PERSPECTIVES ON DISPOSABLE BEVERAGE WASTE

Dalhousie University

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Contents

Executive Summary

Disposable beverage waste is an increasingly common issue in North America and at Dalhousie University. Our research project focused on identifying how students and staff who use the Rowe Management Building on Dalhousie Studley Campus perceived disposable beverage waste and if they would support options for reducing waste through a reusable container program, financial incentives or a ban on disposable cups. To do this, we conducted a non-probabilistic and non-purposive mixed methods (paper, digital and face to face) survey in the Rowe Building over a two and a half week period in March 2018. For students, we conducted utilized quota sampling and for staff we conducted stakeholder sampling. Our quantitative results were analyzed using significance tests and our qualitative results were coded by us as a group. From our data, we identified respondent's reusable container use and disposable beverage purchasing habits, perspectives around disposable beverage waste, support for changes to disposable beverage waste, preferences and realistic options for change, and barriers to change. We identified support for change and a strong preference for financial incentives which led us to make the following recommendations to the Green Café and the Office of Sustainability: support the Green Café as a pilot project for reducing beverage waste on campus through financial incentives; change the social norm; increase efforts in education and outreach to raise awareness of this issue and incentives that exist to support container use.

Introduction

On a daily basis, disposable cups are being used by students and faculty across Studley campus. Most of Dalhousie's disposable cups are made of paper with a plastic lining (Office of Sustainability Dalhousie University, 2015). These cups are unable to be recycled in the HRM area due to its shell and are considered a litter producer (Oakley, MacLeod, Brown, & Higgins, 2008). The main problem is that many people are not aware of how to properly dispose of the cups, and are instead putting them into the compost and the recycling. Due to improper disposal of these cups, it contaminates the entire contents of the other bins, which forces all the other properly composted and recycle material to be redistributed towards the landfill (Davidson, 2011).

The waste generated by disposable cups may seem small when compared to the global consumption waste. However, Dalhousie University has three separate campuses with a total student population of 18, 500 and more than 7000 employees who are from all around the world (Dalhousie University Office of Sustainability, 2015). This diversity of backgrounds, and the sheer number of people, generates a lot of waste both on and off campus. In part this is due to the overuse of disposable cups which are distributed by franchises on campus. Globally over 500 billion disposable cups are sent to landfills every year (Woods & Balski, 2014). That is why more research needs to go into finding an alternative to disposable cups by understanding barriers to change in the community, and if they would support these changes.

Our Research Question

Our group has chosen to focus on disposal waste on Dalhousie Studley campus; particularly surrounding the perceptions that students and staff have on disposable coffee cups and their contribution to the university's waste production. Ideally, we had intended to get in touch and interview small, on-campus franchise owners, but were unable to do so because of time constraints. Our main goal was to determine the level of awareness among stakeholders in terms of their habits, potential concerns, and efforts relating to waste produced through to-go cup consumption on campus. Through survey based questions and face to face interviews our goal was to see how different stakeholders viewed proposed initiatives to transition away from disposable coffee cups on campus, as well as their

willingness to participate in a change towards waste reduction. Determining perceptions of these stakeholders will allow for campus initiative groups to gain a greater understanding into efficient ways to plan, develop, and propose waste reduction projects.

In our survey we also explored a potential pilot project around a hypothetical disposable cup ban in the Green Café in the Rowe Building. Through this proposal, our goal was to collect the stakeholders' perceptions on the benefits, as well as the potential concerns, if there were to be a phase out of disposable coffee cups in the two designated campus coffee shops. Through the use of paper, digital and face to face surveys, the objective of our research project was to determine how successful a pilot such as this may be. To do this, we aimed to understand the degree of awareness that is already present within Dalhousie, and how important this issue is to the following stakeholders that this initiative would affect: students, staff, and potentially company owners. Over the two and a half weeks of data collection, we aimed to interview over 300 students from the Faculty of Management, as well as the Green café managers and owners. At the end of the two weeks we had surveyed below our quota. We collected 82 student and 11 staff responses, and we had not been able to get in contact with the Café's owners.

Pilot projects regarding the ban of disposable cups have already been taking place in other universities and small businesses around the world, and with this we were interested in determining where Dalhousie stands in terms of the university's willingness to change our current waste production. Perceptions were evaluated through on qualitative and quantitative based questions. Along with gaining environmental concerns and insights, our goal was to determine how stakeholders see the social and economic impacts of disposable cups on both an individual and Rowe Building wide scale. We believe this is an important issue that needs to gain greater awareness across Dalhousie's campus. We hope that our research results encourage and inform initiatives on campus by collaborating with relevant stakeholders to work towards implementing similar pilots for reducing waste from disposable beverage containers.

Literature Review

A study of alternative container programs at other universities was made to provide us with background on what similar programs could look like at Dalhousie. Specifically, we examined the University of British Columbia (UBC), and the Princeton University (PU).

The "Mug-Share" program was started in 2016 at UBC as a pilot project to reduce the number of disposable cups being used on campus. The program works by providing the participants who purchased a mug with a refundable five dollar deposit and a laminated membership card. When the participant wishes to buy a beverage of their choice they can exchange their membership card for the mug and when they return the mug, they receive their membership card back. All the mugs are then sterilized at the cafes and returned to use. The cafes are all student run and composed mainly of volunteers at three separate locations around campus. The main goal is to reduce disposable cup waste through a sustainable alternative of reusable stainless steel 14 oz mugs which were provided by University of Victoria (Collins, Fenn, Hollingworth, Karna, & Mowlavi, 2017). The stainless steel mugs were made to last. However, the two negatives outcomes were the tracking of mugs that were distributed at cafes and the locations of drops offs after cafe hours that were provided for participants convenience. The overall project outcome was a success on UBC campus and showed a significant impact on reducing waste from single used cups.

At PU, the "Drink Local" program was introduced in 2009 as a pilot project looking to reducing the number of disposable water bottles purchased on campus. The project worked in collaboration with the Office of Sustainability which provided incoming undergraduate students with a BPA- free Princeton branded reusable water bottle. The University then surveyed all first-year undergraduates at the end of the school semester. The students who took the survey were asked if they had received the reusable bottle, how often they used the water bottle, and how frequently they purchased disposable water bottles. They were then asked about common barriers to use. The final question forced the student to choose if Princeton should or should not sell bottled water on campus (Santos & Linden, 2016). What worked at PU was the distribution of reusable water bottles that signaled a desirable social and pro-environmental norm on campus. This encouraged students to use their water bottles, and to change their behavior from purchasing a single use water bottle to a more sustainable alternative. Furthermore, this project is feasible to promote sustainable approaches on campus.

Methods

Sampling

Through this study, we gathered a non-probabilistic sample of students through quota sampling, and a small stakeholder sample of staff members in the Rowe Building. While the original intent of this project was to gather a probabilistic sample to be able to relate our research findings to the wider population that uses the Rowe Building, we determined that a non-probabilistic sample was more appropriate. The purpose of non-probabilistic sampling is to understand individual perspectives which falls in line with our goal of understanding staff and student perspectives around disposable beverage waste in the Faculty of Management (Palys & Atchinson, 2014, p 121, 429).

We chose to focus on quota sampling for the student population in the Rowe Building because we were primarily interested in the perspectives of those who use the space most. Quota sampling "assumes that all people within a given stratum are equal….[and] it ensures a heterogeneous sample" (p 117). To do this, we determined that with a student population in the Faculty of Management of 1 662 (Dalhousie University, 2017), a confidence level of 95% and a margin of error of 5%, our sample size needed to be 313 respondents (FluidSurveys University, n.d).

For sampling staff members, we utilized the stakeholder sampling method to attempt to ensure that "all voices have been heard" (Palys & Atchinson, 2014, p 113). We recognized that student perspectives on challenges to reducing and replacing disposable beverage containers, would likely differ from staff perspectives. With a staff population in the Faculty of Management of 63 (Dalhousie University, 2017), a confidence level of 95% and a margin of error of 5%, our sample size needed to be 55 respondents (FluidSurveys University, n.d).

We focused our efforts on contacting directors, managers and assistants in the Rowe Building as they are some of the long term residents of the Building and thus are key stakeholders. We had also originally intended to interview the owners of the Green Café because they are the primary stakeholder in this study, but due to time and other restraints that will be discussed later, we were unable to contact them.

Surveying took place in the Rowe Building on various days and times over the course of March 12th to 28th (Table 1). When conducting our sampling, we used paper, digital and face to face surveys to interact with respondents. We primarily focused on obtaining responses to our survey face to face as interviews due to the higher response rate than paper

or digital options (Wright, 2018). Paper copies of the survey were also distributed to passersby when they were too busy to stop for a ten minute conversation. A digital copy of our survey was also sent to staff members in the Faculty of Management via Google Forms as part of our stakeholder sampling.

Mixed Methods Approach

In our survey, we employed a mixed method approach to obtain quantitative information that is comparable across respondents while also collecting their unique perspectives through qualitative questions. We decided to use both approaches together because "the two also often complement one another by shedding [a] slightly different light on the phenomenon of interest in a manner that addresses rival plausible explanations and provides a more comprehensive understanding" (Palys & Atchinson, 2014, p 18). It was with the intent of understanding staff and student perspectives in tandem with qualitative information on respondent's habits, which led us to employ this approach.

The bulk of the first section of questions are quantitative and relate to personal habits and perspectives surrounding disposable beverage waste on campus. By structuring these questions as a mix of single response (yes/no), categorical (select one of these options), ranking, and Likert scale (level of agreement), individual responses could be quantified and meaningfully compared (Wright, 2018). We decided to collect this information as background for informing the qualitative section of our analysis and to highlight a relationship between personal habits and perceptions of the broader community.

The majority of the last section in our survey focused on qualitatively asking why respondents answered the qualitative questions in a certain way to gain insight into how they perceived the situation. This format also provided respondents the freedom to express how they see things without being given only a limited number of options. We decided to conduct most of our surveys as interviews focused on the survey questions because "interviews allow researchers to probe more fully into *why* people feel the way they do, and the broader belief system that makes those attitudes make sense" (Palys & Atchinson, 2014, p 150). By doing this, we as recorders of the information could ask respondents for points of clarification while also ensuring the survey was completed. With qualitative questions asking respondents why they viewed the situation a certain way, we aimed to see patterns emerge in the respondents answers that we had not considered before and which could shed light on barriers to use and recommendations for moving forward.

Through this mixed method approach, we intended to accurately determine and quantify how people perceive disposable cup waste and potential change, while also analyzing what change respondents felt was realistic and why.

Results

Since the questionnaire consisted of both qualitative and quantitative questions, the data analyses required different significant testing methods. The collected quantitative data was compared using t-tests to determine the results' significance, and the qualitative data acquired through open ended questions was categorized through coding of similar responses. The following results correspond with the figures and survey questions contained in Appendix A and Appendix B of this report. Raw data is also included in Appendix C.

Demographic (Questions 1,2)

The respondents were composed of students and staff in the Rowe Building. A total of 93 respondents were collected (Figure 1). The background of these respondents varied, but the majority of these respondents were from Management, Public administration, Business, Commerce, and Economics (Figure 2).

