Brewing Change: Transforming the Disposable Coffee Culture – an LSE Campus Case Study

Nicole Ivanova

Cirinne Rechsteiner

Upasana Sharma

Leonhard von Andrian

London School of Economics and Political Science (LSE)

PB403 Psychology of Economic Life

Summative Coursework March 2024

Course convenors: Dr. Fred Basso & Prof. Saadi Lahlou

Other teachers: Dr. Maxi Heitmayer

Table of Contents

Table of Figures

1 Background

Every morning, the ritual hums: the aroma of freshly brewed coffee, the anticipation of a warm sip, and the inevitable crinkle of a disposable cup. But behind this daily convenience lies a hidden cost – a mountain of plastic waste threatening our planet. A report from the UK's House of Commons Environmental Audit Committee (2018) found that 2.5 billion coffee cups are used and thrown away each year in the UK – enough to stretch around the world roughly five and a half times. The plastic lining on these cups can take up to 30 years to break down. Yet, in the UK only 1 in 400 is recycled and 7 million coffee cups a day end up as landfill waste. Furthermore, 20 million trees are cut down for single-use cup production and 3.7 billion pounds of waste is produced during their manufacturing stage alone. This plastic deluge is not just an aesthetic eyesore; it is a critical threat to our environment. An estimated 1.3 billion tonnes of plastic are destined for our environment – both on land and in the ocean – by 2040 unless worldwide action is taken. (Lau et al., 2020). This plastic breaks down into microplastics, contaminating our oceans, harming marine life, and potentially entering our food chain. The consequences are dire, impacting ecosystems, economies, and our health.

This is where the circular economy, a model that aims to eliminate waste and pollution, offers a beacon of hope. It prioritises designing products for reuse and recyclability, extending their lifespan and minimising dependence on virgin materials (Schroeder et al., 2019). It is imperative to acknowledge that mitigating the challenge of plastic waste generation necessitates a multifaceted approach. While the adverse environmental impacts and carbon footprint associated with plastic production are commonly emphasised, equal scrutiny must be directed toward consumption dynamics. Both facets of production and consumption exert considerable influence on the perpetuation of this issue. It is imperative to acknowledge that mitigating the challenge of plastic waste generation necessitates a multifaceted approach.

Customers often prioritise convenience, and reusable cups can seem cumbersome compared to the grab-and-go disposable option. Herein lies the crucial issue of customer inconvenience. Research found that despite of 69% of Britons owning reusable cups, only 1 in 6 remember to use them every time they buy a hot drink and hence often grab takeaway drinks (Grab Your Cup, 2020). Furthermore, half of the adults polled found it more convenient to use general bins than to find a suitable recycling point, leading to nearly 2 billion cups ending up in landfills (World Coffee Portal, 2023). This essay delves into the issue of how reusable coffee cups can offer a sustainable solution to plastic pollution while addressing customer inconvenience.

2 Introduction

Over the years, the single-use plastic cup has become a symbol of failed individual sustainability, boasting a constant presence in sustainability discussions and strategies of various entities. Accordingly, the London School of Economics and Political Science (LSE) also dedicates itself to circularity in coffee consumption as part of its sustainability agenda and invests in the recyclability of single-use cups and efforts to persuade consumers on campus to bring reusable cups. However, a brief observation of consumption behaviour in cafeterias and a consideration of the number of coffee cups that are incorrectly disposed of shows that progress is limited. Therefore, even though the coffee cup debate may seem 'old and worn out' through the vast amount of literature produced (e.g., Nicolau et al., 2022; Novoradovskaya et al., 2020; Lofthouse & Lilley, 2019; Poortinga & Whitaker, 2018), the unsustainability of the still predominantly used single-use coffee cups as well as the ineffectiveness of previously presented solutions to transition to a more circular coffee cup culture keeps the relevance of the issue alive.

In the last decade, for-profit companies like ClubZero, ReCup, or Kooky, which offer an intelligent service system to enable a sharing economy, have emerged. The LSE has examined these service systems but opted not to pursue them, primarily due to concerns that students may not fully endorse the new system. Thus, in addition to the significant negative environmental impact of single-use coffee cups, current proposed solutions also seem to inherently demonstrate a form of process-induced unsustainability. There currently is a lack of understanding of how consumers and producers can interact within the scope of the LSE campus to drive systemic change. Rabiu and Jaeger-Erben (2024) argue that adopting a transition away from single-use plastic products is primarily hindered by limited availability and convenience. Following this finding and the principles of User-Centered Design (UCD) aimed at improving the ease of use of a product or service (Abras et al., 2004), this essay aims to combine both a system of provision as well as a consumption-related perspective to elucidate the complexities involved in fostering a shift in coffee cup culture on campus – and hopefully beyond. Specifically, it dedicates itself to the following research question: *How can we leverage the usage of reusable coffee cups on the LSE campus considering customer convenience?*

The methodology employed to address this research question is rooted in the conviction that highly intricate systemic challenges, involving human behaviour at specific micro-level action points, warrant a process of decomposition, analysis within the specific context of interest, and a subsequent translation to the macro or even meta-level. This essay undertakes this approach by initially presenting a case outline, delineating the status quo efforts at LSE, presenting the rationale behind the inadequacies of current initiatives, and exploring potential market-driven solutions. Subsequently, an in-depth analysis is conducted on the Beveridge Café on the LSE campus as a case study, structured around the methodologies of a stakeholder analysis, including some forms of qualitative research,

to understand the system of provision. Furthermore, we apply *activity theory* (Lahlou, 2017) to analyse consumer behaviour, which culminates in our solution proposal informed by *installation theory* (Lahlou, 2017), combining the provision- and consumption-driven angles. Finally, we draw our conclusion and discuss the limitations inherent in the presented case study.

3 Case Outline

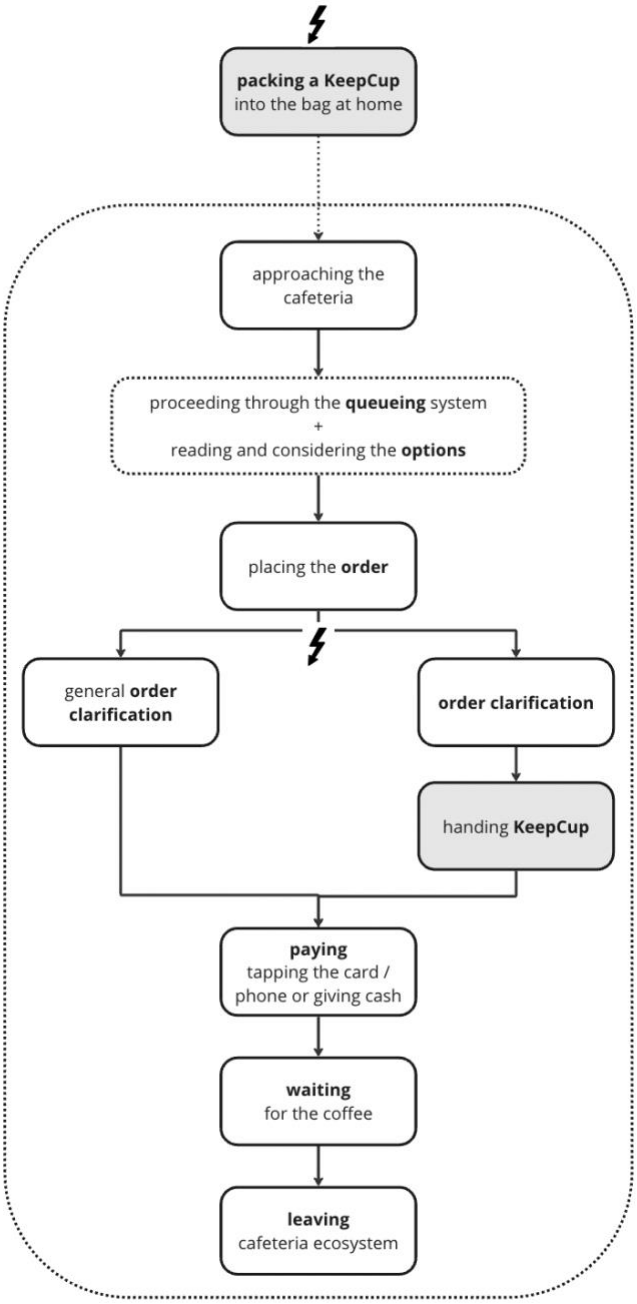


Figure 1: An activity theory visualisation of getting a coffee at the Beveridge Café

In this section, we will assess reusable coffee cup adoption at LSE, identifying consumer barriers from relevant literature. Furthermore, we will introduce existing best practices that inform our analysis.

