

## **Letter of Transmittal**

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March 26, 2022

Mrs. Linda Nowlan

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### **Subject: Letter of Transmittal**

Dear Mrs. Nowlan,

This is my formal report in attempts to improve the efficiency for maintaining the purpose of recycling stations. This report contains the background information on recycling stations, as well as the current state of the sorting stations at the University of British Columbia. In addition, a survey was conducted to the current students and staff of UBC. The purpose of the survey was to gather and understand the opinions on recycling stations from students and staff. The result of the survey is analyzed and embedded in the report. I have gained new perspectives and knowledge on the current state of sorting stations on the UBC campus. Hence, I recommend a serious consideration of my proposal.

UBC Sustainability has done a tremendous job in protecting our environment. The sorting stations are there to guide us to perform pro-environmental behaviors. At this moment, it is not achieving its purpose.

I enjoyed this process as I have learned how to conduct a survey and write a formal report. If you have any questions, please do not hesitate to contact me at [ericzubc@student.ubc.ca](mailto:ericzubc@student.ubc.ca).

Regards,

Eric Zhang

# EFFICIENT USAGE OF RECYCLING STATIONS AT THE UNIVERSITY OF BRITISH COLUMBIA

For: UBC Sustainability Program

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ENGL 301 Student

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## **Abstract**

Recycling is a pro-environmental behavior that should be performed by everyone. However, the purpose of recycling station is not yet achieved at the University of British Columbia. This report intends to promote recycling and improve the efficiency of recycling stations on the UBC campus. As part of this report, a survey was conducted to current students and staff of UBC. The goal of the survey is to gather opinions on the current state of sorting stations on the UBC campus. For instance, it asks the participants what they think the difficulty is to recycle corresponding to the color of the garbage bins. In addition, it also asks about a potential solution to further improve the efficiency of the recycling stations – adding an employee to manage the stations.

## **Introduction**

### **A. Background of Sorting Station at UBC**

You may have seen many garbage stations across the UBC campus where there are four different colors of garbage bins. Green bin is for food scraps; Grey is for containers; Blue is for paper; and black is for garbage. While many of us do our part to protect the environment by sorting our wastes, there are many others who are still not doing their part. UBC Life Building and the AMS Nest are two of the busiest venues that produces the most waste across the UBC campus. These two locations are primary social gathering locations for UBC students. Many students eat lunch there because it is easy to access, and it is near majority of the food restaurants. Often, the janitors were forced to separate food scrapes, plastics and paper from the black bin which consist of garbage.

### **B. Purpose and Benefits of Recycling Stations**

Recycling is the process of collecting and processing materials that would otherwise be thrown away as trash and turning them into new products (Krook, 2009). A recycling station is a place to provide that service. One benefit of recycling stations is that recycling facilities ensure that all materials that can be reused, are (Hazell, 2021). In addition, sending waste to a station means fewer items are sent to landfill sites and therefore the impact on the planet is reduced (Hazell, 2021).

### **C. Current Recycling status at UBC**

Today, it is up to the “individuals” who has the liberty of invoking their subjective judgement when to (or when not to) perform pro-environmental behaviours based on different factors

underpinning such a decision-making process (Oke, 2016). However, the results have shown differently, as people are not currently using and fulfilling the purpose of recycling stations. Therefore, the sorting stations have not been used efficiently.

#### D. Purpose of this Report and Identify Areas of Concern

The purpose of this report is to determine the current usage and satisfaction for sorting stations at UBC. In addition, we explore the opinions of the members of UBC on possible solutions. Furthermore, it provides recommendation for enhancing the proper use of sorting stations at UBC.

The major area of concern is that some students do not separate their own wastes, which defeats the purpose of recycling stations. There are two factors that contribute to this issue. One, the students are not sure which item belongs in which bin. This leads to the second factor, which is that some students are lazy. When the student is unsure which items go into which bin, they are too lazy to find out and they proceed to throw everything in the black bin.

#### E. Potential Solutions

One possible solution to this problem is to add personnel to manage some of the recycling stations. Notice that it is not necessary to add an employee to every recycling station, but only to the busiest venues that produce the most garbage. For instance, the AMS Nest or the Life building. This approach is similar to recycling stations or “Tray Return” stations at local malls, where people drop off their food trays and the employee at the station finish the job by sorting the wastes into their respective bins. Figure 1 shows a local “Tray Return” station, in which an employee sorts different kind of waste for their customers.