Habits (Questions 3,4,5,6)

We found that the majority of our respondents stated they did not buy drinks often or did so just a few times per week (Figure 3). Alternatively, there was a large of proportion of respondents who brought reusable bottles or mugs to campus (Figure 4). The results indicated that respondents who brought a reusable bottle or mug usually did not buy drinks on campus (Figure 5). A t-test was calculated between the results of questions 4 and 5 related to drinks purchased and bottle or mug usage to determine a p-value of <0.25 (Figure 4, Figure 5, and Table 2). This indicated that our results were statistically significant meaning that these two variables were statistically different from one another and not random (Mui, 2018).

Perspectives (Question 7)

When asked how staff and students felt about disposable beverage waste on campus, respondents gave a variety of thoughts. Over half of respondents believed there is too much

waste on campus and 21% stated that something needs to be done to eliminate the pollution (Figure 6).

Support *(Questions 8,9)*

When asked on a Likert scale their level of agreement towards the statement that "disposable beverage change is needed in the Rowe Building" a total of 70% respondent answered with agreement to high agreement (Figure 7). The majority of the remainder of the results (27%) stated that they were neither agreed nor disagreed. Additionally, when asked if they would support a ban on disposable containers, 70% of respondents chose "yes" in support of a complete ban (Figure 8).

Preference *(Question 12, 14)*

When asked to rank which option they would most prefer, the results showed that option B, a discount on beverages, was the most preferred option (Figure 9). In order of most to least preferred, the majority of respondents ranked them as B, D, C, A, E. The options possed to reduce waste were as follows: A- a complete ban on disposable beverage containers; B- a $0.20 discount on beverages if using a travel mug; C- Implementing a reusable container program on campus; D- $0.10 charge on disposable beverage containers to support recycling programs; E- No change to the current system (Figure 12, Table 4).

Realistic Options *(Question 13)*

In addition to the previous question (which option would be the most preferred), we also asked which option respondents believed to be the most realistic. The opinions remained the same for both questions and a discount for using reusable containers (option B) was considered as the most realistic (Figure 11).

Barriers *(Question 11)*

When asked what respondents believed were common barriers to implementing a pilot project in the Rowe Building (Figure 12, Table 13), 32% of respondents stated that a major barrier to change was a lack of awareness, willingness to change and acceptance of the program (D). The next largest majority (17%; F) was "Other" barriers that were not distinctly defined, were uninterpretable or off topic. The next largest barrier cited by respondents was

time and cost (15%; C) followed by respondents who did not answer (14%; N/A) and hygiene concerns around reusable containers (11%, E).

Discussion

In drafting of our research question, the final objective was narrowed, which allowed for our group to gather specific findings relevant to the potential initiative currently being considered by the Department of Sustainability and the Green Café management. With a smaller scope, our question focused on disposable beverage waste and the perceptions of specifically students and staff in the Rowe Management Building, as well as their willingness to change current consumption habits in this Building. This being the Café of interest required more specific data collection, as we altered the student quota into two different quotas: one for the total amount of students, and one for the total amount of management students. This same quota following the 95% confidence interval was applied for management faculty. It was important to survey a certain amount of students and staff within the department of management because these groups are the populations most often in the Rowe Building. Therefore, the Department of Sustainability and the Green Café were most interested in the perceptions and opinions of those in the Management faculty, as they are the most frequent customers.

Key Findings

Significant findings in our quantitative data that was initially considered were the current perceptions surrounding waste on campus. Thirty-eight percent of respondents stated that there is too much waste on campus. Twenty one percent of the total demographic agreed that there needs to be a change to our current system to eliminate waste (Figure 6). More specifically, twelve percent of respondents believed something should be done to encourage students to use reusable beverage containers. Twenty nine percent of the surveyed population answered with contrasting opinions, as they either did not think about waste at all, did not believe it to be an issue, or felt indifferent about current waste production on campus.

Taking these perceptions into consideration and accounting for these perceptions to reflect in habitual behavior, we then looked into the current habits of students and staff that use the Rowe Building (Figure 3). About forty-two percent of the respondents did not purchase drinks from the Rowe; this could be perhaps be because they either had brought

their own beverage from home, or from another restaurant on campus. The second most common response of thirty-eight percent, was that drinks were purchased from the Rowe Building 1 to 2 times a week. The remaining amount of staff and students reported purchasing beverages from the Rowe more than 3 times a week. Of those who buy drinks at the Green Café, twenty-four percent used the disposable cups provided from the Café.

Having collected both current perceptions and habits related to disposable beverage consumption and waste of staff and students in the Rowe, we found that the willingness to change the current system to reduce disposable cup waste was taken positively among the surveyed population. Sixty five percent either agreed or strongly agreed to a change in the current system to reduce beverage waste, and among those who agreed, the same amount of respondents reported that they would support a ban of disposable cups altogether (Table 4 and Figure 12). The willingness for change was demonstrated through this feedback, and further clarified through the given options for potential initiatives such as: discount incentives, reusable cup programs, or a complete ban.

Although some staff and students preferred a complete ban in question 12, in question 13 they explained why this may not by the most realistic compared to financial incentives. Some of the barriers that were commonly discussed for the ban was the toll this could take on sales for the Green Café. It was believed that if they were to stop supplying to go cups for customers, they may see a decline in sales, as those without a reusable mug would just purchase their drinks at other restaurants on campus. Another barrier for the ban that was brought up in majority of the survey responses was that this is an unrealistic expectation to put on student and staff customers at the Rowe Building. A ban was seen as too drastic of a change which would require a slow integrated transition, such as a discount or extra charge to initiate changes in behavior. Barriers addressed for the proposed reusable cup program were primarily surrounding risks of theft, hygiene, and overall effectiveness. Many students were concerned about the dishonesty that may take away the purpose of the program; it was put into question that if students were allowed to borrow reusable mugs, whether it would be possible to keep track of those being used. This system can be taken advantage of through theft and carelessness. Another common concern for this proposed pilot was sanitation and the concern for sharing mugs with others. This reaction from students was one that was unexpected, as we assumed that just like any other coffee shop that offers coffee mugs for in-store use, that the mugs offered in the program will be cleaned to the standards of the Green Café. This expressed concern may have been a reflection of the limited explanation of the pilot provided in the questionnaire. Another point that was brought up in critique to the

proposed mug share program was that it may be ineffective in the long term. A few respondents voiced concerns about the material of the reusable mugs. It was noted that if the mugs were to be made of plastic, there is a chance that customers would dispose of these reusable mugs instead of returning them and thus fail to achieve the intention of the program.

Related Research and Findings

Despite the concern shown by many respondents regarding customer dishonesty, there has been previous success in similar initiatives throughout other universities. An example of one of the programs that had inspired our proposal of a mug share program in our research was the one already implemented in University of British Columbia (UBC). The "Mugshare Program" at UBC has been running since 2016 through a student lead sustainability program where reusable mugs were made available at campus coffee shops for students to sign out (Garcia-Alonso, 2016). The recording of those who signed out a mug eliminates risks of theft, and this is something to be taken in consideration if a program such as this were to be taken on at the Rowe Building. Another consideration to take away from the previous studies done by those in the "Mugshare Program" at UBC is that they took into account social aspects, and research qualities of certain types of mugs surrounding hygiene. This influenced the type of mugs they offered in the program. Ceramic mugs are more easily sanitized and well-kept in comparison to stainless steel (Garcia-Alonso, 2016). The only risk to using the ceramic mug instead of stainless steel would be the risk of breakage; therefore, care must be put into mug use for participating customers. These considerations are those to bring forward and work around to achieve the most efficient system if a program similar to this were to be brought to the Green Café in the Rowe Building.

Limitations

Limitations that may have affected our results were time restraints, the total number of responses collected, and the format of our questionnaire. Due to the inconsistent time of surveying and the number of people who used the space, it was difficult to obtain the desired number of responses in this location. Even though a schedule was set out for surveying times, it was difficult to follow with conflicting class schedules of our group members. We had planned a specific place and time for certain days of the week for our quota to be reached, but throughout the data collection period, we found ourselves surveying on free time and between classes, for shorter, more frequent intervals, rather than one hour at the same time everyday.

An additional difficulty our group faced while approaching potential respondents was the willingness of staff and students to talk to us. Many students did not have, or want, to take the time to fill out our questionnaire between classes or while they were in line for the Green Café. There were many occasions where staff explained the limited amount of time they had in reasoning for not being able to respond to our survey. In an attempt to solve this issue, we created an online copy of our survey and retrieved the e-mail address list of all 63 Faculty of Management staff (Dalhousie University, n.d.), through this we were able to send it out to all staff within the Rowe Building and explain the importance of their responses (Appendix A). In terms of the format of the survey, as previously stated, there were some misinterpretations from some of the questions that we formed for our survey. Although the majority of the respondents favoured the discount incentive as a means of change to the current system at the Green Café, results may have looked differently if we provided further clarification on the proposed mug share program.

The intent was to be representative of the faculty of management student perspectives, but due to limitations surrounding time constraints of both our group, as well as those being surveyed, we did not meet this goal. We did however collect responses from respondents in other faculties who attended class, or used the work spaces, in the Rowe Building. Along with our student and staff quota, we believed it to be important that we addressed business owners and staff in the Office of Sustainability as key stakeholders, and unfortunately were not able to conduct such interviews. Although willingness had been previously expressed by the Café under the conditions of receiving positive feedback from staff and students, we still viewed it as important that we formally record their perceptions and opinions on beverage waste. The business' willingness is a strong deciding factor for whether the chosen initiative be implemented into their current system. Our lack of consultation with both the Green Café and the Office of Sustainability, who had also expressed interest in this project, was a major gap in our research. Discussions with these crucial stakeholders will need to occur, hopefully in conjunction with the submission of this project, before further action on this data can be taken.

Applications of Research Results

Recommendations for the actual implementation of a system to reduce disposable beverage waste include financial incentives, changing the social norms, and increasing awareness through educational outreach. We found that respondents were most enthusiastic about discounts, but also recommended a raise in discount or a charge for disposable cup

use. Twenty cents was considered a sufficient incentive to drive a change in consumer behavior in the Rowe Building. While financial incentives exist to support reusable container use on campus, we found that our respondents as customers are unaware of the discount or charge they are receiving in either using a reusable or disposable cup. What we would recommend to change the social norm and perceptions surrounding disposable cup usage is to encourage dialog between the cashier and customer. We would encourage the cashier to ask if the customer would like a disposable cup, rather than automatically preparing the drink in a disposable cup. This places responsibility on the consumer and will hopefully bring more attention to the individual's habits. Through this modified interaction between the cashier and the customer, awareness of the discount or charge will be heightened, as well provide an opportunity for the consumer to reflect on potential alternative options beyond the use of disposable cups. Other recommendations to raise awareness would be to announce a change to the system through the use of posters, public meetings, and student-lead initiatives such as a mug share pilot to gain student participation and activism.

If the Green Café were to act as a pilot project and leader for implementing these recommendations, it will put pressure on other campus services to follow a similar system. We would especially hope to see this change in Mona Campbell, as it is the Building in which the College of Sustainability is located. Further research on the student population and consultation with the Green Café and the Office of Sustainability would need to be conducted to draft feasible and realistic solutions to the waste issue surrounding disposable cups on Dalhousie campus.