3.1 Status Quo at LSE

There are eleven coffee shops on the LSE campus that are operated by the same provider, LSE Catering. The coffee shops offer the same coffee menu and the purchasing process is very similar. Mapping the customer journey at the Beveridge Café based on *activity theory* (Lahlou, 2017), leads to a trajectory as depicted in Figure 1.

The customers receive their coffee in a single-use cup by default. All cafeterias also offer customers to have their coffee filled in their own reusable cups (KeepCup). Most coffee shops offer KeepCups for purchase as well and customers receive a £0.25 discount on every coffee they consume with their KeepCup. Therefore, the KeepCups, their advantages, and the price reduction are advertised in the respective cafeterias (as well as at various places across campus). Despite LSEs efforts, the staff reports that less than 10% of the customers use a KeepCup.

3.2 Consumer Psychology: The Importance of Convenience

In today's fast-paced society, the transition to reusable coffee cups encounters several significant hurdles, making it inconvenient for consumers to embrace sustainable practices. Firstly, ingrained within our culture is a disposable mentality, where convenience often trumps environmental consciousness (Gammon, 2019). Coffee cups represent this single-use culture, encouraging consumers to discard them without consideration for recycling. Secondly, the practicality of reusable cups is hindered by their portability and weight. Unlike their lightweight, compact single-use alternatives, reusable cups are bulkier and heavier, posing challenges for on-the-go consumers who prioritise convenience. Additionally, the cleaning and maintenance required for reusable cups present another barrier. Many consumers find the process cumbersome, especially when they must clean their cups on the move, perceiving it as time-consuming and inconvenient (Allison et al., 2021). Lastly, the shift to reusable cups demands a change in behaviour, making it easy for consumers to forget or misplace their cups when leaving home (Herweyers, et al., 2024). This forgetfulness further discourages consistent usage, hindering the widespread adoption of reusable coffee cups despite their environmental benefits.

3.3 Marketplace Solutions

There is a variety of solutions in place to address plastic pollution from single-use coffee cups, that can be clustered into four best practices (see Figure 2). Number one and two are already implemented on the LSE campus. In number one, customers are encouraged to bring their own KeepCups to reduce single-use cup consumption. In two, shops offer KeepCups for purchase to customers who do not own one yet. Number three describes coffee shops lending out reusable cups against a deposit (ReturnCups), refundable upon the cup's return to any participating outlet. And number four is similar to three but offers the added convenience of cup returns via designated bins. Customers need to scan their cup to link it to a pre-registered account. Either through the bin itself, or later in the cleaning process, the cups are scanned, and the deposit is returned to the respective customer accounts.

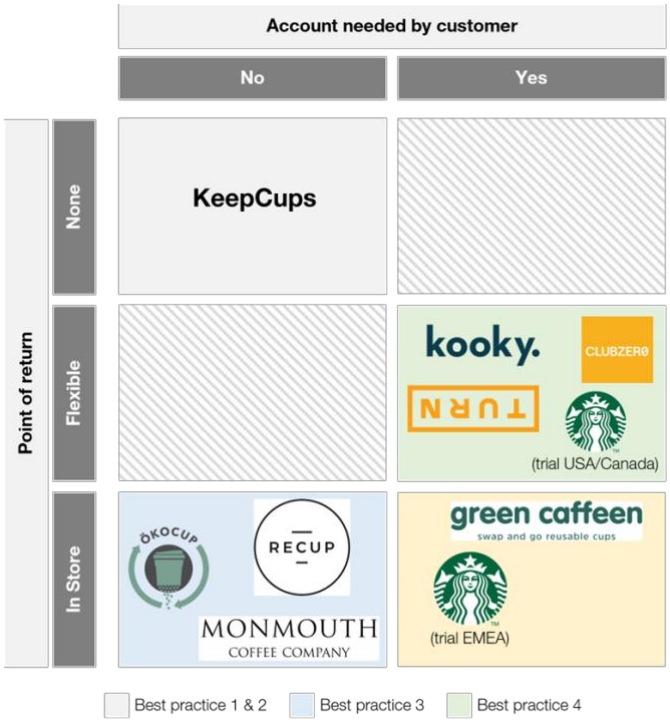


Figure 2: Marketplace solutions offer four best practices

Mostly, these practices are optional alternatives to single-use cups, with incentives like price reductions and educational promotions on the benefits of reusable cups, particularly in reducing microplastic pollution. However, these best practices do not address the consumers' wish for convenience well enough and therefore are only adopted by a minority of customers (Sidhu et al., 2018). In the following case study, we will showcase at which stages the customer journey for reusable cups deviates, becoming less convenient than single-use cups.

4 Case Analysis

Our examination thus far has shown that the reusable cup system currently pursued by LSE does not effectively address the issue of single-use coffee cups. The prevailing unsustainability largely stems from the system's lack of convenience. Before developing interventions to enhance the existing infrastructure or integrate ready-to-use market solutions, it is crucial to understand LSE's unique context. Therefore, this chapter is dedicated to conducting a case analysis to identify specific intervention opportunities. Firstly, we will examine consumer behaviour at the Beveridge Café using an activity theory framework (Lahlou, 2017), analysing and comparing the distinct scenarios: (1) the prevalent use of convenient single-use cups, (2) the current, less convenient KeepCup system, and (3) the potential adoption of a ReturnCup system. Following this, a stakeholder analysis will be conducted to assess feasibility. The output of these steps of analysis will then serve as a roadmap for the subsequent intervention development phase.

4.1 A Circular and Comparative Activity Theory

When following the simplified version of activity theory, as presented by Lahlou (2017), it becomes apparent that this entails a linear portrayal of behaviour. This may adequately depict the course of action in many cases. However, since the case study at hand aims to foster a circular economy, it lacks completeness. As one extends the observation of consumer behaviour beyond their engagement within the cafeteria ecosystem, it becomes apparent that additional significant behaviours in connection to achieving a circular economy of plastic use emerge. Circular economy frameworks prioritise the end-of-life phase of materials, aiming to effectively close the loop of material flow and mitigate disposal (Alamerew et al., 2019). To comprehensively consider and analyse these behaviours by tracing a product through its lifecycle, we adapted the activity theory for application to the Beveridge Café at the LSE campus (Figure 3). This adaptation involves delineating the lifecycle into distinct phases, namely the *retail and usage phase*, alongside the *end-of-life phase*.