**Figure 1 – “Tray Return” station located in Metrotown.**

#### F. Research Method

My Primary data source will be a conducted survey to all the students, professors and workers who have access to the recycling stations. The survey can provide some insights and important knowledge to approach the solution. My secondary sources will include literatures on benefits and motivations on recycling.

#### G. Scope

This paper investigates the following questions:

- 1) How often do students throw out garbage at the recycling stations.
- 2) Do students separate their waste and make sure they are thrown out into the right bin?
- 3) How much do students care about recycling?



- 4) What is the hard cost and soft cost of hiring personnel to manage recycling stations?
- 5) What is the students' opinion on having an employee to sort the wastes?
- 6) Would students be interested in working at the recycling station?

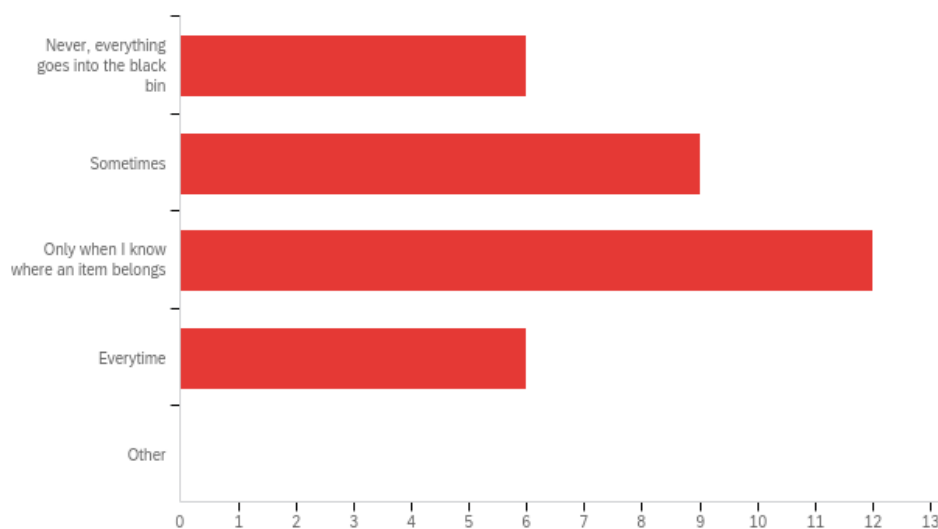
## Data Section

### A. Participant Information

The participants of this study are students or staff at the University of British Columbia who have access to the sorting stations. Notice that there is a total of 33 people participated in the survey, but some of the data shows 28 or 32. The reason for it is because some individuals chose not to answer some of the survey questions due various reasons.

### B. Frequency of Usage

Figure 2 shows the frequency of how often these participants access the sorting stations and sort their wastes.