Conclusion

The primary goal of this research project to find alternatives to disposable cup waste and to understand barriers in the Dalhousie community, was met in this research. The obtained results suggest that the majority of the participants would like to see a real change in the coming years. There are strong indications which suggest that the best encouragement for current students to reduce disposable cup waste is through financial incentives. These would give discounts to individuals who bring their mugs to campus and to add a charge to individuals who continue to purchase disposable cups. Furthermore, our results suggest that more awareness is necessary for people to truly participate in future surveys around disposable beverage waste. This is because many students were either confused or unaware of the disposable cup waste issue.

Based on our findings, it is recommended that Dalhousie University implement a pilot project at the Green Café that can be expanded to other restaurants on campus and to continue to support financial incentives to encourage reduced disposable mug use. We would also recommend that Dalhousie create a thorough plan to educate and create awareness for students about disposable cup waste in general. In considering these recommendations, it must be acknowledged that our results are mixed and not representative of the entire Rowe Management Building, nor of the Dalhousie Studley Campus community. Further research to validate these findings for the wider community, meaningfully consult with the Green Café and the Office of Sustainability, and to determine a plan for implementing these recommendation is necessary. It is hoped that with the implementation of these recommendations in the coming years that current disposable cup waste on campus could be reduced and the Office of Sustainability would be able to expand this project beyond the Rowe Building to other restaurants and buildings on campus.

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Appendix A

Questionnaire on Disposable Beverage Waste for Staff and Students in the Rowe Building

I understand the purpose of this survey and give my consent to the documentation of my responses for the group project being conducted in Campus as a Living Lab (SUST 3502). I understand responses will be kept confidential results will be presented in aggregated form to the course instructor and the Dalhousie Sustainability Office.

Name of interviewer: _____   Date:_____

1. Are you a) a student or b) a staff member at Dal?

2.   What faculty are you in? _____

3.   How many times per week do you purchase drinks at the Rowe?
a.   0
b.   1-2
c.   3-4
d.   5-6
e.   7 or more

4.   Do you bring a reusable water bottle or mug to school? Circle: Yes/ No.

5.   If yes, using the same scale from Question 3 please circle, how many times a week you:
        i) bring a reusable water bottle or mug to school?
a.   0
b.   1-2
c.   3-4
d.   5-6
e.   7 or more
        ii) use your own water bottle or mug to purchase drinks on campus?

f.   0
g.   1-2
h.   3-4
i.   5-6
j.   7 or more

6.   If you answered "No" to Question 4, what is preventing you from using or bringing a reusable container every day?

_____

_____

7.   How do you feel about/ what do you think about beverage waste on campus?

_____

_____

8.   Using the following scale, how much do you agree that there needs to be a change in disposable beverage waste production in the Rowe building?

(Strongly disagree) 1   2   3   4   5 (Strongly agree)

9.   Would you support a ban on disposable cups in the Rowe? Circle: Yes/ no

10.   Reusable container program pilot (where containers are borrowed and return to Dal for cleaning):
       Do you think it is possible to integrate or completely replace disposable beverage
       containers with a reusable container program at Dal? Circle: Yes/No.
       Why? _____

       _____

11.   What do you think are barriers to integrating a reusable container program in the Rowe?
       _____
       _____

    12) Which option would you prefer in the Rowe (rank 1-5, 1 being most preferable,
5   being least preferable)
       A) complete ban on disposable beverage containers _____
       B) $0.20 discount on beverages if using a travel mug____
       C) Implementing a reusable container program on campus (as mentioned above)___
       D)$0.10 charge on disposable beverage containers to support recycling programs ___
       E) No change to the current system ___

    13) Which option do you think is more realistic? (circle: A B C D E)
       Why? _____

       _____

    14) Please explain why you think one of these options is most preferable. If none of the options mentioned in Question 12 are preferred, please provide any other ideas you have that could be implemented to reduce disposable cup waste in the Rowe building._____

_____

_____

Online Survey

We are a research group in Campus as a Living Lab (SUST 3502) looking to collect data regarding staff and student perceptions of disposable cup waste in the Rowe building. Our research project aims to understand current perceptions of disposable coffee cups and faculty/student willingness to change consumption habits at the Green cafe. The Department of Sustainability is interested in the views of faculty/students of Management since you represent a consistent presence in the building. All responses will remain confidential.

We would really appreciate if you took a few minutes to fill out the online survey attached to this email before **Friday March 30th.**

Appendix B

Table 1 Surveying dates and times for two-week data collection period.

Surveyor	Maria	Shaye	Wenpeng
Dates	M: 12th, 19th, 26th W: 14th, 21st, 28th F: 16th, 23rd	M: 12th, 19th, 26th T: 13th, 20th, 27th W: 14th, 21st, 28th F: 16th, 23rd	W: 14th, 21st, 28th Th: 15th, 22nd F: 16th, 23rd
Times	M: 10am-12pm W: 1pm-3pm F: 1pm-3pm	M: 10:30-11:30am T: 10:00-11:00am W: 10:30-11:30am F: 11:00-12:00am	W: 5pm-6pm Th: 5pm-6pm F: 5pm-6pm
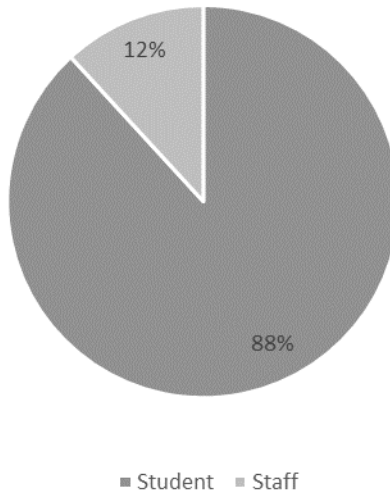
■ Student ■ Staff

Figure 1 Proportion of respondents over the duration of 3-week period survey between students and staffs. Data collected by Green is the New Black from Kenneth C. Rowe Management Building, Dalhousie University Halifax, NS, Canada in 2018.
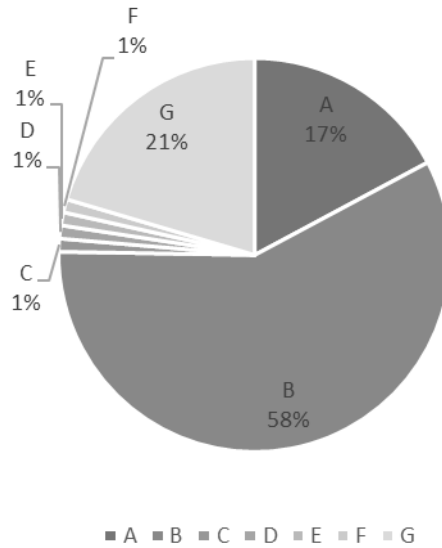
Figure 2 Proportion of respondent faculty over the duration of 3-week period survey among faculties (A-Arts; B-Management, Public Administration, Business, Commerce, Economics; C-Computer Science; D- Engineering; E- Medicine, Nursing; F- Community Design; G- Science, Sustainability, Environmental Science). Data collected by Green is the New Black from Kenneth C. Rowe Management Building, Dalhousie University Halifax, NS, Canada in 2018.
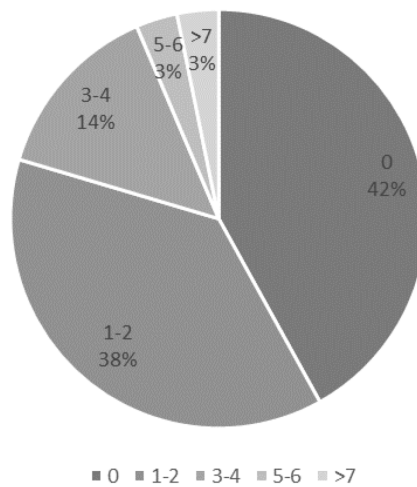
Figure 3 Drinks purchased per week of students and staffs in Rowe. Data collected by Green is the New Black from Kenneth C. Rowe Management Building, Dalhousie University Halifax, NS, Canada in 2018.
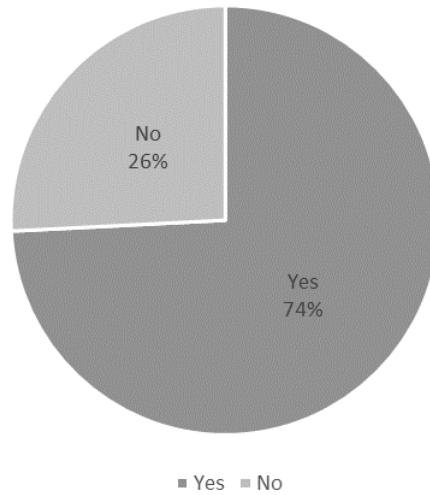
Figure 4 Bottle/mug usage among respondents for purchase drinks on campus. Data collected by Green is the New Black from Kenneth C. Rowe Management Building, Dalhousie University Halifax, NS, Canada in 2018.
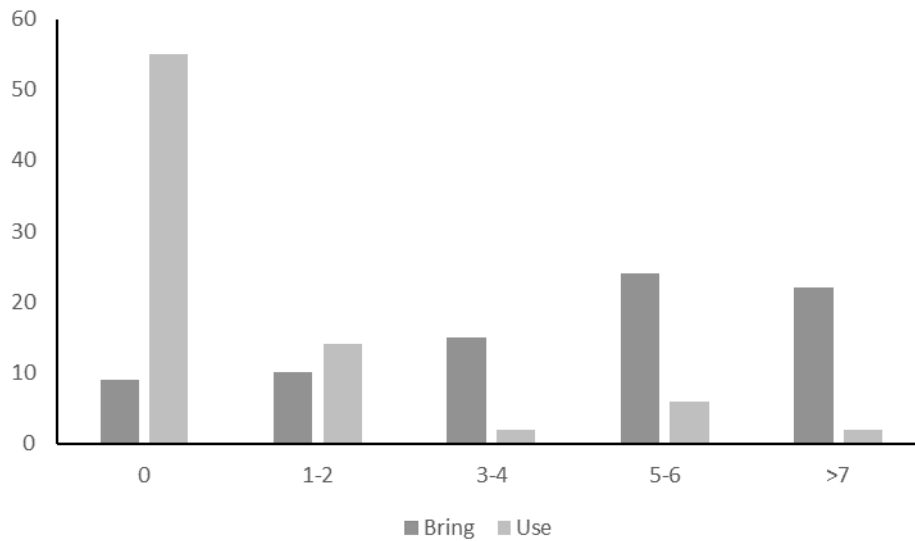
Figure 5 Comparison between drinks purchased and bottle/usage ($P<0.25$). Data collected by Green is the New Black from Kenneth C. Rowe Management Building, Dalhousie University Halifax, NS, Canada in 2018.