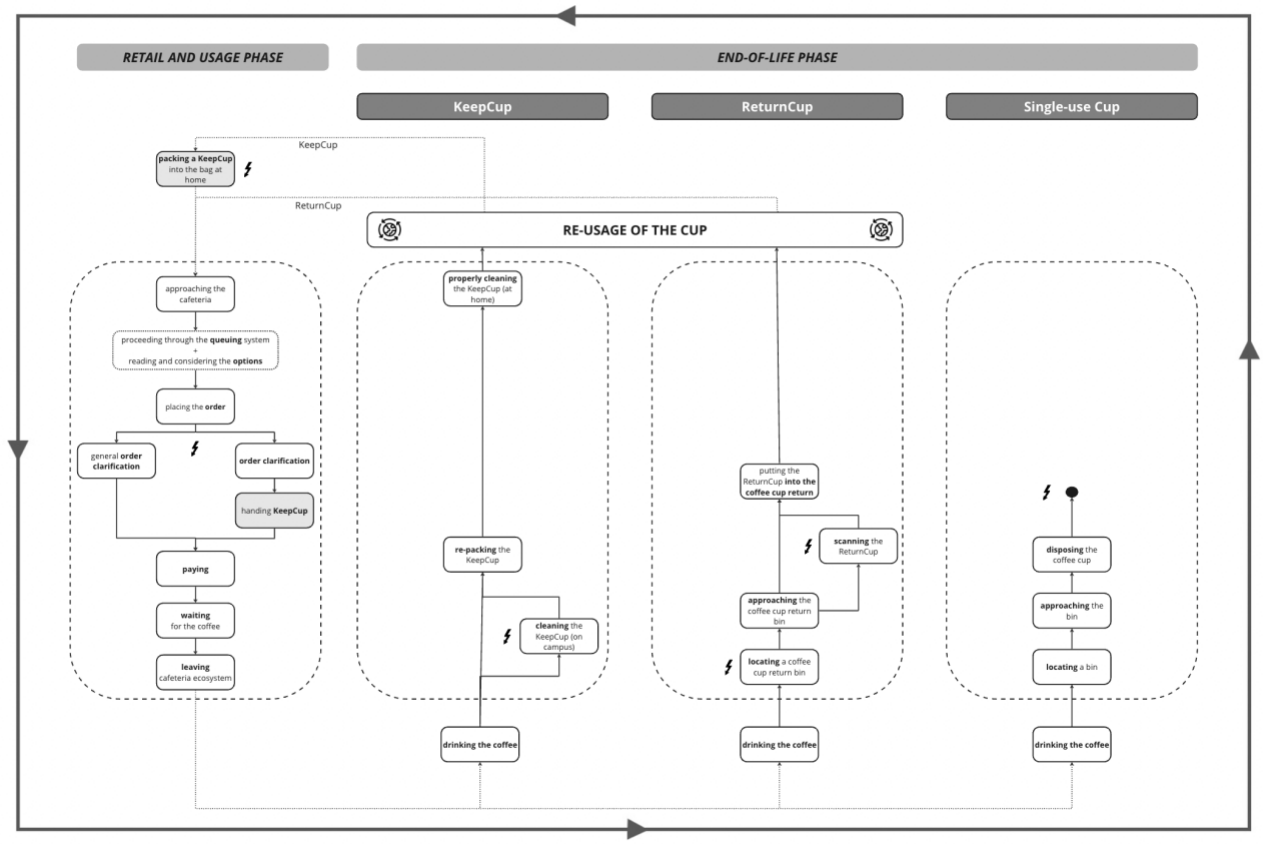


Figure 3: A circular activity theory

As the current default procedure involves providing single-use cups, it represents the most convenient option. Conversely, both the KeepCup and ReturnCup scenarios represent deviations from this standard approach, inherently introducing certain inconveniences.

Consumer behaviour along the KeepCup trajectory operates under the assumption that the customer both owns a KeepCup (general availability) and remembers to bring it to campus (in-case availability). Consequently, the primary availability challenge arises at home, while the main inconvenience manifests in the necessity of carrying the KeepCup throughout the day. Furthermore, when entering the *end-of-life phase*, considerations arise regarding the method of cleaning before returning it to the consumer's bag.

In a ReturnCup scenario on campus, the availability obstacle can be effectively addressed by switching the default from offering single-use cups to reusable ReturnCups. However, the design of the *end-of-life phase* again plays a critical role in determining overall convenience. Challenges such as locating the return bin when not strategically positioned or the additional effort required to interact with a mobile phone application for cup scanning can arise, impacting the user experience significantly.

We can conclude that these obstacles need to be addressed to create convenient modifications to the installation for more sustainable behaviour.

4.2 Stakeholder Analysis

While the consumer is at the center of our research question, the interests of various other stakeholders are relevant in developing sustainable interventions suited for the LSE campus. Figure 4 displays the decision-makers, key players, and further interest groups, categorised based on their significance in driving change[1].

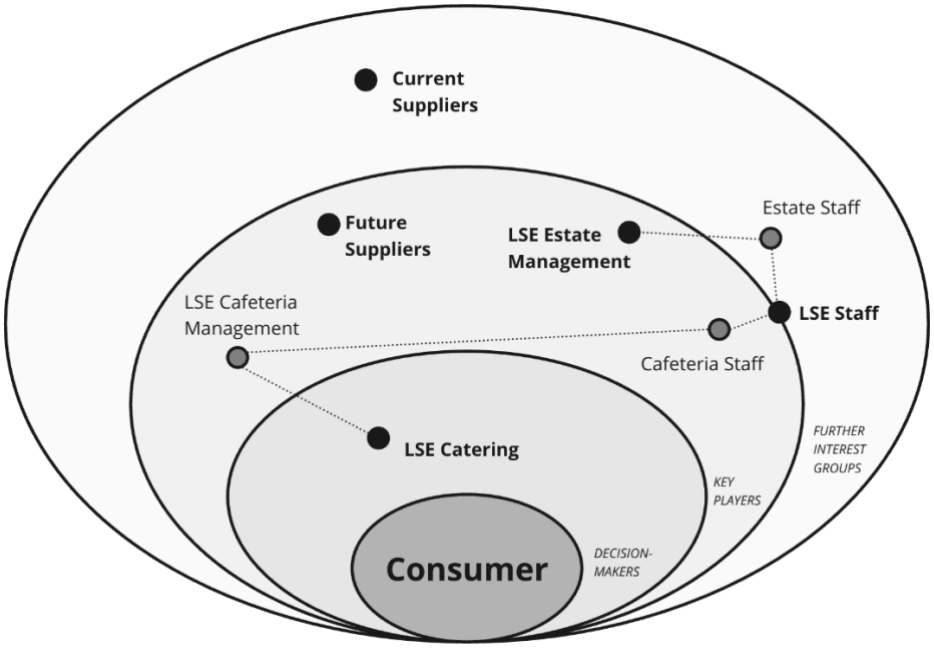


Figure 4: Stakeholder map

4.2.1 Stakeholder Map

The *Beveridge Café* is managed by an assigned cafeteria manager and assistant manager, who both report to the central organisation of *LSE Catering*. Decisions are made by *LSE Catering*, identifying this stakeholder as the decision-maker and therefore the most direct stakeholder in our research project.

Likewise, *LSE Estate Management* is pertinent because it interacts with the process concerning the end-of-life phase of the coffee cups, particularly regarding waste management and cleaning. However, this entity collaborates with *LSE Catering* as a

[1] The information provided in this sub-chapter is based on direct conversations with the manager of LSE Catering.

service provider, positioning them as a third party from a process-oriented perspective. Therefore, we acknowledge their role as a key player but not as a decision-maker.

Furthermore, both *cafeteria* and *estate management staff* at LSE play a pivotal role, serving as the primary interface for customer interaction and ensuring smooth process maintenance. Thus, their collaboration is essential to our efforts. However, while it is vital to consider their needs and interests, their influence in driving change within the present case study is limited due to their lack of decision-making authority.

As we prepare to implement significant changes to the coffee commerce process at the Beveridge Café, and ultimately across campus, we will now present a more thorough analysis of the LSE Catering entity as the decision-maker in place. This analysis aims to address specific feasibility considerations.

4.2.2 The Decision-Making Stakeholder: LSE Catering

LSE Catering is an independently operating self-financing entity separate from the overall institution. Therefore, they are responsible for setting and monitoring a budget and independently making financial decisions. Despite this, LSE Catering is still strategically committed to the overall sustainability agenda of LSE. LSE Catering's current strategy to meet LSE's net zero targets by 2030 (Carbon, n.d.) is characterised by a recycling strategy, including a shift to coffee cups that can be largely recycled when being disposed correctly. Nevertheless, LSE Catering has been promoting the reusable cup strategy and has pursued several ideas that emerged within the 'green impact projects' contest in 2018-2019. For instance, the 'ditch the disposable' project focused on awareness campaigns and imposed a levy on disposable cups, while offering a 25p discount to reusable cup holders and providing KeepCups at a discounted price of £5.00 with funding from the LSE Sustainable Futures Fund. Additionally, qualitative research conducted on campus as part of the '100 Green Ideas' project provided insights leading to current considerations of LSE Catering, such as advocating for more washing areas across the campus to meet students' expressed need for conveniently washing their own KeepCups after use. This focus is further motivated by the fact that establishing a central washing service would require compliance with stringent safety guidelines, including washing cups at temperatures exceeding 84 degrees Celsius, which would necessitate the use of a washing machine, making it unfeasible to simply allow staff to rinse out used coffee cups and return them to students.

