Engaging Students in the Vancouver Cleanliness Index

Model of Citizen Engagement

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November 28th 2018
Introduction

The Cleanliness Index Project by the City of Vancouver will collect litter counts of the entire municipality. The community engagement project of the cleanliness index is concerned with understanding whom and what would this index look like with the community at-large. We chose to specifically focus on young adults/post-secondary students. By using a google form survey and an interactive Instagram poll, we were able to gauge interesting results regarding the cleanliness index. For instance, we found 51.3% of respondents volunteer, suggesting a potentially large pool of students already willing to participate in extracurricular activities; in addition, our polling found a vast majority of respondents do care about the cleanliness of their streets. As a result, we found providing an easy means to participate and a valuable reward will gather participants.

Using the Cleanliness Index

The Cleanliness Index constructed by the city engineering department was a useful tool using ArcGIS; however, the current beta form of the index is certainly short from a final product. The program ArcGIS is a widely-used tool for interactive mapping due to its ability to combine both advanced data and an interface that is user-friendly. As part of the community engagement group, responsibilities to how this index could be more user-friendly was delegated. While participating in the index itself however, a similar vision of improvements was shared. For instance, the current practice of using two apps native to ArcGIS and not the city, would have to
change. Our primary recommendation to the city of Vancouver, is to see an investment in creating or combining the cleanliness index with a separate application.

As mentioned earlier, if the Cleanliness Index were to successfully appeal to a broad audience, including young adults, a smartphone application unique to the city’s purpose must occur. This recommendation is a direct result of the experience had when using the index. Firstly, the process was surprisingly shorter than we anticipated, and yields the best efficiency when only two students participate. With each count, it became clear a two-person play was ideal. With this format, both participants were able to move at a good pace. Most streets took no longer than 3-5 minutes, and filling out the application only used an additional two minutes. With time not a concern on the project, it became clear the greatest barriers to the activity would be less-direct. Two people counting litter often yielded a difference of litter account of approximately 5-10. Considering most streets were primarily covered in cigarette butts, this margin of error was minor. The advantage of two participants could potentially remove barriers of planning the index, as an additional third person is another variable potentially limited frequency of litter counts among volunteers.

The steps were most effective and simple when counting was allocated to one person, and the other person would use their phone to take photos. Beginning at the edge of the site, we would immediately begin counting while walking a reasonable pace. During this time, the person using the application would also watch their partner count to make sure most litter clutters were accounted for; in addition, if any
notable parcels of litter or trends of any kind were noticed, such information would be noted during the walk. At the end of the site, the final photograph was taken and classification of the litter took place. This part posed the greatest confusion, as there was no difference on the index between some cigarette butts, and a greater mix of cigarette butts and larger disposable litter, such as drink cups. Posing significant debate between the two most frequent index categories could pose problematic when compiling data at-large.

When participating in the cleanliness index, our project group counted streets in the Davie/Sunset Beach neighbourhood (figure 1). The project was conducted at approximately dinner time/rush hour, when daylight was still ideal. The three stops for 2b were dispersed somewhat far from one and another, but the entire activity was completed in less than one hour. As mentioned earlier, the fast process of the index is a major positive point for attracting participants from the public. Launching between two apps was a worry beforehand, but the automatic redirection was not too confusing. Instead, the greatest barrier to the app following a brief tutorial was limit to internet. An ideal participant would compete the app on-site, and not have to complete the form per site elsewhere. This is a considerable barrier, as not all smartphone users have cellular data, and internet is not available on each street. In addition to internet being a barrier to many users, this problem could disproportionately deter lower-income participants who cannot afford data overage charges.
Overall, while the process itself was relatively smooth and efficient, there are immediate concerns with the index classification and supporting infrastructure. Considering this, we found that investment of time and resources into these two concerns could dramatically reduce barriers to some participants, potentially affecting volunteering interest. The cleanliness index was however, a positive way to motivate physical activity. While it could be difficult to get to the site for some at a distance, the activity itself was relaxing and physical. This is a surprisingly positive outcome from the cleanliness index that could potentially be a great pull for those living in isolation in the urban centre, or require motivation to be more active. The index is affective as a social tool, potentially having indirect effects on mental and physical health of participants.