Table 2 T-Test: Two-sample assuming equal variances for data represented in Figure 5

	Variable 1 (Bring Bottle)	Variable 2 (Use Bottle to Purchase)
Mean	16	15.8
Variance	46.5	504.2
Observations	5	5
Pooled Variance	275.35	
Hypothesized Mean Difference	0	
df	8	
t Stat	0.019057128	
P(T<=t) one-tail	0.492631129	
t Critical one-tail	1.859548038	
P(T<=t) two-tail	0.985262258	
t Critical two-tail	2.306004135	
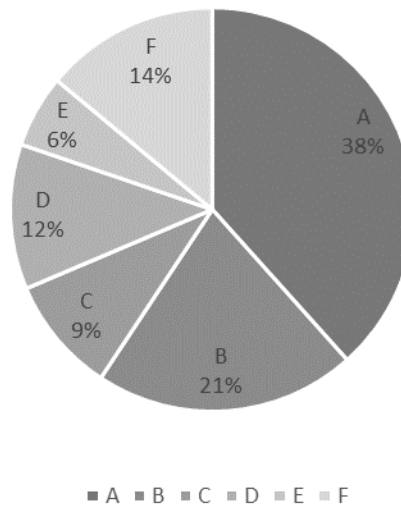
Figure 6 Proportion of different thought about the waste on campus. (A- There is too much disposable cup waste on campus; B- Something needs to be done to eliminate the pollution; C- Don't think about it; D- Something needs to be done to encourage students to use Reusable Bottles/Mugs; E- Unformed opinion; F- Not a big deal) Data collected by Green is the New Black from Kenneth C. Rowe Management Building, Dalhousie University Halifax, NS, Canada in 2018.
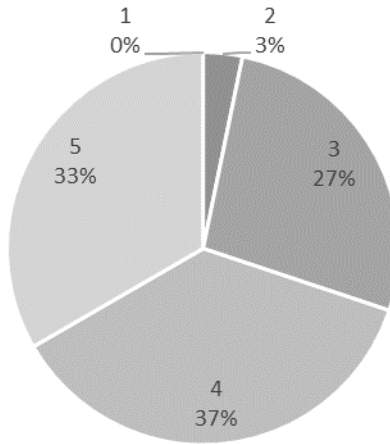
Figure 7 Proportion of agree level for disposable change in Rowe building (1-Strongly disagree, 5-Strongly agree). Data collected by Green is the New Black from Kenneth C. Rowe Management Building, Dalhousie University Halifax, NS, Canada in 2018.
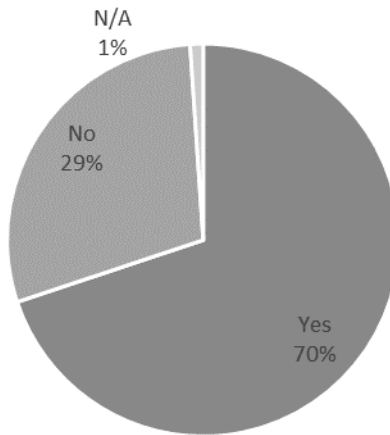
Figure 8 Proportion of ban support situation. Data collected by Green is the New Black from Kenneth C. Rowe Management Building, Dalhousie University Halifax, NS, Canada in 2018.

Table 3 Number of supporters for preferred options (1-most preferred, 5-least preferred), (A-complete ban on disposable beverage containers; B-$0.20 discount on beverages if using a travel mug; C-Implementing a reusable container program on campus (as mentioned above); D-$0.10 charge on disposable beverage containers to support recycling programs; E-No change to the current system). Data collected by Green is the New Black from Kenneth C. Rowe Management Building, Dalhousie University Halifax, NS, Canada in 2018.

	A (Ban)	B (-$0.20)	C (Reusable)	D (+$0.10)	E (No change)
1	11	43	14	8	10
2	9	15	23	24	11
3	19	11	30	28	5
4	22	10	15	17	13
5	24	6	3	8	46

■A ■B ■C ■D ■E
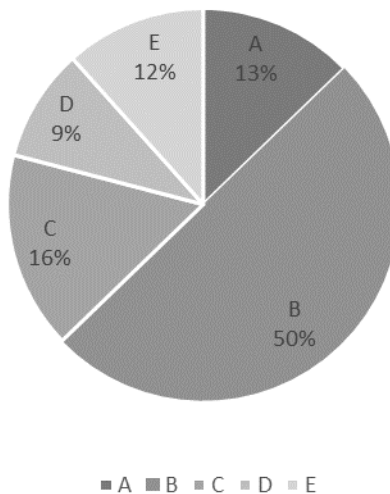
Figure 9 Proportion of the most preferable option (A-complete ban on disposable beverage containers; B-$0.20 discount on beverages if using a travel mug; C-Implementing a reusable container program on campus (as mentioned above); D-$0.10 charge on disposable beverage containers to support recycling programs; E-No change to the current system). Data collected by Green is the New Black from Kenneth C. Rowe Management Building, Dalhousie University Halifax, NS, Canada in 2018.
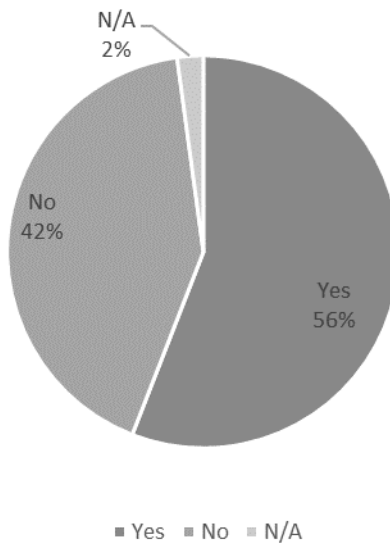
Figure 10 Support rate on replace disposable beverage containers with a reusable container program at Dal. Data collected by Green is the New Black from Kenneth C. Rowe Management Building, Dalhousie University Halifax, NS, Canada in 2018
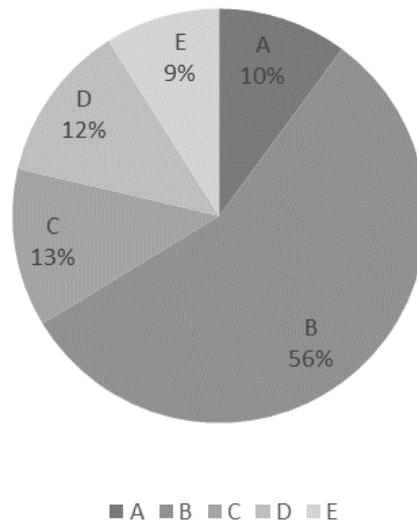
Figure 11 Proportion of different barriers (Complete ban on disposable beverage containers; B-$0.20 discount on beverages if using a travel mug; C-Implementing a reusable container program on campus; D-$0.10 charge on disposable beverage containers to support recycling programs; E-No change to the current system). Data collected by Green is the New Black from Kenneth C. Rowe Management Building, Dalhousie University Halifax, NS, Canada in 2018.
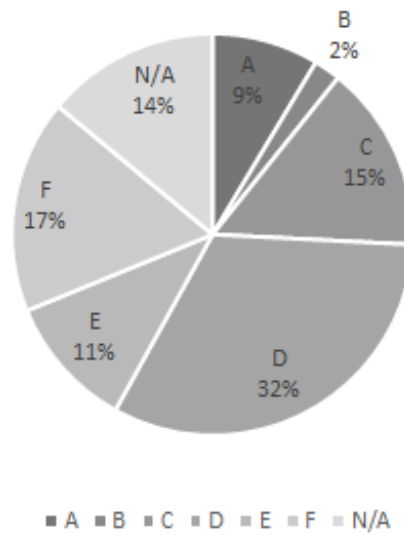
Figure 12 Proportion of different barriers to integrating a reusable container program in the Rowe. (A-It will not be returned back; B-There will need to place for the cups to be returned after closing hours; C-More Timely & Costly; D-Lack of acceptance (willingness to change) & awareness; E-Hygiene; F-Other)

Table 4 Legend for Figure 12

A	It will not be returned back
B	There will need to place for the cups to be returned after closing hours
C	More Timely & Costly
D	Lack of acceptance (willingness to change) & awareness
E	Hygiene
F	Other

Appendix C

Table 1.1 Survey results (Part 1). Data collected by Green is the New Black from Kenneth C. Rowe Management Building, Dalhousie University Halifax, NS, Canada in 2018.

| #	1	2	3	4	5	6	7
Date	14-Mar	14-Mar	14-Mar	14-Mar	14-Mar	14-Mar	14-Mar
Student	X	X	X	X	X	X	
Staff							X
Faculty	Management	Management	Management	Science	Arts	Management	Public administration
Times Per Week purchase drinks in the Rowe	(1-2)	(5-6)	(3-4)	0	(1-2)	0	0
Bring a reusable water or mug	Yes	No	No	Yes	No	Yes	Yes
How many time per week do you bring a reusable water or mug	>7			(5-6)		(5-6)	(5-6)
How many time per week do you use a reusable water or mug to purchase drinks at the Rowe	0			0		0	0
"No" to Question 4, what is preventing you from using or bringing a reusable container every day?		No time to prepare	The carrying around of a reusable container		I never really think about it. It's easier to buy more		
How do you feel about/ what do you think about beverage waste on campus?	Cups , especially coffee cups are a huge amount of of waste on campus	Need to pay more attention and advertise the reusable water bottle advantages	Should incentives students bring reusable container	I think there a crazy amount but there is a lot of students who want coffee so it's hard to control	I don't have a strong opinion. I do however agree that we should reduce our beverage waste since it's better for the environment	I think more reusable cups/mugs/ bottles are needed especially with plastic waste pollution	Don't think about at all
How much do you agree that there needs to be a change in disposable beverage waste production in the Rowe building?	5	3	4	5	3	5	4
Would you support a ban on disposable cups in the Rowe?	Yes	Yes	Yes		Yes	No	Yes
Do you think it is possible to integrate or completely replace disposable beverage containers with a reusable container program at Dal	No	Yes	Yes		Yes	Yes	Yes
Why?	I think the cups will not be returned, cups that could be recycled would be more beneficial		A lot of students already bring their own containers		I think it can be done but in small steps, first offer reusable cups to encourage people and slowly remove disposable cups	Can Integrate	Because if there is reusable cups it helps push for the right direction
What do you think are barriers to integrating a reusable container program in the Rowe?	They will not be returned		Closing time of the Rowe and some students are stay on campus very late. There must be a place to return after hours		I Think people will forget to return the cups also they will want to take them to go. They won't take the time to return cups	Hygiene, Perceptions, Awareness	The problem is the price for students, but as a staff there is no barriers
Which option would you prefer in the Rowe (rank 1-5, 1 being most preferable, 5 being least preferable)							
A) complete ban on disposable beverage containers ____	4	3	2		5	3	5
B) $0.20 discount on beverages if using a travel mug____	1	5	1		5	4	2
C) Implementing a reusable container program on campus (as mentioned above)___	3	3	3		1	1	1
D) $0.10 charge on disposable beverage containers to support recycling programs __	3	5	4		2	2	3
E) No change to the current system ___	5	1	5		3	5	4
Which option do you think is more realistic? (circle: A B C D E)	B	B	C		B	D	C
Why?	People often bring/ have their own mugs	Because discount can encourage them	It's hard to completely ban all disposable beverage containers		People always look for ways to save money	I think a charge might make people more aware plus it supports a good cause	The best option for everyone, cause it can be used more than once.
Please explain why you think one of these options is most preferable. If none of the options mentioned in Question 12 are preferred, please provide any other ideas you have that could be implemented to reduce disposable cup waste in the Rowe building.	Students are looking to save money wherever they can		Implement a reusable container program		I think charging people more is preferred because people want to save money and would rather use reusable cup then extra for disposable one	I think C is because no one would need to buy their own reusable containers-borrow and clean / pay tax too	