Considering this factual background, LSE Catering has both incentives and disincentives to further invest in a KeepCup System. On one hand, aligning with LSE's overarching sustainability agenda, they strive to enhance the sustainability of their operations, demonstrating innovation and inspiring students and other universities to adopt sustainable practices. Moreover, there is a long-term incentive regarding costs, as unsustainable practices may result in higher financial expenses due to regulatory changes and potential damage to the institution's reputation.

On the other hand, disincentives stem from significant operational challenges that could result in increased short-term costs and concerns about the effectiveness of potential interventions. Any modifications to the current processes that require additional physical space face limitations due to the lack of storage space. Further expansion would necessitate adjustments to the lease agreement with LSE, leading to higher fixed costs. Additionally, there is operational complexity in implementing a convenient washing procedure, as a centralised washing facility may not be easily scalable due to the stringent safety requirements outlined earlier. Moreover, LSE Catering harbours substantial concerns about whether students will adapt to the changes, raising doubts about the viability of pursuing the intervention. This specific disincentive prompted LSE to halt its exploration of potential sharing economy solutions after benchmarking against UCL, which had conducted a pilot project on implementing a coffee cup sharing economy with ClubZero as the infrastructure provider. UCL's experience revealed challenges in fostering student adaptation to the new processes, influencing LSE's decision to discontinue its investigation.

Nevertheless, there remains a window of opportunity to introduce interventions, considering the operational obstacles that serve as disincentives, both from the provision and consumer perspectives. The criteria that evolve out of this stakeholder analysis and that need to be considered for developing interventions are:

(1) Storage space
(2) Hygiene and safety compliance
(3) Cost-efficiency
(4) Operational convenience in provision for staff and management
(5) Student's adaptation to the new process

4.3 Intervention Potentials

Drawing upon the findings from the activity theory and stakeholder analysis, the following areas are identified as providing opportunities for improvement, thereby prompting possible interventions:

- Lack of end-of-life infrastructure (inconvenience)
- Lack of embodied competencies (forgetfulness)
- Lack of social norms established (de-motivation)

Installation theory, developed by Lahlou (2017) serves as a framework for analysing and modifying environments from a constructivist perspective, highlighting the crucial role of design in formulating interventions for sustainable change (Lahlou, 2017). The theory posits that to establish sustainable interventions within an installation, it is imperative to simultaneously address the following three spatial layers: (1) the physical space, (2) the inner space, and (3) the social space (see Figure 5). As the identified intervention potentials align with these three layers, this essay will adopt the framework outlined by installation theory to formulate precise interventions within each layer. Subsequently, these interventions will be consolidated into packages, thereby reconstructing individual interventions into integrated and resilient solution proposals.

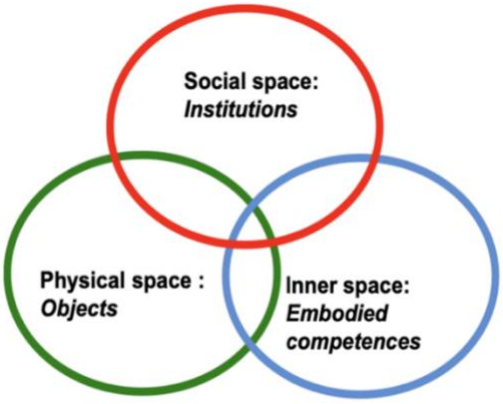


Figure 5: Installation theory framework

5 Intervention Development

In the present chapter, interventions based on *installation theory* (Lahlou, 2017) will be derived, providing the theoretical underpinning for the subsequent solution proposals.

5.1 Objective Material Environment: Physical Affordances

Affordances of material objects are seen as informing, supporting, and constraining activity, thereby provoking stigmergy which refers to the mechanism through which individuals can influence the actions of others by altering artifacts (Lahlou, 2017). Therefore, the physical artifacts of an installation are significantly guiding our behaviour – consciously and subconsciously.

In the context of coffee consumption, we can build upon the previously defined main problems that limit the availability and convenience of alternatives to single-use cups (see 3.2) and thereby constrain activity in hindsight on sustainable behaviour. This primarily sheds light on two material aspects. Firstly, within the *retail phase* the availability of a KeepCup or ReturnCup as physical objects themselves needs to be considered. There is a requirement for the material environment to provide the opportunity to purchase KeepCups or lend ReturnCups, which, through strategic positioning within the context of choice architecture (Thaler & Sunstein, 2009), can simultaneously positively influence the embodied competencies of consumers towards sustainable behaviour (Lahlou, 2017). Secondly, the availability of washing opportunities for KeepCups or returning points for ReturnCups is crucial, significantly contributing to customer convenience in the end-of-life cycle of the coffee cup. This could enhance a

seamless interaction between provision and consumption, fostering a resilient installation (Rabiu & Jaeger-Erben, 2024).

5.2 Embodied Interpretive Systems: Individual Competencies

Embodied competencies are the internal systems individuals possess, including reflexes, skills, knowledge, mental models, and experiences, which influence how they interpret situations and behave, irrespective of their biological, cultural, or experiential backgrounds (Lahlou, 2017). The interventions in relation to embodied competencies are twofold. On the one hand, interventions can build on existing embodied competencies, turning status quo competencies into a strength. On the other hand, interventions can actively facilitate the adoption of new, more sustainable embodied competencies.

Observationally, an individual's competencies mainly come to consciousness as interpretations of underlying drivers of visible actions (unless they are reflected upon and verbally communicated). For instance, if one observes that a colleague forgot his or her key at home, the assumption of a situational lack of embodied competence can be stated. Therefore, if we hypothesise that the lack of convenience within the current KeepCup procedure hinders a consumer's motivation for change as well as continues to maintain and even foster a status quo of unsustainable embodied competencies – namely having the mental model of: "When I am grabbing a coffee, I get a cup conveniently at the point of sale, no need for any effort on my end" – we need to find windows of opportunities to unfreeze and overwrite this salient state of unsustainable convenience-driven mental models. We can do this by creating an environment influenced by physical affordances (see 5.1) and social institutions (see 5.3) in favour of this endeavour. In specific, the objective for interventions on the layer of embodied interpretive systems is to create an environment that promotes (1) a conscious formation of urgency of attitude change towards motivating oneself to change the own embodied competencies, and (2) (subconsciously) nudging consumers towards acting on these new embodied competencies. Therefore, many of the interventions aimed at influencing embodied competencies do not happen within the embodied layer itself, but within either the material or the social layer. Nevertheless, this layer requires specific attention as it can serve as a tool to identify the windows of opportunities to intervene in a way able to influence the embodied competencies and to understand whether there are existing embodied competencies that do not occur as a hurdle, yet an opportunity.

Leveraging existing embodied competencies can enhance the efficacy of interventions by tapping into established habitual behaviours, thus providing a robust connection potential (Pedersen, 2018). This can be applied to the process of linking the ReturnCup to the customer's account. In current third-party-provider-based solutions, the customer has to scan the cup with an app, which requires embodying a new competence (ClubZero, n.d.; Kooky, n.d.). Hence, we propose that the linking process takes place at the point of sale (*retail phase*), where the customer provides a personal

barcode, which the staff then scans along with the cup to establish a connection between them. This enhances convenience since scanning is a routine task for staff and consumers alike, being a component of job-related embodied competencies and akin to loyalty cards in coffee shops or grocery stores.

When analysing the trajectory of activity (see 4.1) we can observe that there are differences in the degree and direction of consumers' attentiveness, allowing us to specifically identify possible intervention points to influence the formation of new embodied competencies. High task-attention is expected during the reading of the coffee menu and price list, as well as during the clarification of orders with the staff. Furthermore, heightened environment-attention is expected during periods of waiting, such as while queueing to place an order and awaiting the coffee. Therefore, these points of heightened awareness pose possibilities for drawing on the institutional layer to foster desired embodied competencies. We will come back to this in section 5.3.