Figure 1. The 2b area was the sample neighbourhood for conducting the cleanliness index.
Methods

In order to develop a sense of how to engage youth and young adults into the Cleanliness Index, we chose to survey our target demographic. We utilized two tools: Google forms, a standard tool for planning a survey was used along with Instagram Polls. Instagram already holds a large population of youth and young adults and with the “story polls” tool available we were able to get approximately 120 responses. Meanwhile our Google Forms came back with 21 responses. Within the two surveying tools and methods, the following questions were asked: 1. Are you currently working? 2. Do you volunteer? 3. How many hours a week do you volunteer? 4. What keeps you volunteering? 5. What would motivate you to volunteer? 6. How important is the cleanliness of streets to you? 7. How likely are you to participate in a walking activity to count trash? 8. Would you prefer volunteering with friends or other volunteers? 9. If you were incentivized to complete the index, what would they be?

Findings

With data cleaning and filtration, we concluded with approx 110 clear responses to our survey. The responses to all nine questions we received are listed in this subsection. The data is presented as circle diagrams, tables and importance rating scales. It is important to know Chris, Sofie and Leejoo are all students of
Simon Fraser University hence many participants were students of the university. Additionally, many participants were business students and some, members of a university organizations (club) or other organizations. It is important to note that there was an emphasis on convenience of questions formulated in order to collect quantity of data.

Question 1: Are you currently working?

- Yes: 60.0%
- No: 40.0%

Question 2: Do you volunteer?
Question 3: How many hours a week do you volunteer?

6.96 hours of volunteering / week

Question 4: What keeps you volunteering?

**Frequent Responses**

<table>
<thead>
<tr>
<th>Feel good - do good</th>
<th>One way to engage with the community and giving back</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal satisfaction</td>
<td>Avoiding negativity and sadness</td>
</tr>
<tr>
<td>Believing in the cause</td>
<td>Team culture and intrinsic value of making an impact</td>
</tr>
<tr>
<td>Interesting topics and events</td>
<td>New people, connections and improving Interpersonal skills</td>
</tr>
<tr>
<td>Participant relationships</td>
<td>Fun</td>
</tr>
<tr>
<td>Working towards a same goal</td>
<td>Learning</td>
</tr>
<tr>
<td>Passion and purpose</td>
<td></td>
</tr>
</tbody>
</table>

Question 5: What would motivate you to volunteer?

**Frequent Responses**

<table>
<thead>
<tr>
<th>Incentives</th>
<th>Friends</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Resume-building</td>
<td>Purpose</td>
</tr>
<tr>
<td>----------------</td>
<td>---------</td>
</tr>
<tr>
<td>Career connections</td>
<td>Great people, great initiative</td>
</tr>
<tr>
<td>Lead on other opportunities</td>
<td>Knowing the impact being made</td>
</tr>
<tr>
<td>Seeing the impact</td>
<td>Opportunity to make people feel like the belong</td>
</tr>
<tr>
<td>Mentorship</td>
<td>Money</td>
</tr>
<tr>
<td>Campus opportunities</td>
<td>Self motivation &gt; outside influence</td>
</tr>
<tr>
<td>Supportive volunteer culture</td>
<td>Easier ways to volunteer</td>
</tr>
<tr>
<td>Food</td>
<td>Having more free time to do so</td>
</tr>
<tr>
<td>Organizational values and helping</td>
<td>marginalized populations</td>
</tr>
</tbody>
</table>

**Question 6:** How important is the cleanliness of streets to you?

![Not Important to Very Important Scale]

**Question 7:** How likely are you to participate in a walking activity to count trash?

![Not Important to Very Important Scale]

**Question 8:** Would you prefer volunteering with friends or other volunteers?

![Not Important to Very Important Scale]
Question 9: If you were incentivized to complete the index, what would they be?