Table 1.2 Survey results (Part 2). Data collected by Green is the New Black from Kenneth C. Rowe Management Building, Dalhousie University Halifax, NS, Canada in 2018.

|	8	9	10	11	12	13	14	15	16	17	18
	14-Mar	14-Mar	14-Mar	15-Mar	15-Mar	15-Mar	15-Mar	15-Mar	15-Mar	15-Mar	15-Mar
	x		x	x	x	X	x	x	x	x	x
		x									
	Management	Business	Commerce	Science	Science	Arts	Sustainability	Sustainability	Science	Science	Arts
	(1-2)	(1-2)	(3-4)	1-2	0	0	0	0	0	0	0
	Yes	Yes	Yes	yes	yes	Yes	Yes	Yes	Yes	Yes	Yes
	(1-2)	>7	>7	5-6	>7	5-6	>7	5-6	3-4	3-4	>7
	(1-2)	0	0	3-4	0	0	0	0	0	0	0
		Washing it	Cleaning the mug	I usually do bring one, but if I ever dont, it's just because I'm short on time	N/A			N/A		It's a hassle	N/A
	I think it should encourage students to use reusable bottles because beverage waste makes our campus dirty and sometimes waste times to clean it	There's a lot, especially during exam week	Its disappointing that there is a lot of waste	I still see a lot of people who use disposable cups everyday. I think it's important for people to switch to reusable ones	I think there is a lot of unnecessary waste going to landfill from one use cup	I think it would there is definitely room for improvement reducing waste, incentives for bringing reusable water bottles/ mugs	Don't like it, try to avoid when possible.	Pretty Mixed	Beverage waste contributes a lot in waste recycling	Pretty high waisted considering our coffee consumption.	Senseless when there are effective alternatives.
	5	4	3	5	5	5	3	3	3	2	5
	Yes	No	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes
	No	Yes	Yes	Yes	No	No	Yes	No	Yes	No	Yes
	I think it maybe more reasonable for us to take our own bottles to school because its a huge expense to for the replacement containers	Because people can adapt, and will be willing to get involved	People won't like it, but they'll deal with it	I do, but I think it would take a lot of work and time. It might be best to introduce it gradually on a per building basis.	I think it's a good step, but if people forget their bottle they should still be able to buy water/juice.	I think it would be a good effect, but i don't know if people would actually return the containers	At least able to integrate, there are programs at other places that do this.	Need to know the logistics	It may be hard to replace all of the disposable beverage containers with reusable containers at Dal.	Integration is possible but completely replacing it would be difficult as not all students would agree.	Other universities have effectively implemented it
	The realization of the disadvantages for using disposable beverage waste production	People don't have time and want something quick and easy	convenience	A Lot of people are stuck in the habit of not bringing reusable mugs/bottles. It will be difficult to unlearn this	Public support, perceptions/ concerns about cleanliness of borrowed and returned bottles.	Yes, whether or not people return the container	More timely/costly perhaps.	Cost, Sanitation	Some people don't want to bring their reusable container on campus	Student acceptance/cost	Consumer culture, apathy
	4	3	2		3		4	5	4	5	1
	1	1	3	x	4	x	1	1	4	1	3
	2	2	1	x	5		2	4	3	3	2
	5	5	4		2		3	2	3	2	3
	5	5	5		5		5	3	1	4	4
	B	B/C	C	B	B	B	D	D	B	B	E
	Because saving money sometimes makes good effect	B, We like cheaper at of the day /C, Initiative is good	It puts the least stress on students to compensate with money	Probably B, but it may not be as effective in reducing waste as C	I think a larger discount could help, there is already a $0.20 discount.	I think more people will be able to justify getting a travel mug and using it if they get regular discounts. Also cheaper mug options at the bookstore would help.	I think D could be realistic as it doesn't give ppl a chance to pick & choose.	People won't change habits and cost of the coffee is elastic	I think this is a good way to reduce bottle waste	Either B or D work as they are financial incentives, so more likely to change behavior willingly.	People do not want to be inconvenienced
			A complete ban would be great, but highly difficult to enforce	I think introducing a program would be best	Reusable containers program would be interesting to see.		I think this idea is it give struggling students an opportunity to save money & environment.	See 13	Option B is most preferable because it can be more effective to reduce the current system		A complete ban is most preferable because it eliminated disposable waste rather than discouraging it, as other options recommend.

Table 1.3 Survey results (Part 3). Data collected by Green is the New Black from Kenneth C. Rowe Management Building, Dalhousie University Halifax, NS, Canada in 2018.

19	20	21	22	23	24	25	26	27	28	29
15-Mar	15-Mar	15-Mar	15-Mar	15-Mar	15-Mar	15-Mar	15-Mar	15-Mar	15-Mar	15-Mar
x	x	x	x	x	x	x	x	x	x	x
Environmental Science	Engineering	Management	Arts	Management	Commerce	Management	Management	Arts	Nursing	Management
0	0	1-2	0	1-2	1-2	3-4	3-4	0	0	1-2
Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
>7	5-6	3-4	>7	3-4	5-6	5-6	5-6	>7	>7	5-6
0	1-2	1-2	0	1-2	0	0	5-6	0	0	1-2
I don't buy drinks			I bring my own water from home. Also i do not come to the rowe building very often.							
Not a fan	Good	There is too much	I feel as though even though there is a lot of beverage waste on compus, it is always placed in the garbages and not on the grounds.	Lots of people don't realize how large an issue it is	it is good to cut down as much as possible	There is a lot of waste	Good, always clean	I feel people should bring reusable mugs for hot drinks, there is too much coffee cups waste.		It is really high
4	4	5	3	5	4	4	2	5	4	5
Yes	Yes	Yes	No	Yes	No	No	No	Yes	Yes	Yes
No	No	Yes	No	No	Yes	Yes	No	No	Yes	Yes
	Healthy concern	it's possible, food survices would need to brace for the cost	I feel as though having reusable cups are inconvenient.	people forget and will keep it	I think its tough to control cup logistics, limits where drink can come from	Without disposable cups, there will be necessary.	I would personly not want to use the same containers as any else.	People will complain about any changes		Attainable it implemented well.
Cost/ Sanitation	Money matters and health concern	It's expensive, may not be hygieve	I feel as though people would not be very pleased if there was a complete ban on disposable cups.	Financial and people are scared of change	Can be in tegrated, won't completely replace disposable cups			Must be extremly clean.	People will be worried about cleanliness of the reusable mugs.	Convincing staff to make this happen	Marketing correctly.
5	4	4	5	3	5	5	5	1	4	1
4	3	1	1	1	1	1	1	2	1	2
2	1	3	3	4	3	2	4	3	2	3
3	5	2	4	2	4	4	3	4	3	4
1	2	5	2	5	2	3	2	5	5	5
E	C&D	B	B	B	B	A	B	D	B	B
Hard to make changes	May be the container program could be good, the other options may cost too much money or hard to be processed.	The university faces a cost with reusable containers and some consumers may feel the containers unclean!	Because banning disposable cups is not very realistic discounting 20 cents if using a reusable cup eliminate some disposable cups.	Easier to porsvele people with discount	Minimal change, doesn't affect students' choice	It compells people to bring own mugs without forceing the to do the alternative.	Save money, and recycling friendly.	It will discurage some from using disposable mugs but is not a drastic change.	Because a complete ban may be too much of a process/ hard to accomplish	most easily implemented
A. I would like to see disposable beverages gone	Maybe option C is the best if we need to control beverage waste. But I think how is this program processed would be a hard time. How can I get a free cup from Dal and return, do I need to pay the deposit? What if I lost the cup or break the cup?	A discent is a great idea.	The most preferable option is E, I feel as thoug there should not be a change in the current system.		Encouraging people to use reusable options is good using incentives, hard to restrict people's choice.	Becasue it leaves the option for choice.		The 10 cents charge on dosposable cups is good because it nrgatively reinforces those wh don't bring reusable cups.		most attainable

Table 1.4 Survey results (Part 4). Data collected by Green is the New Black from Kenneth C. Rowe Management Building, Dalhousie University Halifax, NS, Canada in 2018.

30	31	32	33	34	35	36	37	38	39	40
15-Mar	16-Mar	16-Mar	16-Mar	16-Mar	16-Mar	16-Mar	16-Mar	16-Mar	16-Mar	16-Mar
x	X	X	X			X	X	X		x
				X	X				x	
Management	Commerce	Management	Commerce	Management / Commerce	Commerce	Commerce	Management / Commerce	Computer Science	Commerce	Commerce
0	3-4	1-2	0	0	3-4	0	0	0	1-2	0
No	No	Yes	Yes	No	Yes	Yes	No	Yes	No	Yes
		1-2	3-4	0	3-4	5-6	1-2	5-6	0	3-4
		1-2	1-2	0	1-2	0	0	5-6	0	0
Don't have any drink before leave the house usually.	I forget to bring them most of the time			I don't drink that much water			Live on residence, so feel like have easy access to drinks			Sometimes I forget to bring my water bottle
We should cut down on such environmental problem.	I don't really think about it	I think it's not too serious my classmates often bring their own mug	Don't feel good about beverage waste, should always be consumed completely	Indifferent	It's not a huge problem since most people throw the beverage into the correct garbage box	I honestly don't really notice it		Feel bad for sure, we should take it every possible step to prevent beverage waste	Very normal	I feel that it could be better, but they ao an alright job
3	3	4	4	3	4	3	4	3	4	3
Yes	No	Yes	No	No	Yes	Yes	No	Yes	Yes	Yes
Yes	No	Yes	No	No	No		Yes	Yes	Yes	No
Why not		It's good for saving resources	No, Because some students will still have disposable beverage waste	People won't like it	There is a large demand for the disposable beverage containers	I don't think people would be into buying or even borrowing a reusable container, and return it.	Clean, efficient and easy for students	If everyone is aligned to a goal, everything is possible		I do not think everyone would agree to this as cleanliness is very important to some people
	People dont care as much		Not everyone will follow this	Coffee cups are often thrown in garbage	Some students may not know the rules	People are too lazy for that	Potential for students to " backlash" or lack of use of the service	Acceptance , ome should be ready and open-minded to adapt to new changes		Cleanliness issues, people not wanting to reuse containers, etc
4	5	4		5	5		5	4	5	5
1	1	3		1	1	x	1	1	4	3
2	4	1	x	3	3		2	2	3	4
3	3	2		4	2	x	3	3	2	1
5	2	5	x	2	4		4	5	1	2
B	B	B/C	C	B	B	B/C	B	B	B	E
Easy initiative	The 0.20 discount		C, This will create awareness	People would use it	Giving discount to people to help them save money is the most attractive to them	incentivize (A, people won't follow this)	As it will incentivize students as well help the environment	Providing discount and implementing the same is an easy work around and as more of the students will be interested in the discount, and more chances of getting the thing implemented	Money can encourage people	E or D, because these type of systems take the to implenent and might not work long term alse to casts or peoples individual values.
	It rewards people for using reusable cups	Implementing can solve the problems	C is the most preferable because you are not having any disposable waste containers	B helps people, while other options hurt			I think B, is the most preferred as a complete ban is unrealistic but a change is required	Providing discount is more preferable than enforcing anything on the students	Ban drinking in building	Promtion of using your own water buttles and $0.1 chose on disposable beverages to suggest recycling problems are preferable because it is a saby step that long term will add up.