5.3 Social Regulation: Social Norms and Institutions

Institutions function to establish and enforce rules that control behaviour and coordinate societal interactions, while social norms serve as informal guidelines that individuals are expected to adhere to, with deviations often resulting in social sanctions, collectively shaping and regulating behaviour within society (Lahlou, 2017). While our overall objective of increased convenience can be mainly understood as a condition assessable within the physical or embodied layer, the social layer can act as a catalyst regarding both, the seamless engagement with the affordances of the material environment, as well as the embodiment of new competencies and the overwriting of old competencies. Therefore, the affective and behavioural targets informing our interventions on the social layer are consumer awareness, motivation, commitment, and accountability regarding the usage of KeepCups or ReturnCups. On the *social level*, consumer behaviour can be influenced by social norms and community building. On the *institutional level*, these norms can be supported by displaying the sharing economy as the default option, introducing physical reminders, price signaling, and giving positive feedback.

Firstly, *dynamic norms* can be used to drive the usage of KeepCups and ReturnCups (Loschelder et al., 2019; Sparkman & Walton, 2017) until reusable cups become the new social norm. Dynamic norms emphasise the increasingly changing norm over time to elicit pre-conformity to this change. These norms can be made salient to the customers through signs at the points of action. This proves to be effective and therefore it will be helpful to shift the consumer's behaviour towards using KeepCups or ReturnCups.

Furthermore, *community building* interventions can be used to strengthen the conformity of customers to the target behaviour (Muniz & O'Guinn, 2001). These interventions foster the community member's wish to differentiate themselves from others and to reproduce the meaning of the group through rituals and traditions (see also

signaling theory in Bird & Smith, 2005). Community building interventions can include events, messaging, and possibilities to signal community membership.

Moreover, the *default effect* can have a significant impact on sustainable consumption (Mundt et al., 2020). Default interventions include the placement of cups (physical affordances, see 5.1), the communication by staff (social regulation), and the design of the menu (institutional regulation). Incorporating any of these interventions will drive the customers towards engaging with the sharing economy. Either as a participant or by active cognitive engagement. This makes the disposable consumption process more conscious and thus, increases the effect of other interventions, e.g., educational messaging (Pichert & Katsikopoulos, 2008).

In the context of the KeepCup scenario, where adept individual competencies are required to overcome forgetfulness, the integration of *(physical) reminders* that consciously or subconsciously guide behaviour can be beneficial. This might entail digital reminders upon leaving home or through the incorporation of physical affordances, such as a tote bag featuring a dedicated cup holder, serving as a tangible reminder for consumers to remember to bring their KeepCup (Stawarz, 2017).

Lastly, a *price difference* between single-use coffee cups and reusable ones can be used for positive reinforcement of participating in the sharing economy. Findings from a 2019 on-campus survey conducted as part of the '100 Green Ideas' project reveal that 39% of students believe a price reduction of £0.5 would significantly aid in addressing forgetfulness regarding bringing a KeepCup (see Appendix 3).

6 Solution Proposal

Taking into account the stakeholder-driven constraints on change, which significantly influence the feasibility of solutions perceived as the optimal set of interventions, we propose a staggered solution, addressing the entire LSE ecosystem. Depending on the degree of change and thus, the required time and cost of implementation, there are different optimal solutions. We formulate two main interventions that fundamentally alter the installation: (1) a convenient KeepCup Program (as the minimum viable product) and (2) a ReturnCup Program (as the optimal outcome). We will describe these solutions along their simplified respective activity trajectories. Building upon this, we additionally propose a narrative NoCuptober Campaign that can complement the resilience of each proposed intervention package.

6.1 KeepCup Program

The first solution we suggest is encouraging the use of KeepCups (see Figure 6). As the *end-of-life phase* pinpointed critical obstacles (see 4.1) we propose a simpler washing

alternative that prioritises customer convenience. To simplify the process, we suggest enhancing the physical affordances by installing pressure cup washers in key locations around LSE common areas (Appendix 6). The proximity and functionality of the specialised technology tailored for cup cleaning in a single motion effectively addresses the practical aspects of managing reusable cups post consumption.

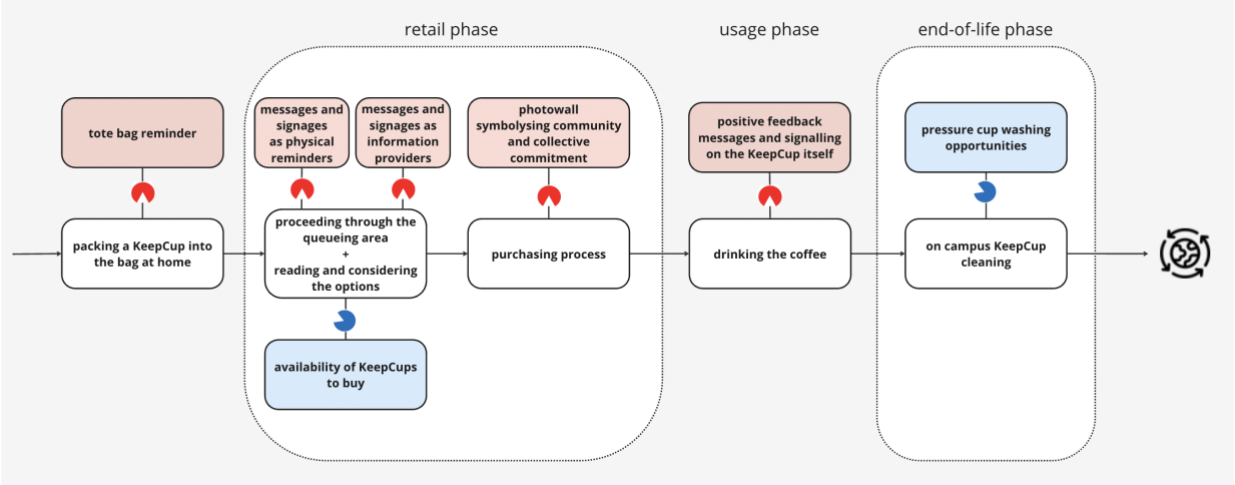


Figure 6: Summary of KeepCup program Intervention Package

To ensure the resilience of the enhanced installation, we propose supporting interventions prior to and within the *retail and usage phase*. To overcome forgetfulness (Herweyers et al., 2024), the integration of a *(physical) reminder* was an identified intervention. We propose implementing tote bags with a designated section for carrying a coffee cup, serving as a clue.

Furthermore, as the consumer proceeds in the queueing area, a point previously identified as of heightened awareness, he or she typically decides on the purchasing order. Placing reusable cups even more prominently in the decision-making area where they are available to be picked is therefore vital. Coupled with this strategic positioning, we suggest incorporating a compelling message to consumers, reminding them of the positive environmental impact reusable cups have and how consumers are now shifting away from single-use coffee cups, indicating an evolution of norms. This messaging extends to the end of the *retail phase*, where consumers await their coffee. Here, a photo wall featuring instant snapshots of students with their reusable cups is positioned, fostering a profound sense of social identity, commitment, and community belonging among KeepCup users.

When drinking the coffee within the *usage phase*, positive reinforcement messages on the KeepCup themselves elicit feelings of accomplishment and positive associations with eco-friendly actions among users. These messages serve as reminders of the positive environmental impact of the individual's choice, motivating the consumers to opt for the sustainable alternative and reinforcing their commitment in the long run.

6.2 ReturnCup Program

The second solution we propose should make it even more convenient to disregard single-use coffee cups. We suggest introducing a sharing economy, based on a ReturnCup Program.

