

# Continued Work: Reducing Single-Use Waste in HBS Dining Halls

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## **Background and previous work**

As our focus for this year, we set out to continue the work conducted by the last Student Sustainability Associates (SSAs) cohort around reducing waste in the on-campus dining halls. Last year, the SSAs focused on collecting data and information on the current usage of to-go containers at Spangler, discovering that more than 50% of Spangler meals are served in single-use to-go containers (totaling more than 160,000 containers/year). However, most meals served in those to-go containers were then consumed within the dining halls. This indicated that there is a huge opportunity to reduce our environmental impact by encouraging individuals to use reusable dishware instead.

In addition to analyzing customer dining behavior, the SSAs conducted a survey polling students on their willingness to pay a small price premium to use a to-go container (up to \$0.50 per container). They found most respondents consider that price premium to be fair. However, this survey was only conducted with students and did not include faculty, staff, or individuals at the Chao dining hall.

## **Initial talks with Restaurant Associates and final project plan**

Our team met with the Restaurant Associates (RA) team to discuss these findings and identify our next steps to reduce dining hall waste. Given the risk of frustrating or confusing customers, RA encouraged us to pursue educational and operational levers prior to implementing a price premium trial.

Over the course of the year, we expanded the customer survey to validate our findings, met with the dining hall staff at both Spangler and Chao to reinforce best practices, and increased our educational efforts through new marketing materials and tabling efforts.

## **Behavioral survey**

To expand and validate the findings gathered on the 2023 survey, we rolled out a new form, this time primarily targeting staff, while creating the opportunity for data collection from

faculty and students as well. The results not only reinforced what was known for the student body, but also extended the results to the other groups. Some of the main results include:

- 74% of students and 60% of staff admit to eating out of to-go containers while inside Spangler
- 57% of students and 53% of staff consider it fair to pay an extra cost of \$0.25 for to-go containers
- 63% of students and 48% of staff said they would decrease their usage of to-go containers if there were an additional fee

This data reinforced our hypothesis that there was significant room for changing behavior around waste in the dining halls. We then proceeded to roll out key initiatives with the goal of nudging some best practices and curbing excessive to-go containers usage.

### **Pre-meal, tabling and educational efforts**

Our first main efforts were to engage the RA team at both Spangler (MBA dining hall) and Chao (Executive Education dining hall) on the project and our objectives during their pre-meal meetings. The conversations were extremely productive, as the RA was very engaged and posed several suggestions and challenges faced on the day-to-day operations. A direct outcome of these meetings was the adoption of new educational materials used in the onboarding of Executive Education students, focused on generating awareness of compostable items and the preference for reusable dishware instead of single-usage containers. In addition to that, RA pointed to the usefulness of more frequent touchpoints with the SSAs to keep an open dialogue on improvement ideas.

After the pre-meal sessions, we went on to engage the public in the Spangler dining area. Before Spring Break, we set up a table at the main dining hall with banners and marketing materials with call-to-actions of our project. Several students and staff members approached us to learn more about the work, and we listened to their comments on the main drivers for their behavior. Among some of the key insights was the fact that the major hurdles to using reusable dishware remain students' desires to keep optionality in where they sit and to shake their salads. It also became clear that more frequent tabling or reminders could help nudge students towards more sustainable behaviors.

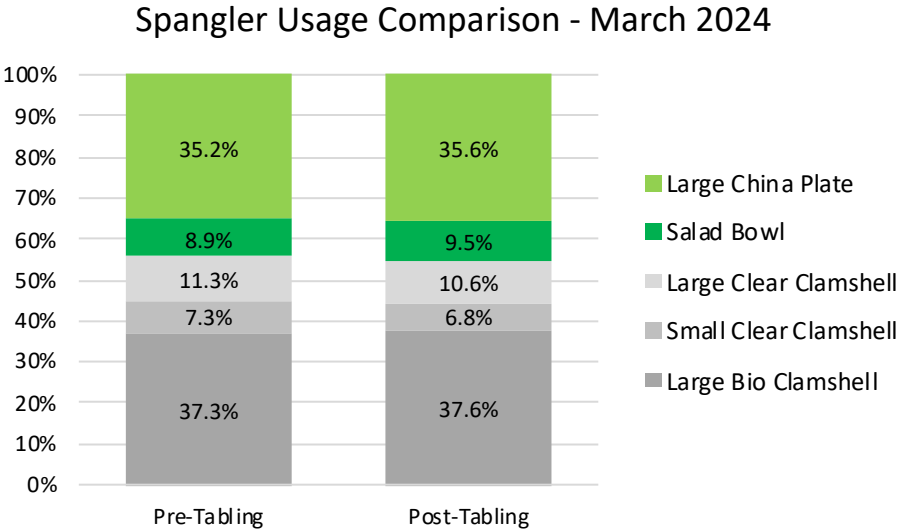
To complement our educational efforts, we worked with RA to have some new signage put in place across key locations at Spangler. On the main dining hall and The Grille, we added stand-up banners with messages that promote the usage of reusable dishware, as well as indicate the waste generated by to-go containers. We also invested in increasing awareness