Table 1.5 Survey results (Part 5). Data collected by Green is the New Black from Kenneth C. Rowe Management Building, Dalhousie University Halifax, NS, Canada in 2018.

	41	42	43	44	45	46	47	48	49	50	51
	16-Mar	16-Mar	16-Mar	16-Mar	16-Mar	16-Mar	16-Mar	16-Mar	16-Mar	20-Mar	20-Mar
	x	x	x	x	x	x	x	x	x	X	X
	Commerce	Management	History	Management	Management	Commerce	Commerce	Management	Management	Commerce	Public Administration
	1-2	1-2	1-2	5-6	1-2	>7	1-2	1-2	1-2	1-2	1-2
	No	No	Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes
	5-6		1-2	>7	>7	/	0	5-6	5-6	3-4	5-6
	0		0	0	>7	/	0	5-6	0	0	1-2
	only down 10/20 cents housing carry around a daily	My bag's small.				I just feel if I use a reusable container everyday, it is wasted resource.	too large to put into the bag		Don't anticipate needing, only bring water bottle.		
	what beverage waste	It's not normal at Dal. Majority of Dal students drink up beverages	it needs to improve	should reduce one time use cups as much as possible	hard to deal with them cause pollution		waste resource and harmful for environment	there is probably too much. however it seems like most people bring their own water bottle	I think it should be reduce	I haven't thought about it	I don't know much about it
	3	3	4	5	5	3	4	4	4	3	4
	No	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	No	Yes
	Yes	No	Yes	Yes	Yes	Yes	No	Yes	No	Yes	No
		I don't know how it would work	helps the environment	it is good for our environment	to protect the environment			it is more flexible than a ban. it gives people option if they forget their ewusable but don't want to waste			Disposable cups are more convenient for those who don't bring their bottle. It's a choice!
	Drop off	Is there any costs/ fees	willingness to do so by the student	people use one time use cups a lot at in rowe building				will	Not enough buy-in	People in a rush, and people fear change	Those who don't bring their mug. And also the coffee shop.
	5	3	1	1	3	1	2	5	1	5	4
	5	3	4	1	2	4	2	3	3	2	1
	3	3	2	1	4	3	4	1	2	1	2
	5	3	3	1	1	2	1	2	4	3	3
	1	4	5	5	5	5	5	4	5	4	5
	E	E	A	B	A	D	D	E	B	B	C
	Expect C if done correctly	There's no room to implement it	it takes little effort for the students to do	People will care about spending more money	Easier for people to accept	It could reduce the number of using disposable beverage containers effectively.		Business as usual is always easier.	Least effect		easier to achieve
		E, Some cups from the second cup are also recycleable cups. Do need to change.						I think the pilot is a great idea and has been implemented the where (like Germany)	A is preferred because it is effective and universial	Can give people an motive to make the change	B. I'am consumer, Discount is always is good for me

Table 1.6 Survey results (Part 6). Data collected by Green is the New Black from Kenneth C. Rowe Management Building, Dalhousie University Halifax, NS, Canada in 2018.

52	53	54	55	56	57	58	59	60	61	62
20-Mar	20-Mar	20-Mar	20-Mar	20-Mar	20-Mar	21-Mar	21-Mar	21-Mar	21-Mar	21-Mar
X	X	X	X	X	X	x	x	x	x	x
Management	Management	Commerce	Commerce	Management	Commerce	Economics	Science	Arts	Science	Science
3-4	3-4	1-2	0	1-2	5-6	1-2	>7	3-4	3-4	5-6
No	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No	Yes
0	3-4	1-2	3-4	5-6	5-6	>7				1-2
0	0	0	5-6	5-6	0	0				1-2
I do not own one							Heavy and take up space	it is heavy	small bag	
Ambivalent		I haven't thought about it	Environmental-Friendly	To much of it	I feel like we could save more	Bring lots of pollution		too much cuos wasted on campus		waste a lot, and the resort of cup is not good
3	4	3	3	5	3	5	3	4	3	4
Yes	Yes	No	No	Yes	No	No	Yes	Yes	Yes	Yes
Yes	No	Yes	No	Yes		No	Yes	Yes	No	No
If you make make the change people will adapt	I think people wouldn't trust it	It's good for the environment		It is easy to get reusable containers		Sometimes it is not very convenient to bring a reusable container	decreas environmental pollution	reduce waste on beverage	maybe it is not very beautiful as i like, and it will cost lots of money	the rule is hard to afford and the cost will be higher, that may make the demand of beverage decrease
Apathy		Laziness		People leaving them home		Hard to manage people's behavior	hard to control everyone	Hard to control everyone	School will pay lots of money on this program and i think maybe have others more necessary program to do	replace the one time use cup, the cost will be higher and the rule need a long time to make people accept
5			3	2		5	4	4	2	3
2		X	2	1		1	1	1	1	1
4			3	3		3	3	3	4	4
3	X		4	4	X	4	2	2	3	2
1			2	5		2	5	5	5	5
B	D	B		B	D	B	B	B	A	B
Easiest to implement vs. convenience for students	They change 10 for bottle why not cups	Cheaper for people				most people can accept it quickly	cheaper for consumers if using a travel mug	less money to purchase on beverages	no one want to pay more money to support reycling programs and thee are lots of students in school, so discount will cost lots of money	because when people feel to bring their own cup can get $0.2 benefit, and at this period they will habit to do that, then the ban will easier.
I'am not concerned about disposable cup waste , but I could not oppose something being done about it.				Easiest for student	Because it is reasonable to charge 10 cents for the disposable cups	i still think B is more possible to implementing	B is most preferable, it has discount to buyers and also reduce wastes.	B is the most preferable, because we use less money on the same drink	People will take travel mug because they want to earn the discount and only the benefit can make student have motivative to using travel mug	i think B or C is the most preferable, that can make people to realize the important of waste.

Table 1.7 Survey results (Part 7). Data collected by Green is the New Black from Kenneth C. Rowe Management Building, Dalhousie University Halifax, NS, Canada in 2018.

63	64	65	66	67	68	69	70	71	72	73
21-Mar	21-Mar	21-Mar	21-Mar	22-Mar	22-Mar	22-Mar	22-Mar	22-Mar	22-Mar	22-Mar
x	x	x	x	X	X	X	X	X	X	X
Science	Environmental science	Management	Commerce	Commerce	Commerce	Environmental Science	Sciences	Arts	Arts	Arts
1-2	0	0	1-2	1-2	0	o	o	0	0	1-2
No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	>7	5-6	1-2	3-4	0	3-4	5-6	3-4	5-6	>7
	0	0	0	0	3-4	1-2	0	0	0	0
I perfer buy a drink if I need instead of bring a bottle	/									I had never really considered doing so, and I didn't know how many places would do this.
No one can avoid this	Coffee cups are an issue	I don't use disposable bottles	I think that reusing propeily disposing of beverages is very important for the environment	There is likely a lot of it occurring due to convenience	I dont notice it	A lot of people bring reusable water bottles but not enough travel mugs for warm drinks	I find that it is extremely excessive and wasteful. Especially food containers	Too many end up in the waste, kings stopped using them for this reason	The garbage bins get full outside of the classrooms	I think that there is a large amount and that cutting down on it would be a very good thing.
3	5	4	4	4	3	5	4	5	5	5
No	Yes	Yes	No	No	No	Yes	Yes	Yes	Yes	Yes
No	Yes	No	Yes	No	No	Yes	Yes	No	No	Yes
someone may not comfortable using this	some what problem I see is the cleaning process, does Dal have the facilities	I would not use a mug random people have use	But it will be difficult changing students' mentality and habits.	People don't love enough to commit		I think that most people would use this service and its convenient	Because Dal has lots of funds to do so	Too many students are unreliable	I don't think students would return the containers for cleaning	The loaded ladle has a similar program that seems to be working so i think that a disposable beverage program could work.
N/A	Lack of infestrueture	STI'S	-ease of disposable beverages - students habits to want somthing "on the go"	People won't understand how it works, costly, complications	It's a hassle	Many students are commerce/ business students they may be open to it	Student population not participating	Not being brought back	I think there would be alot of missing containers	Perhaps people wouldn't bring the cups back or may not want to use reusable ones
3	5	4	4	5		1	3	1	1	2
2	4	5	1	1		3	1	2	1	1
1	3	2	3	4		2	2	4	3	2
4	2	5	2	3		4	3	3	2	3
5	1	1	5	2	X	5	4	5	5	4
C	B	B	C	B	E	A	B	A	A	B
Easy to start up	seems like tim hortons is already doing something similar, so it probably can be appilied to the Rowe.	Because it as seen as a bonis not a gvnisheat	will likely be too costly, what if students don't return the cups, B/D are great ideas, more realistic	Money incentives work the best		I think that this would be the simplest	Because more people will be able to save money	Banning disposable containers removes the problem	I think lots of people have travels mugs at homes that they could use or i don't think people would find it inconvenient to buy one.	I think a discount on using beverage containers that are reusable would be the most realistic
using reusable resource id now a popular why to protect environment and it will be easier for student to accept.	I feel like B is the best at this time however, if the infastarture to clean all those reusable cups is available it could be an option.		B/D is good because it incentivizes people to do whats best for environment without being too strict.	Would rather some $ than anything else	It's fine now	This option would be best for the environment and the simplest way	More awareness- Like this survey	Preferred would be discount, encourages students		

Table 1.8 Survey results (Part 9). Data collected by Green is the New Black from Kenneth C. Rowe Management Building, Dalhousie University Halifax, NS, Canada in 2018.