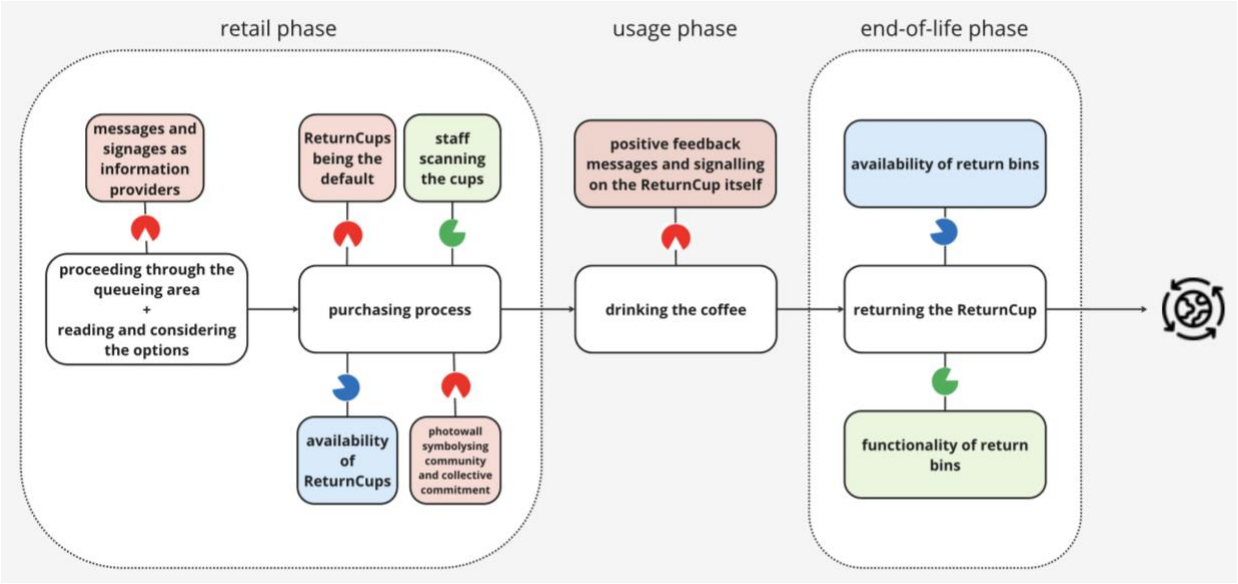


Figure 7: Summary of ReturnCup Intervention Package

In the critical *end-of-life phase*, ReturnCup users can dispose their cups in designated return bins. They will be located close to the coffee shops and across the campus next to the bins which currently report the most single-use cups being disposed in. We suggest a re-evaluation after six months to understand where customers would wish for additional return bins, and which return bins are not used. Although there will be fewer disposal possibilities for ReturnCups than for single-use cups, the strategic placement of the return bins will make the disposal almost as convenient as for single-use cups. Compared to the KeepCup there is a significant increase in convenience by enabling consumers to get rid of their cup, therefore relying on already present embodied competencies. Furthermore, the ReturnCup Program offers a significant advantage compared to existing best practices with returnable cups. The consumers do not have to scan their cups before disposing of them as the linking between cup and consumer is shifted to the *retail and usage phase* where it is part of existing routines.

The *retail and usage phase* for ReturnCup users are very similar to the ones of KeepCup users (see 6.1). The educational, informative, and community building messaging in the queueing and waiting areas will be the same but coined on ReturnCups. Additionally, in the queueing area, there will be a visual explanation of the ReturnCup Program with a barcode that leads to the registration of a ReturnCup account. The registration is a one-time event but necessary to facilitate the refunding of the deposit paid for the ReturnCup. Next, the coffee menu will show the ReturnCup as the default and

single-use cups as optional for a £0.5 price increase. This is the crucial point for a successful adaptation. The staff will consider ReturnCups as the default in their interaction with the customer. In the payment process, customers present their unique ReturnCup account barcode. The staff links the ReturnCup to the customer's account by scanning the barcode and the chip in the cup. The customer pays £1.0 deposit, which is returned once the ReturnCup is scanned again in the washing process.

By leveraging *installation theory*, the ReturnCup Program is expected to drive successful behaviour change. Partnering with a third-party provider could streamline implementation, handling IT infrastructure, and cup logistics (ClubZero, n.d.).

6.3 NoCuptober Campaign

To initiate our proposed solutions a NoCuptober Campaign is going to be held across the LSE campus — an aptly named initiative planned to coincide with the beginning of the school year. This campaign is designed to prepare consumers for their involvement within the solutions frameworks across the social, physical, and embodied competence layers. Our key objective is to encourage student participation by communicating community values and delivering essential information and affordances, thus fortifying the resilience of our solutions.

The campaign is mainly an intervention on the social level, prioritising community building and engagement by creating events and promoting a shared objective through a *community contest*: making a collective impact by reducing disposable cup consumption. This will be complemented by a *social media campaign* aimed at encouraging individuals to share their involvement and expand awareness even further. However, NoCuptober is also designed to provide students with a starter pack containing *information messaging*, as well as *offers and promotions* – actively encouraging reusable cups by providing an economic incentive.

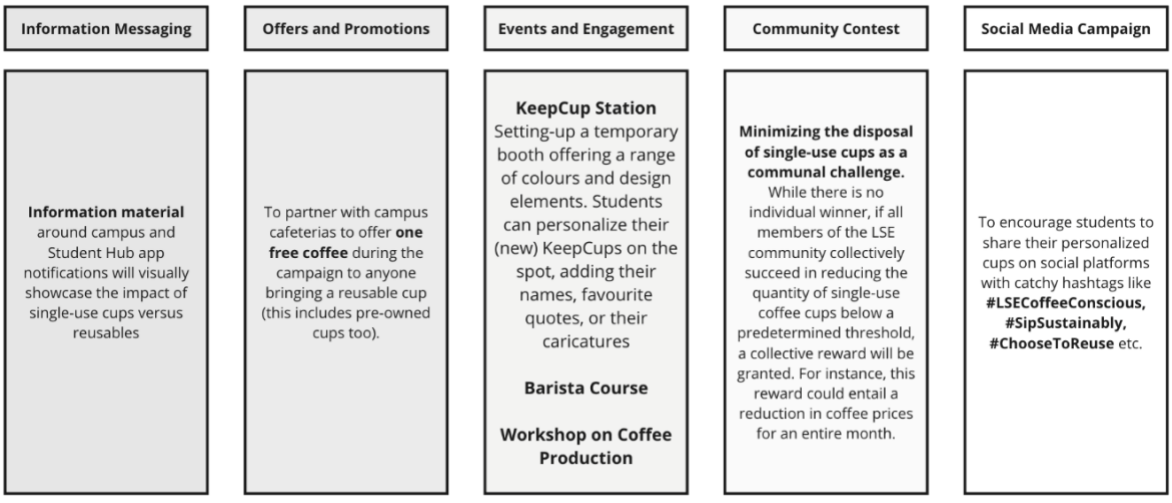


Figure 8: NoCuptober Campaign content pillars

7 Discussion and Limitations

Our findings indicate that promoting a reuse behaviour regarding coffee cups to address the current customer inconvenience associated with reusable cups requires effective design of the physical environment, promotion of individual embodied competencies, and fostering the necessary social norms. Through our staggered solution – advocating a *KeepCup Program* as an initial intervention package, followed by a more effort requiring yet expected higher yielding *ReturnCup Program*, both of which are accompanied by a campus-wide *NoCuptober Campaign* – we aspire to provide a pragmatic contribution, directly aligning with ongoing initiatives and the key criteria identified by stakeholders. Encouragingly, discussions with LSE Catering have validated this optimistic perspective. We are confident that the applied methodology uncovers overlooked nuances, adding value to understanding single-use coffee cup consumption. Moreover, we hope that our approach can inform interventions in various behavioural settings, fostering scalable positive change. This is particularly important as successful influencing of sustainable behaviour can have spill-over effects onto further behaviour – a mechanism vital for LSE students given their potentially influential future roles in business, politics, and society.

Nevertheless, this essay is subject to certain limitations which are crucial to acknowledge before extrapolating the results across the campus and beyond, simultaneously providing avenues for future research. First, the generalisability of the findings is restricted by the fact that the specific installation of the LSE Beveridge Café was the focus of analysis. Factors like coffee consumption patterns and cafeteria layout might differ across other campus cafes, potentially impacting the success of the solutions suggested. Second, the limited timeframe of the case study hinders understanding long-term sustainability and user behaviour, overlooking factors like extended adoption and cup maintenance. Third, the quality of this case study is limited to research being based on observations, informal oral information, and secondary research. Fourth, while this case study focuses on environmental benefits in terms of fostering a circular economy of coffee cup usage, economic implications fall short in analysis. Factors like investment costs, price fluctuations, cost savings, and revenue generation need deeper exploration, given LSE Catering's financial independence and competition outside campus. Lastly, measuring the impact of single process redesigns cannot be achieved within the scope of this study. A long-term adoption is crucial for positive overall impact, adding complexity to assessment.