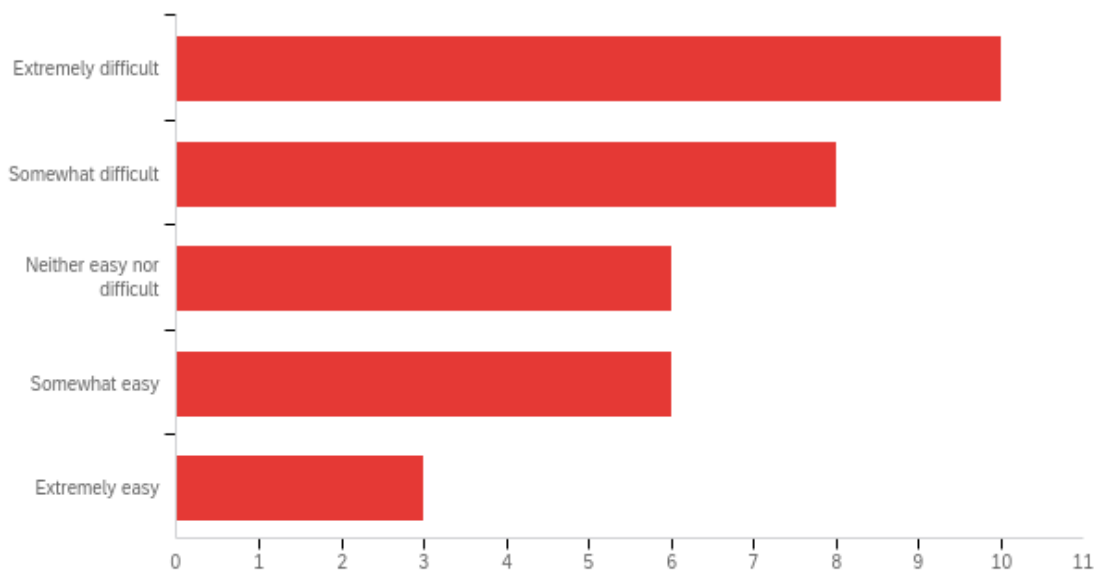


**Figure 2 – Frequency of usage of sorting stations among participants**

As expected, 27% of participants “sometimes” use the recycling station and 36% of participants only use the recycling stations when they know what kind of waste goes in which color bin. On two different extremes, 18.5% participants in the study either never uses the recycling station and throw everything into the garbage (black) bin or uses the recycling station efficiently and sort their wastes every time.

### C. Difficulty of usage

Figure 3 shows the difficulty from the participants’ perspective when accessing the recycling stations. In other words, do the participants know what kind of wastes go into which bin?



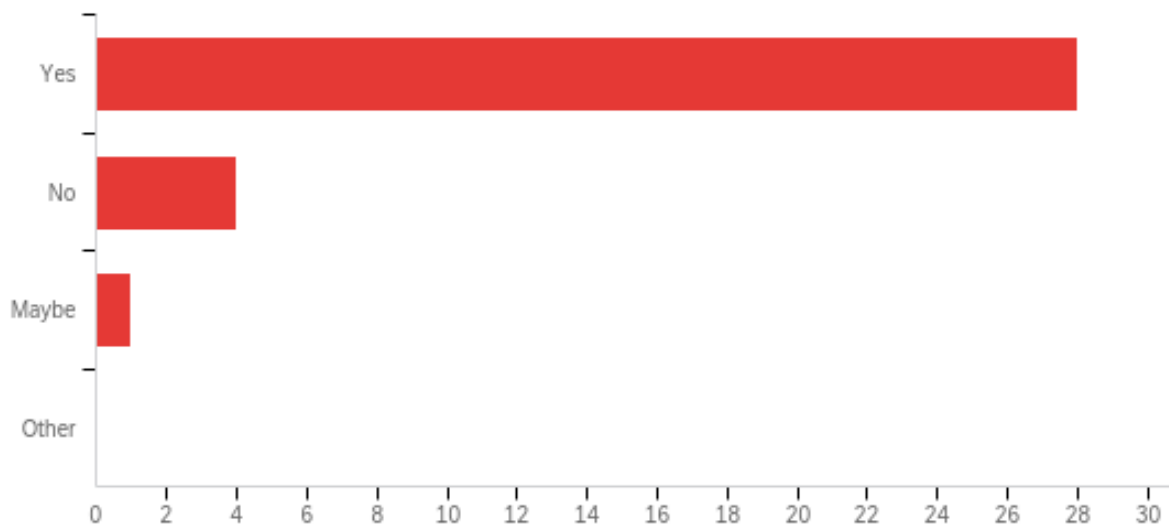
**Figure 3 – Difficulty when accessing the sorting stations**

Out of 33 people who participated in this study, 10 people (30%) thought the recycling stations were extremely difficult to use, and 8 people (24%) thought the sorting stations were somewhat difficult to use. There are 6 people (18%) who were neutral about the difficulty of

the sorting stations. On the other hand, only 6 people (18%) who thought that the sorting stations were somewhat easy to use. Only 3 people (9%) knew exactly which item goes into which bin.

#### D. Effectiveness of Usage

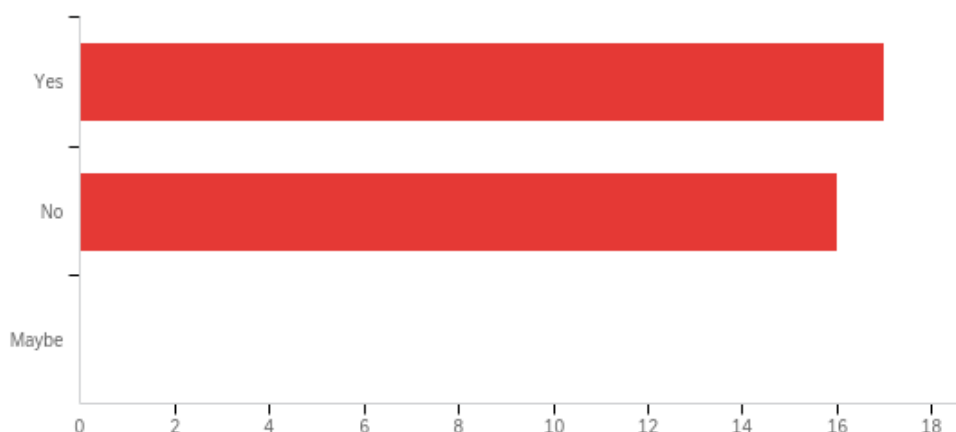
Participants were asked if they thought it would be beneficial to hire an employee to manage the recycling stations. Figure 4 shows the result of that question.