74	75	76	77	78	79	80	81	82	83
22-Mar	22-Mar	22-Mar	22-Mar	23-Mar	23-Mar	23-Mar	23-Mar	23-Mar	23-Mar
X	X	X	X	X	X	X	X	X	X
Arts	Arts	Arts	Arts	Arts	Science	Planning	Management	Arts	FASS
0	1-2	1-2	1-2	0	1-2	0	0	0	0
Yes	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes
>7				>7	1-2	5-6	3-4	>7	3-4
1-2				0	1-2	0	0	1-2	0
	I don't stop to really think about it, but I realize i probably should	I don't drink water on the go, cause im cheap student	Forgetful						Sometimes I simply forget when I am in a rush		
It is extremely high	I think we could label the garbage, compost & recycling better - I feel like there is a lot of confusion about it	I think people don't know how to recycle properly because they do not know what a coffee cups is made of	I think people don't think about it enough	I think a lot of money is being wasted on the purchase of cups	That plastic pollution should be stopped/ decreased in the amount of beverage waste	Excessive	It should be reduced through campus or student-run programs	I don't like how garbages on campus are always filled with disposable cups	lots, especially because coffee cups can't be recycled and most people don't separate lids and paper sleeves
5	4	5	4	4	4	5	5	5	4
No	No	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes
Yes	Yes	Yes	Yes	Yes	No	No	No	No	Yes
I believe it is possible, but will take time	I think if there is enough awareness and people are willing - then possibly	Because students lack the infrastructure for change to be an easy choice and not a chance to plan ahead	We don't need to use paper cups	I think it would be extremely hard to completely get rid of all disposable containers because if people live off campus and need (really want) a coffee and forgot their reusable cup, that kind of sucks. Overtime it could definitely be integrated though	There are many people in the university everyday, the demand of disposable beverage is huge	I don't think its sanitary	There are still pre-packaged beverages like gatorade, milk cartons, etc	I don't think this idea would work at Dal	People will use a better/more sustainable option if it is true-but unsure that they will return the cup to Dal
It is against the status quo	Awareness- people dont think about unless its brought to one's attention	Coffee shops are not required by law to integrate a reusable program at only 1 location	Laziness, people don't like change , people like convenience	Within the Rowe, I think nothing. If we start with the Rowe and their one cafe and it catches on slowly, other Dal shops ca change too. If the Rowe changed and someone forgot their reusable, they can just go somewhere else on campus	It needs propaganda and time to achieve the goal	Convenienc e, habit, values	The ease in getting disposable cups when buying drinks	Places like Tim Hortons, Starbucks, etc	Cost, location, time, the risk people wont drop them off
4	4	3	4	3	4	3	2	3	2
1	3	1	2	2	3	1	1	4	1
3	1	1	1	1	2	5	4	2	4
2	2	2	3	5	1	2	3	5	3
5	5	5	5	4	5	4	5	1	5
B	B	B	C	D	D	B	C	D	B
When people have more of an incentive to do something they will	A discount or implementing a strong on campus program also no one likes additional charges (that another idea)	Because students like to save money at every opportunity	It would cause awareness, make people think about their waste	If there's no opportunity to make more money, people/companies will do it	D is cheap and efficient	It gives incentive to people and many cafes do this already	The school/building has complete control over this and there is no backlash from this	I think it's the most realistic option that would make a change or initiate it atleast	People like discounts! maybe B and D together
	Maybe if we implement a similar system to the grocery store bags- can encourage people to buy reusable products	Encourage better recycling products but does not change the behaviour when saving are not longer available	Impose a tariff on use of non-recyclable cups - Influence people to bring reusable cups/ mugs	Implementing a container program is the most preferable because there is no cost to do it. But a program can increase the general public's idea of cup waste and encourage people to bring their own cups	D. No one cares about a 0.10 cent chage on containers, its easy to achieve the goal.	B. It gives an incentive and encourages people to bring their own mug	I think B is most preferable, as people always want t save money, but it can be hard for all retailers to get on board	I think option D should be applied in our school because I believe it would help decrease and eventually eliminate disposable cups at Dal.	A would be great but would impact sales (I think). C is great in theory, but iffy if it is at all realistic

Table 1.10 Survey results (Part 10). Data collected by Green is the New Black from Kenneth C. Rowe Management Building, Dalhousie University Halifax, NS, Canada in 2018.

84	85	86	87	88	89	90
23-Mar	23-Mar	23-Mar				
X				X		X
	X	x	X		X	X
Management	Management	Management	Managment	Biology	School of Rowe	Management
3-4	1-2	0	5-6	1-2	>7	3-4
No	Yes	Yes	No	Yes	No	Yes
	>7	5-6	N/a	>7	0	1-2
	1-2	0	N/a	>7	0	0
I don't own a travel mug and I also don't like making instant coffee at home before. It's better fresh			I use a reusable bottle for water, but not for coffee. Soap also has polluting effects		Have one in my office, can't always have one walking past the cafe	
I do think it is a big issue, especially how alot of cup waste isn't recycle. I never know which bin to throw it in	Too much unnecessary waste		Recycling is easy to do on campus	We need to be more vigilant in preventing waste	Beverage cups should be recycled	It's horrible we can cut down
4	4	4	2	5	5	5
Yes	Yes	Yes	No	Yes	No	Yes
Yes	Yes	Yes	Yes	Yes	No	No
If students have class in the Rowe then it would be cool if you could bring the mug to class and then return it after class	People can wash their own cups- a service is not needed		As long as it is not mandatory, it is an interesting option	For the most part people are pretty honest. There may be a few people who don't return the cups, but other penalties can be implemented to prevent that. For example, a fee for not bringing back the container back. However, I also think it would work best not to have this at all and just force people to bring their own mugs. Eventually it would just become second nature to bring it.	The overhead in cleaning the cups makes this idea impractical	People wont return them
People being lazy, or people want to take it outside, also theres the risk of theft	Laziness, throughlessness		Practicality	The fact that people might not bring it back	Uptake	People not returning them, people getting over how clean the reusable cups and lids are
4	3	3	5	1	4	3
1	5	1	1	2	2	5
2	3	2	2	3	3	5
3	4	1	3	4	1	1
5	1	5	4	5	5	3
B	D	B	E	A	B	B
Most realistic. Gives consumers an incentive to get their own mug and save money			N/a	People will adapt to this change eventually. It completely fixes the problem. We need to start changing and if that means that a few people won't be able to purchase coffee in the morning for the first couple days because they forgot their mugs, so be it.	An outright ban is too big of a change	Students would get behind it
If students know that they could be paying 0.20 cents less if they have a mug, they would definitely invest in one.			To get compliance it has to be easy. Pricing waste is easier. If it is complicated people will simply go to Tim Hortons next door and the only penalty will be for the Rowe counter.	N/a	Small fee to encourage is a start to changing behaviour	Wil cause students to actually lead change

Table 1.11 Survey results (Part 11). Data collected by Green is the New Black from Kenneth C. Rowe Management Building, Dalhousie University Halifax, NS, Canada in 2018.

91	92	93
X	X	X
Management	Commerce	Science
0	1-2	0
Yes	Yes	Yes
>7	>7	1-2
0	0	0
	I use it for water only	I don't bring it everyday because I sometimes forget to clean it or just forget to grab it before coming to campus
Coffee cup waste is an enormous issue in today's day and age	It can be reduced significantly	Not bad
5	4	4
Yes	Yes	No
Yes	Yes	No
The rowe itself is actually built to be self sustaining and during the construction process used recycled materials to reduce the impact it had on the environment. I feel like the Dean of Management, who is heavily involved in sustainability would also support change.	It is in everyone's best interest	People like having their own things
Biggest issue would be cost. Second would be the problem with students: how are they expected to carry reusable cups everywhere and/or return these cups? What if they decide to throw them out? Then we'd be left with the same problem	Trust and efficiency	People like having their own things
3	4	5
2	4	1
2	3	4
2	3	2
5	2	3
B	B	A
The saving incentive to bring a cup! At the NSLC they have a 0.10 cent charge on each cab and bottle that goes out the door which is used to offset the impact. However the discount would have to be larger, closer to a dollar or more to really push students to use their own cups.	N/a	Easiest to implement if not the most effective solution
A discount would work. As students studying the art of business I would say that a discount would be most effective!	N/a	The price incentives are easier to implement than and less onerous on those affected by the change. It requires much more work to set up the reusable container program compared to charging more or less for drinks depending on the container used. Also banning disposable containers seems like a huge hassle. It would certainly cut down on waste more than the other options but it would also inconvenience a large number of people.

Table 2 Coding box. Data collected by Green is the New Black from Kenneth C. Rowe Management Building, Dalhousie University Halifax, NS, Canada in 2018.

Coding Boxes		
Student		A
Staff		B
Faculty		
	A	Arts
	B	Management,Public administration , Business, Commerce, Economics
	C	Computer Science
	E	Engineering
	M	Medicine,Nursing
	P	Community Design
	S	Science, Sustainability, Environmental Science
Times Per Week purchase drinks in the Rowe	1	0
	2	1-2
	3	3-4
	4	5-6
	5	>7
Bring a reusable water or mug	Y	Yes
	N	No
How many time per week do you bring a reusable water or mug	1	0
	2	1-2
	3	3-4
	4	5-6
	5	>7
How many time per week do you use a reusable water or mug to purchase drinks at the Rowe	1	0
	2	1-2
	3	3-4
	4	5-6
	5	>7
"No" to Question 4, what is preventing you from using or bringing a reusable container every day?	A	Not enough time
	B	Cleaning the Cup and Mug Issue
	C	To much of a hassle to carry around
	D	Don't think about it, just buy
	E	Easy to buy instead of bringing
	F	No Answer
How do you feel about/ what do you think about beverage waste on campus?	A	There is to much disposable cup waste on campus
	B	Something needs to be done to eliminate the pollution
	C	Don't think about it
	D	Something needs to be done to encourage student to use Reusable Bottles/Mugs
	E	Unformed opinion
	F	Not a big deal
How much do you agree that there needs to be a change in disposable beverage waste production in the Rowe building?	1	Strongly Disagree
	2	Disagree
	3	Neutral
	4	Agree
	5	Strongly Agree
Would you support a ban on disposable cups in the Rowe?	Y	Yes
	N	No
Do you think it is possible to integrate or completely replace disposable beverage containers with a reusable container program at Dal	Y	Yes
	N	No
Why?	A	Difficult to replace disposable containers
	B	Unreasonable
	C	Reasonable
	D	Cups will not be returned back
	E	Slowly to integrate and implement, hesitant
	F	More realistic if students and staff bring their own
	G	No need
What do you think are barriers to integrating a reusable container program in the Rowe?	A	It will not be returned back
	B	There will need to place for the cups to be returned after closing hours
	C	More Timely & Costly
	D	Lack of acceptance (willingness to change) & awareness
	E	Hygiene
	F	Other
Which option would you prefer in the Rowe (rank 1-5, 1 being most preferable, 5 being least preferable)		
	A	Complete ban on disposable beverage containers
	B	$0.20 discount on beverages if using a travel mug
	C	Implementing a reusable container program on campus
	D	$0.10 charge on disposable beverage containers to support recycling programs
	E	No change to the current system
Which option do you think is more realistic? (circle: A B C D E)		
Why?	A	Creating a price incentive is more realistic
	B	No change is needed
	C	Support discount and awards
	D	Change is required but do not support
	E	Awareness
	F	Indifferent
	G	Inconvenience
	H	Easy program implementation
Please explain why you think one of these options is most preferable. If none of the options mentioned in Question 12 are preferred, please provide any other ideas you have that could be implemented to reduce disposable cup waste in the Rowe building.	A	
	B	

Table 3.1 Coding results (Part 1). Data collected by Green is the New Black from Kenneth C. Rowe Management Building, Dalhousie University Halifax, NS, Canada in 2018.