around drop-off spots at Spangler Cafe, to encourage students to take reusable dishware even if they will be eating outside of the main dining area.

### Project Impact

Following our comprehensive roll out of operational activities and educational materials in March, we gathered data from RA’s point of sale (POS) system to examine the impact of our project. Usage data and breakdown from 2 20-day periods of 12-Feb to 2-Mar and 11-Mar to 30-Mar were collected, representing before and after the project, respectively.

The chart below summarizes the comparison of usage percentage data on different types of containers across the 2 periods. Percentage format was used instead of absolute numbers, as the latter was impacted by the week of Spring Break.



As shown by the chart, where green-colored bars represent the reusable containers and the gray-colored bars represent the single-use containers, a marginal 1 percentage point increase in reusable containers was observed, which involved Large China Plates substituting the Large Clear Clamshells in people’s usage. However, it is possible that a greater increase in reusable containers happened, as the POS system only includes data from weighted items and is not able to track and capture usage data from action stations.

This result highlights the need for continued efforts in behavioral change. Despite some encouraging trends, the marginal nature of the improvement underscores the necessity for further measures to foster sustainable habits among both staff and students. This indicates an opportunity for enhanced education and engagement strategies to drive more substantial and lasting impacts.

### **What's next?**

Building on the momentum gained from our project this year, we are well poised to take even bolder strides towards single-use waste reductions next year. Here are a few next steps that we came out with:

**Engaging Students and Staff:** One of the primary avenues for future action involves engaging both students and staff through creative and compelling initiatives. Leveraging newsletters and social media platforms can serve as powerful tools to raise awareness and foster a culture of sustainability within the community. This should include making it visually clear in the materials what the best choice is and why, using facts such as the water used to wash reusables is less impactful than the waste from compostable single-use items.

By showcasing the environmental benefits of reusable containers and highlighting the importance of responsible consumption, these initiatives can spark meaningful conversations and inspire collective action.

**Testing Price-Premium/Discount Trials:** Exploring price-premium/discount trials at select stations presents another potential opportunity to incentivize sustainable behavior. We can encourage individuals to make environmentally conscious choices while simultaneously evaluating the effectiveness of such incentives before rolling the trials out to all stations in HBS dining halls. According to the student and staff survey earlier and coupled with continuing to leverage behavioral nudges to influence diners, a 50-60% reduction can potentially be expected in the long-term.

**Expanding Drop-Off Points:** Expanding drop-off points for dishware, both within Aldrich and student dormitories, presents a practical solution to enhance convenience and accessibility. By strategically locating these points in high-traffic areas, we can create additional

optionality for students and staff on the return process and encourage greater usage of reusables.

While embarking on these next steps, it's essential to address key considerations and overcome potential constraints. Ensuring that students and staff are well-informed about pricing premiums and new drop-off points is paramount to fostering participation and engagement. Additionally, the development of new or refreshed educational materials will be crucial in maintaining momentum and sustaining long-term behavioral change. Lastly, rolling out reusable to-go containers in the HBS dining halls in the longer term can further help push down the single-use waste.

Reducing single-use waste and driving sustainability at HBS dining halls requires long-term sustained efforts from the community. We are excited to continue actively engage with the next classes of SSAs and work closely with the HBS Sustainability Office and the Restaurant Associates to push through further trials and initiatives.