Bibliography

Abras, C., Maloney-Krichmar, D., & Preece, J. (2004). User-centered design. *Bainbridge, W. Encyclopedia of Human-Computer Interaction. Thousand Oaks: Sage Publications*, *37*(4), 445-456.

Alamerew, Y. A., & Brissaud, D. (2019). Circular economy assessment tool for end of life product recovery strategies. *Journal of Remanufacturing*, *9*(3),169-185. https://doi.org/10.1007/s13243-018-0064-8

Allison, A. L., Lorencatto, F., Miodownik, M., & Michie, S. (2021). Influences on single-use and reusable cup use: a multidisciplinary mixed-methods approach to designing interventions reducing plastic waste. *UCL Open Environment*, *3*.

Bird, R. B. & Smith, E. A. (2005). Signaling Theory, Strategic Interaction, and Symbolic Capital. *Current Anthropology, 46*(2), 221–248. https://doi.org/10.1086/427115

London School of Economics and Political Science. (n.d.). *Carbon*. LSE. https://info.lse.ac.uk/staff/divisions/estates-division/sustainable-lse/what-we-do/carbon

CLUBZERØ. (n.d.). *CLUBZERØ, formerly CupClub | ZERØ waste packaging for takeaway and delivery*. https://www.clubzero.co/

Foteinis, S. (2020). How small daily choices play a huge role in climate change: The disposable paper cup environmental bane. *Journal of Cleaner Production, 255*(120294), 120294. https://doi.org/10.1016/j.jclepro.2020.120294

Gammon, R. M. (2019). *How plastic is our plastic culture? Reducing our consumption of single-use plastics* [Doctoral dissertation, University of Northern British Columbia].

Grab your cup | Press Release | Hubbub. (2020, January 8). Issuu. https://issuu.com/hubbubuk/docs/hubbub_grab_your_cup_national_press_release#:~:text=Research1%20released%20today%20by%20Hubbub

Herweyers, L., Du Bois, E., & Moons, I. (2024). Use-clean-repeat: Understanding user, product, and context to design for long-term reuse. *Resources, Conservation and Recycling, 204*, 107511.

House of Commons Environmental Audit Committee (Ed.). (2018). *Disposable Packaging: Coffee Cups Second Report of Session 2017-19 Report*, https://publications.parliament.uk/pa/cm201719/cmselect/cmenvaud/657/657.pdf

Kooky - The leading circular economy infrastructure. (n.d.). https://www.kooky2go.com/en/home

Lahlou, S. (2017). Installation theory. https://doi.org/10.1017/9781316480922

Lau, W. W. Y., Shiran, Y., Bailey, R. M., Cook, E., Stuchtey, M. R., Koskella, J., Velis, C. A., Godfrey, L., Boucher, J., Murphy, M. B., Thompson, R. C., Jankowska, E., Castillo, A. C., Pilditch, T. D., Dixon, B., Koerselman, L., Kosior, E., Favoino, E., Gutberlet, J., & Baulch, S. (2020). Evaluating scenarios toward zero plastic pollution. *Science, 369*(6510), 1455–1461. https://doi.org/10.1126/science.aba9475

Lofthouse, V. & Lilley, D. (2019, November 27). Design for sustainable behaviour: reducing single use coffee cup waste in the UK. *Figshare*. https://repository.lboro.ac.uk/articles/conference_contribution/Design_for_sustainable_behaviour_reducing_single_use_coffee_cup_waste_in_the_UK/14724876

Loschelder, D. D., Siepelmeyer, H., Fischer, D., & Rubel, J. A. (2019). Dynamic norms drive sustainable consumption: Norm-based nudging helps café customers to avoid 24 disposable to-go-cups. *Journal of Economic Psychology, 75*, 102146.

Meis, J., & Kashima, Y. (2017). Signage as a tool for behavioral change: Direct and indirect routes to understanding the meaning of a sign. *PloS one*, *12*(8), e0182975. https://doi.org/10.1371/journal.pone.0182975

Mundt, D., Carl, S., & Harhoff, N. (2020). A field experiment on reducing drinking straw consumption by default. *Frontiers in Psychology*, *11*, 2266.

Muniz, A. M., & O'Guinn, T. C. (2001). Brand Community. *The Journal of Consumer Research*, *27*(4), 412–432. https://doi.org/10.1086/319618

Muralikrishna, I., & Manickam, V. (2017). *Life Cycle Assessment - an overview | ScienceDirect Topics*. Sciencedirect.com. https://www.sciencedirect.com/topics/earth-and-planetary-sciences/life-cycle-assessment

Nicolau, J. L., Stadlthanner, K. A., Andreu, L., & Font, X. (2022). Explaining the willingness of consumers to bring their own reusable coffee cups under the condition of monetary incentives. *Journal of Retailing and Consumer Services, 66*(66), 102908. https://doi.org/10.1016/j.jretconser.2022.102908

Novoradovskaya, E., Mullan, B., Hasking, P., & Uren, H. V. (2020). *Mixed Methods Investigation of a Pro-environmental Behaviour: The Case of Reusable Coffee Cups*. [Doctoral Thesis], School of Population Health.

Behaviour change intervention to promote use of reusable hot drink cups. *Journal of Cleaner Production, 284*, 124675. https://doi.org/10.1016/j.jclepro.2020.124675

Pedersen, M. (2018). The resilience of habit. *Ephemera: Theory & politics in organization*, *18*(2), 331339. http://www.ephemerajournal.org/sites/default/files/pdfs/contribution/18-2pedersen.pdf

Pichert, D., & Katsikopoulos, K. V. (2008). Green defaults: Information presentation and pro-environmental behaviour. *Journal of environmental psychology*, *28*(1), 63-73.

Poortinga, W., & Whitaker, L. (2018). Promoting the Use of Reusable Coffee Cups through Environmental Messaging, the Provision of Alternatives and Financial Incentives. *Sustainability, 10*(3), 873. https://doi.org/10.3390/su10030873

Rabiu, M. K. & Jaeger-Erben, M. (2024). Reducing single-use plastic in everyday social practices: Insights from a living lab experiment. *Resources, Conservation and Recycling, 200*, 107303. https://doi.org/10.1016/j.resconrec.2023.107303

Sandhu, S., Lodhia, S., Potts, A., & Crocker, R. (2021). Environment friendly takeaway coffee cup use: Individual and institutional enablers and barriers. *Journal of Cleaner Production, 291*, 125271.

Schroeder, P., Anggraeni, K., & Weber, U. (2019). The relevance of circular economy practices to the sustainable development goals. *Journal of Industrial Ecology*, *23*(1), 77-95. https://doi.org/10.1111/jiec.12732

Smith, E. A., & Bliege Bird, R. (2005). Costly signaling and cooperative behavior. *Moral sentiments and material interests: The foundations of cooperation in economic life*, *6*, 115.

Sidhu, M., Mehrotra, K., & Hu, K. (2018). *Single-use items reduction: Disposable cups*. https://dx.doi.org/10.14288/1.0387025

Sparkman, G., & Walton, G. M. (2017). Dynamic norms promote sustainable behavior, even if it is counternormative. *Psychological science*, *28*(11), 1663-1674. https://doi.org/10.1177/09567976177199

Stawarz, K. M. (2017). *Towards better medication adherence apps: Preventing forgetfulness by facilitating the formation of routine-based remembering strategies*. University College London (Ed.).

Thaler, R., Sunstein, C. (2009). *Nudge: Improving Decisions About Health, Wealth and Happiness*. Penguin Random House, UK.