**Frequent Responses**

<table>
<thead>
<tr>
<th>Competition</th>
<th>Discounts, free stuff</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gift cards</td>
<td>Adopt a street program</td>
</tr>
<tr>
<td>Food</td>
<td>Calculating weight of trash clean</td>
</tr>
<tr>
<td>Money</td>
<td>Government follow up with data of collection</td>
</tr>
<tr>
<td>Recognition</td>
<td>Reward points</td>
</tr>
<tr>
<td>Knowing that the work was impactful</td>
<td></td>
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</tbody>
</table>

**Analysis**

Through our research, we wanted to answer a few questions: Who will engage in the Vancouver cleanliness index? How can we engage individuals in the Cleanliness Index? What value can the Cleanliness Index provide for volunteers? Due to our circumstances, we mainly focused on young adults/post-secondary students, who
are thus the subjects that participated in our survey and Instagram poll. In this section, our data is discussed and analysed.

We found that 60% of our subjects currently work and 51.3% already volunteers. This means that over half of our subjects engage in their community and has some interest in extracurricular activities. These students have already overcome the barrier of volunteering and might be easier to get involved.

Furthermore, we found that those that volunteered, gave out an average of almost 7 hours a week. This result may be seen in two different ways. 1. Currently volunteering individuals may have little to no time for other extracurriculars such as the Cleanliness Index. 2. The young adult and youth population is already engaged and has seven hours a week to spare through volunteerism, as a result, the Cleanliness Index can work towards capturing a part of those hours. When asked “What keeps you volunteering”, we found out that factors such as personal satisfaction and intrinsic values played a vital role. Personal satisfaction and intrinsic values were increased when carrying a feel good - do good mentality, aligning of values, interest and purpose when volunteering. Our survey has also found that promotion of collectivism and culture through building relationships and working towards the same goal increased engagement and retention. As a result of all these factors, it made volunteering “fun” and kept participants to continue volunteering.

Furthermore into our survey, we found out our participants wanted to gain value when volunteering. When giving out their free time, incentives attracted participants in two methods: career advancement opportunities and meeting one or two of our human basic needs. Within career advancement opportunities, volunteers wanted to get the chance to build resume, connect with professionals, receive mentorship and
be in the loop for opportunity leads. On the other hand, meeting basic needs
included factors such as food, money (gift cards) and a sense of belonging.
Together, career advancement opportunities and meeting basic needs encouraged
volunteerism. These answer suggest a way of organization of the Cleanliness Index,
in which there exist opportunities to work together and to expand networks. Potential
participants would thus prefer to do the Cleanliness Index in groups. Our survey also
asked the question whether our respondents would prefer to volunteer with friends or
with strangers. 84.2% answered ‘friends’ to this question, although domestic
students answered ‘strangers’ more compared to international students, while
international students seemed to prefer volunteering with friends. Furthermore, our
data showed a split between the cleanliness of the streets. International students
often felt that the cleanliness of the streets to be very important. However many
domestic students were not interested. The results of these two question together
suggest that international students with a belief that the cleanliness of the streets is
important are the ones that should be targeted to participate in the Cleanliness
Index. The group that is most likely to take part in the Cleanliness Index are the
students that already volunteers, but does have time left during the week, and thinks
the cleanliness of the streets of Vancouver is an important cause.

Recommendations

Considering the feedback of the respondents, it was determined a majority of
people either already volunteer, or would like to in the future. Respondents appear to
be willing to dedicate a set amount of time to volunteer per week. For instance, the
average time spent volunteering each week was 6.95 hours. To capture a portion of volunteering labour into the cleanliness index, we suggest the following to:

I. Provide value in exchange for the time spent completing the cleanliness index.
   A. Offer various incentives that is equal in value for participants.
      Career-building incentives are ideal, such as networking events.

II. Promote and educate the public on how to volunteer/participate.
    A. Advertise the cleanliness index as an easy-to-use tool, that would attract both casual and organized participation.

III. Flexible volunteer schedules.
    A. Make the activity accessible enough that most students could participate.

IV. Provide a sense of belonging when participating in the cleanliness index.
    A. Understanding the value of the cleanliness index.

Acknowledgements

We would like to thank Gretchen Ferguson and Nina Nichols for the support and Stephanie Chua and Ileana Costrom for making this project possible.