrisdale Community users in order to identify the cause of improper waste disposal activities.~~

Data Analysis

Upon collecting data from our observation and informal short opinion questions ~~survey,~~

the percent of accuracy and average time spent on sorting their waste will be calculated.

A table of content with accuracy, average time, age group, gender, and race will be organized to identify vulnerable population in terms of waste sorting management knowledge. **These data will be used to answer our inquiry question as well as to refine our decal designing to make it specifically targeted to those who need the guidance the most.** Finally the data before and after the addition of new decals will be compared to see whether new decals affect sorting accuracy.

Ethical Consideration

The study is conducted on the basis of the TCPS-2 tutorial course on Research Ethics. When conducting our research, we will make sure that participants are well informed of the right to decline and withdraw their participation at any time. In accordance with an approach used by Asset-Based Community Development that listening to a community helps find out what people in the area want and thus it helps development move forward, we will sincerely take their comments, opinions, and feedback into consideration throughout our project, hoping that we contribute Vancouver to be the greenest city in the world.

Appendix

Tables used to record observations:

Number #	Item	Sorted Properly (Y) or Sorted Improperly (N)

Number #	Time Used

Number #	Gender (Female/Male)	Age Group (Kids/Adult/Senior)	Race (Caucasian/Asian/Aboriginal/ Other)

References

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