#	Respondents	Faculty	Times Per Week purchase drinks in the Rowe	Bring a reusable water or mug	How many time per week do you bring a reusable water or mug	How many time per week do you use a reusable water or mug to purchase drinks at the Rowe	"No" to Question 4, what is preventing you from using or bringing a reusable container every day?	How do you feel about/ what do you think about beverage waste on campus?	How much do you agree that there needs to be a change in disposable beverage waste production in the Rowe building?	Would you support a ban on disposable cups in the Rowe?	Do you think it is possible to integrate or completely replace disposable beverage containers with a reusable container program at Dal	Why?
1	A	B	2	Y	5	1	-	A	5	Y	N	D
2	A	B	4	N	1	1	A	D	3	Y	Y	-
3	A	B	3	N	1	1	C	D	4	Y	Y	G
4	A	B	1	Y	4	1	-	A	5	-	-	-
5	A	S	2	N	1	1	D	C	3	Y	Y	E
6	A	B	1	Y	4	1	-	A	5	N	Y	C
7	B	B	1	Y	4	1	-	C	4	Y	Y	C
8	A	B	2	Y	2	2	-	D	5	Y	N	F
9	B	B	2	Y	5	1	B	A	4	N	Y	C
10	A	B	3	Y	5	1	B	A	3	Y	Y	C
11	A	S	2	Y	4	3	A	B	5	Y	Y	E
12	A	S	1	Y	5	1	-	A	5	Y	N	A
13	A	A	1	Y	4	1	-	D	5	Y	N	D
14	A	S	1	Y	5	1	-	B	3	Y	Y	C
15	A	S	1	Y	4	1	-	E	3	N	N	E
16	A	S	1	Y	3	1	-	B	3	Y	Y	A
17	A	S	1	Y	3	1	C	B	2	Y	N	A
18	A	A	1	Y	5	1	-	A	5	Y	Y	C
19	A	S	1	Y	5	1	F	F	4	Y	N	-
20	A	E	1	Y	4	2	-	A	4	Y	N	B
21	A	B	2	Y	3	2	-	A	5	Y	Y	A
22	A	A	1	Y	5	1	-	A	3	N	N	B
23	A	B	2	Y	3	2	-	B	5	Y	N	D
24	A	B	2	Y	4	1	-	B	4	N	Y	B
25	A	B	3	Y	4	1	-	A	4	N	Y	C
26	A	B	3	Y	4	4	-	F	2	N	N	E
27	A	A	1	Y	5	1	-	B	5	Y	N	E
28	A	M	1	y	5	1	-	-	4	y	Y	-
29	A	S	2	Y	4	2	-	A	5	Y	Y	C
30	A	B	1	N	-	-	F	B	3	Y	Y	C
31	A	B	3	N	-	-	A	C	3	N	N	-
32	A	B	2	Y	2	2	-	F	4	Y	Y	C
33	A	B	1	Y	3	2	-	A	4	N	N	A
34	B	B	1	N	1	1	F	E	3	N	N	B
35	B	B	3	Y	3	2	-	F	4	Y	N	A
36	A	B	1	Y	4	1	-	C	3	Y	-	D
37	A	B	1	N	2	1	E	-	4	N	Y	C
38	A	C	1	Y	4	4	-	B	3	Y	Y	C
39	B	B	2	N	1	1	-	F	4	Y	Y	-
40	A	B	1	Y	3	1	A	F	3	Y	N	E
41	A	B	2	N	4	1	C	C	3	N	Y	-
42	A	B	2	N	-	-	C	F	3	Y	N	E
43	A	A	2	Y	2	1	-	B	4	Y	Y	C
44	A	B	4	Y	5	1	-	B	5	Y	Y	C
45	A	B	2	Y	5	5	-	A	5	Y	Y	C
46	A	B	5	N	-	-	E	-	3	Y	Y	-
47	A	B	2	N	1	1	C	A	3	Y	N	-
48	A	B	2	Y	4	4	-	F	4	N	Y	C
49	A	B	2	Y	4	1	E	B	4	Y	N	-
50	A	B	2	Y	3	1	-	C	3	N	Y	-
51	A	B	2	Y	4	2	-	E	4	Y	N	E
52	A	B	3	N	1	1	F	E	3	Y	Y	C
53	A	B	3	Y	3	1	-	-	4	Y	N	E
54	A	B	2	Y	2	1	-	C	3	N	Y	C
55	A	B	1	Y	3	4	-	F	3	N	N	-
56	A	B	2	Y	4	4	-	F	5	Y	Y	C
57	A	B	2	Y	4	4	-	B	5	Y	Y	-
58	A	B	2	Y	5	1	-	A	5	N	N	E
59	A	S	5	N	-	-	C	-	3	Y	Y	C
60	A	A	3	N	-	-	C	A	4	Y	Y	C
61	A	S	3	N	-	-	-	-	3	Y	N	B
62	A	S	3	N	2	2	-	A	4	Y	N	B
63	A	S	2	N	-	-	E	A	3	N	N	E
64	A	S	1	Y	5	1	-	A	5	Y	Y	E
65	A	B	1	Y	4	1	-	E	4	Y	N	B
66	A	B	2	Y	2	1	-	B	4	N	Y	E
67	A	B	2	Y	3	1	-	A	4	N	N	E
68	A	B	1	Y	1	3	-	C	3	N	N	-
69	A	S	1	Y	3	1	-	D	5	Y	Y	C
70	A	S	1	Y	4	1	-	A	4	Y	Y	C
71	A	A	1	Y	3	1	-	A	5	y	N	D
72	A	A	1	Y	4	1	-	A	5	Y	N	D
73	A	A	2	Y	5	1	D	A	5	Y	Y	C
74	A	A	1	Y	5	2	-	A	5	N	Y	E
75	A	A	2	N	-	-	D	D	4	N	Y	C
76	A	A	2	N	-	-	F	D	5	Y	Y	E
77	A	A	2	N	-	-	A	D	4	Y	Y	G
78	A	A	1	Y	5	0	-	D	4	Y	Y	E
79	A	S	2	Y	2	2	-	B	4	N	N	A
80	A	P	1	Y	4	1	-	A	5	Y	N	B
81	A	B	1	Y	3	1	A	D	5	Y	N	A
82	A	A	1	Y	5	2	-	A	5	Y	N	B
83	A	A	1	Y	3	1	-	A	4	Y	Y	D
84	A	B	3	N	-	-	B	A	4	Y	Y	C
85	B	B	2	Y	5	2	-	A	4	Y	Y	F
86	B	B	1	Y	4	1	-	-	4	Y	Y	-
87	B	B	4	N	-	-	B	F	2	N	Y	C
88	A	S	2	Y	5	5	-	B	5	Y	Y	E
89	A	B	5	N	1	1	C	A	5	N	N	B
90	B	B	3	Y	2	1	-	B	5	Y	N	D
91	B	B	1	Y	5	1	-	A	5	Y	Y	C
92	B	B	2	Y	5	1	F	B	4	Y	Y	C
93	A	S	1	Y	2	1	A	F	4	N	N	F

Table 3.2 Coding results (Part 2). Data collected by Green is the New Black from Kenneth C. Rowe Management Building, Dalhousie University Halifax, NS, Canada in 2018.

What do you think are barriers to integrating a reusable container program in the Rowe?	Which option would you prefer in the Rowe (rank 1-5, 1 being most preferable, 5 being least preferable)	A) complete ban on disposable beverage containers ___	B) $0.20 discount on beverages if using a travel mug ___	C) Implementing a reusable container program on campus (as mentioned above) ___	D) $0.10 charge on disposable beverage containers to support recycling programs __	E) No change to the current system ___	Which option do you think is more realistic? (circle: A B C D E)	Why?	Please explain why you think one of these options is most preferable. If none of the options mentioned in Question 12 are preferred, please provide any other ideas you have that could be implemented to reduce disposable cup waste in the Rowe building.
A		4	1	3	3	5	B	B	
-		3	5	3	5	1	B	C	-
B		2	1	3	4	5	C	D	
-		-	-	-	-	-	-	-	-
A		5	5	1	2	3	B	A	***
E		3	4	1	2	5	D	E	
C		5	2	1	3	4	C	C	
D		4	1	2	5	5	B	A	
C		3	1	2	5	5		C	
C		2	3	1	4	5	C	A	***
D		-	X	X	-	-	B	C	
E		3	4	5	2	5	B	C	
A		-	X	-	-	-	B	C	-
C		4	1	2	3	5	D	G	
E		5	1	4	2	3	D	B	-
D		4	4	3	3	1	B	H	
C		5	1	3	2	4	B	C	-
D		1	3	2	3	4	E	G	
E		5	4	2	3	1	E	D	
E		4	3	1	5	2	C	D	***
E		4	1	3	2	5	B	G	
D		5	1	3	4	2	B	A	
C		3	1	4	2	5	B	C	-
F		5	1	3	4	2	B	F	
-		5	1	2	4	3	A	C	
E		5	1	4	3	2	B	C	-
E		1	2	3	4	5	D	E	
D		4	1	2	3	5	B	G	-
D		1	2	3	4	5	B	G	
-		4	1	2	3	5	B	C	-
D		5	1	4	3	2	B	A	
-		4	3	1	2	5	C	-	
D		-	-	X	-	X	C	E	
F		5	1	3	4	2	B	A	
D		5	1	3	2	4	B	A	-
F		-	X	-	X	-		A	-
D		5	1	2	3	4	B	A	***
D		4	1	2	3	5	B	A	
-		5	4	3	2	1	B	C	
E		5	3	4	1	2	E	G	
B		5	5	3	5	1	E	D	-
F		3	3	3	3	4	E	G	
D		1	4	2	3	5	A	H	-
F		1	1	1	1	5	B	A	-
-		3	2	4	1	5	A	H	-
-		1	4	3	2	5	D	C	-
-		2	2	4	1	5	D	-	-
D		5	3	1	2	4	E	B	***
D		1	3	2	4	5	B	B	
D		5	2	1	3	4	B	-	***
F		4	1	2	3	5	C	H	
D		5	2	4	3	1	B	C	***
-		-	-	-	X	-	D	C	-
D		-	X	-	-	-	B	C	-
-		3	2	3	4	2	-	-	-
F		2	1	3	4	5	B	-	
-		2	1	3	4	5	B	-	
D		5	1	3	4	2	B	A	
F		4	1	3	2	5	B	C	
F		4	1	3	2	5	B	C	
C		2	1	4	3	5	A	D	
C		3	1	4	2	5	B	A	***
F		3	2	1	4	5	C	H	
F		5	4	3	2	1	B	A	
F		4	5	2	5	1	B	A	-
D		4	1	3	2	5	C	A	
C		5	1	4	3	2	B	A	
C		-	-	-	-	X	E	-	***
D		1	3	2	4	5	A	H	
D		3	1	2	3	4	B	C	*** (APPRECRIATION)
A		1	2	4	3	5	A	H	
A		1	1	3	2	5	A	H	-
A		2	1	2	3	4	B	A	-
D		4	1	3	2	5	B	A	-
D		4	3	1	2	5	B	A	
F		3	1	1	2	5	B	C	
F		4	2	1	3	5	C	E	
D		3	2	1	5	4	D	G	***
F		4	3	2	1	5	D	A	
D		3	1	5	2	4	B	A	
D		2	1	4	3	5	C	H	
C		3	4	2	5	1	D	A	
F		2	1	4	3	5	B	A	***
C		4	1	2	3	5	B	A	
A		3	5	3	4	1	D	-	-
-		3	1	2	1	5	B	-	-
C		5	1	2	3	4	E	-	***
A		1	2	3	4	5	A	H	
D		4	2	3	1	5	B	G	
E		3	5	5	1	3	B	G	
C		3	2	2	2	5	B	A	
D		4	4	3	3	2	B	-	
D		5	1	4	2	3	A	H	