**Figure 4 – If the participants believe it is a good idea to hire an employee**

Majority of the participants believe it would be beneficial to add someone to do the sorting for them. Only 4 people thought it was a bad idea to hire an employee, and 1 person thought that maybe it would be beneficial to hire an employee. This guarantees that the recycling stations are maintaining its purpose while maximizing efficiency.

### E. Student Participation



**Figure 5 – Shows if the participants would be willing to work at the sorting stations**

Participants were asked if they are willing to work at the sorting stations if they were being paid and the results were shown in Figure 5. We can see an even split, where 17 people (51%) would be willing to work at a sorting station and 16 people (49%) would not. This question contributes to the possible solution of adding personnel to manage the sorting stations. The benefits of this are further explained in the “Benefit of Hiring Sorting Station Employee” section below.

## **Conclusion**

### A. Summary of Results

The survey reflected participants’ thought on the current situation at the sorting stations and if they are being effective. The results have shown that majority of the participants, 72% of the participants do not think the recycling stations are easy to use. As a result, 67% of the participants use the different color bins when they know if an item belongs in that bin. In addition, majority of the participants, 85% of the participants believe it would be beneficial to

add an employee at these recycling station whose responsibility is solely to sort the wastes to maximize the efficiency of the recycling bins. This is the proposed solution and survey also reflected that 52% of participants are willing to take on that responsibility with decent pay. That is a decent amount of interest to jump start this process.

#### B. Benefits of Hiring Sorting Station Employee

As mentioned in the Introduction, there are two factors that contribute to people not recycling their own waste. One factor states that the students are confused as they do not know which bin should receive their waste. The other factor is stating that students are lazy to sort their wastes. Hiring a sorting station employee can solve both factors and it will save a lot of time and confusion from all the students. In addition, it shows the students that it is very important to recycle, which opens the possibility of individuals to recycle when they are at a self managed station. Adding an employee also creates a possible part time job position for university students. Ultimately, adding an employee ensures that the recycling stations are maintaining the purpose of recycling.

#### C. Suggestion for future studies

The main suggestion for similar future studies is to increase the sample size of the participants. This survey was published on social media websites that includes thousands of students and staffs of UBC. Only 32 people participated in the survey out of 64,158 students or staffs at UBC. Larger sample size will greatly increase the accuracy of the study.

## Appendices

### Survey Questions

I am an undergraduate student at UBC engaged in a technical writing project. The purpose of this survey is to obtain primary data for a research proposal and investigation that aims to provide recommendations for improving the usage of the waste sorting stations on the UBC Vancouver campus. The final formal report will be addressed to the UBC Sustainability leadership team Linda Nowlan and Tara Ivanochko. Together with knowledge from research papers, the data I gather from this survey will serve the ultimate purpose of providing recommendations for increasing efficiency and affectability. The survey contains 7 multiple-choice questions, and it should take about 5 minutes of your time. Your responses are voluntary and anonymous. Thank you, I appreciate your generous participation in my survey.

Q1. How often do you eat on campus per week?

- a) 1 day
- b) 2 days
- c) 3 days
- d) 4 days
- e) 5+ days

Q2. How much does the sorting stations contribute to the sustainability at UBC?

- a) Not at all
- b) Somewhat
- c) Neutral
- d) Very

Q3. What is the level of difficulty when using the waste sorting stations on campus? In other words, do you know what goes in where?

- a) Extremely Difficult
- b) Somewhat Difficult

- c) Neither Easy nor Difficult
- d) Somewhat Easy
- e) Extremely Easy

Q4. How often do you sort your own garbage at the sorting stations?

- a) Never, everything goes into the black bin
- b) Sometimes
- c) Only when I know where an item belongs
- d) Every time
- e) Other

Q5. Do you think it would be beneficial to have someone at the stations to sort the wastes?

- a) Yes
- b) No
- c) Maybe
- d) Other

Q6. If a position to sort the waste station is available with decent pay, would you be willing to take on the position?

- a) Yes
- b) No
- c) Maybe

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