5 factors shaping UK coffee chains in 2023. (2023, 17. März). World Coffee Portal. https://www.worldcoffeeportal.com/Latest/InsightAnalysis/2023/March/5-factors-shaping-UK-coffee-chains-in-2023

Appendices

Appendix 1: Data from Conversations

Stakeholder	Project Importance	Role	Key parameters
LSE Catering	Primary	• Supports cafeteria operations • Sets and manages budget • Initiates sustainability objectives	• Operational convenience in provision for staff and management • Cost efficiency • Limited storage space • Hygiene and safety compliance - central washing with temperature exceeding 84°C
ClubZero	Secondary	• Provides returnable cup solutions • Potential partner for LSE Catering • Insights regarding cost structure • Field experience	• Institutional commitment • Complete ecosystem bought in • Default necessary • Stakeholder (also cafeteria) experience as close to single-use cup as possible • Provided solution can be adapted
kooky. @HSG	Secondary	• Success story of a ReturnCup Program enrolment on a university campus	• Having the ReturnCup as a default is crucial → fast adaptation • Cleaning and maintenance outsourced • Smooth functioning

Appendix 2: Activity Grid

	#	Activity steps	Actor	Actors' motives	Expected contribution from actor	INTERVENTION	Comments
Retail and usage phase for single-use, KeepCup, and	1.0	Walking towards the coffee ecosystem	Consumer	Reaching the cafeteria ecosystem	Movement / navigating space	- Physical Affordances - Social Regulation	
	2.1	Proceeding through the queuing area	Consumer	Reaching the counter	Movement / waiting / queueing	- Physical affordances - Social Regulation	People spend time waiting (space for intervention), queueing is complying with a social norm
	2.2	Reading and considering the options	Consumer	Selecting a drink	Assessment of options available, scanning possibilities, assessing own interest, needs/wants = decision-making	- Social Regulation	High attention of the customer when reading the menu and prices
	2.2	Reading and considering the options	Menu		Being visible, readable, understandable and accessible	- Social Regulation	Menu can be a helpful affordance but a lot of customer are not looking at it
	3.1	Placing the order	Consumer	Having the coffee made	Communicating with staff		Order is not always clear --> clearifying
	3.1	Placing the order	Cashier	Putting order in system	Passing on the information		All information is tracket; opportunity for insights and monitoring
	3.1	Placing the order	Barista	Preparing the coffee	Starting to prepare the coffee		
	3.1	Placing the order	Coffee machine		Making the coffee		
	3.2	Clarifying the order	Consumer	Receiving the right cofee	Communicating with staff	- Social Regulation	Back and forth between Cashier and Consumer
	3.2	Clarifying the order	Cashier	Understanding order details	Asking questions to the consumer	- Social Regulation	Back and forth between Cashier and Consumer; cashier sometimes influences consumers choice
	4.0	Tapping the card / giving cash	Consumer	Fulfil legal obligation	Taking out the money, mobile phone or card, tapping or giving	- Embodied Competences	Most customers pay with card
	4.0	Tapping the card / giving cash	Cashier	Sustain business / job	Communicating the price, asking "cash or card", accepting payment, potentially giving back change	- Embodied Competences	
	4.0	Tapping the card / giving cash	Card machine	Making tansaction seamless	Processing payment		
	5.0	Waiting for the coffee	Consumer	Receiving the coffee	Appropriate spacial positioning meaning not standing in the way of someone (while being less restricted though), being present and aware / paying attention to your order	- Social Regulation	Customers wait for quite some time and would potentially be attentive to messaging; there is inofficial but still designated waiting area
	5.0	Waiting for the coffee	Staff	Ensuring order is fulfilled	Keeping an eye onto your order, call out your order when it's ready, handing it to the consumer or placing it on the counter		
	6.0	Drinking the coffee	Consumer	Get energy and satisfaction	Drinking the coffee when the temperature is right	- Social Regulation	Possibility to use coffee cups as platform for messaging

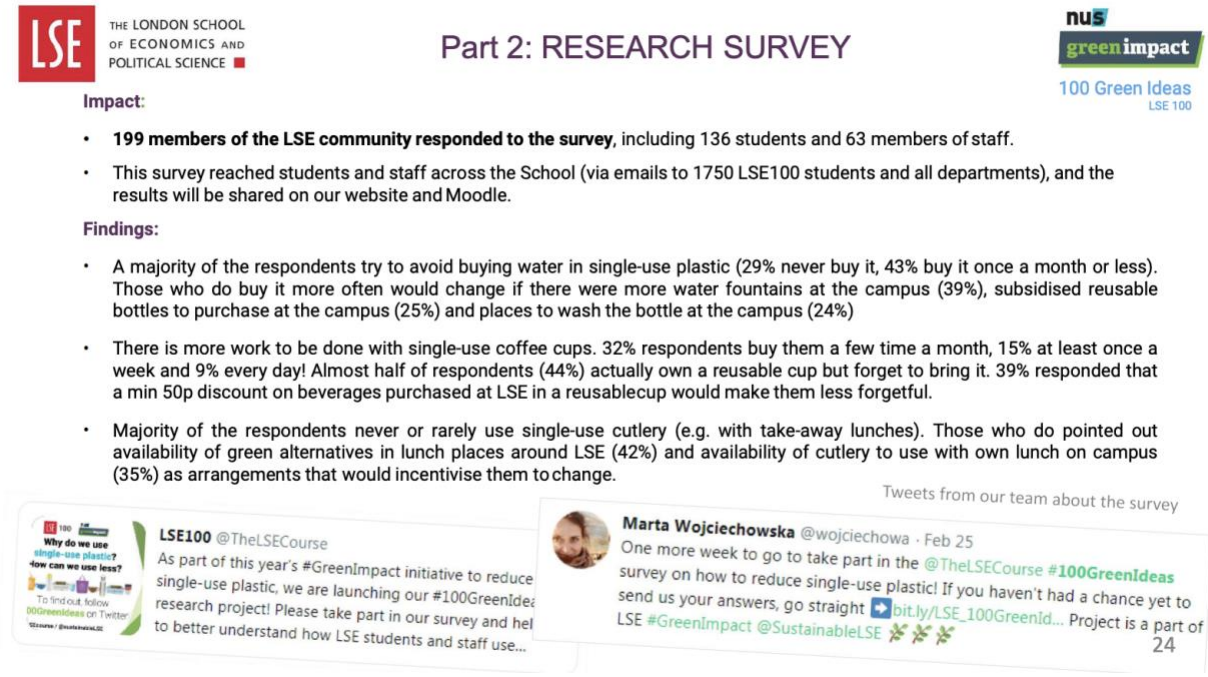
#	Activity steps	Actor	Actors' motives	Expected contribution from actor	INTERVENTION	Comments
End-oaf-life phase for single use coffee cups						
7.1.0	Locating the bin	Consumer	Finding a bin	Looking around or knowing where bins are located	- Physical Affordances - Embodied Competences	
7.1.0	Locating the bin	Bin	Being visible and at convenient location	Design that helps to recognize it as a bin and location that is easy to reach / will be reached automatically		
7.1.1	Approaching the bin	Consumer	Reaching the bin	Walking towards the bin		
7.1.2	Disposing the coffee cup	Consumer	Getting rid of the cup	Disposing the cup in the right bin without littering	- Social Regulation - Physical Affordances	Compostable coffee cups mostly not disposed of correctly; seperation is not clear to everyone
7.1.2	Disposing the coffee cup	Bin	Ensuring clean environment; no trash	Having space for the disposed cup	- Social Regulation - Physical Affordances	
End-of-life phase for KeepCup						
7.2.0	Locating the sink / washing opportunity	Consumer	Finding a sink	Looking around or knowing where sinks are located	- Physical Affordances - Embodied Competences	
7.2.0	Locating the sink / washing opportunity	Washing station	Being visible and at convenient location	Design that helps to recognize it as a sink and location that is easy to reach / will be reached automatically	- Physical Affordances	Existing sinks are designed and labled for refilling, not for cleaing
7.2.1	Approaching the sink / washing opportunit	Consumer	Reaching the sink	Walking towards the sink	- Social Regulation	Nothing is leading towards the sinks
7.2.2	Cleaning the cup	Consumer	Having clean cup to pack	Cleaning the cup in the sink		
7.2.2	Cleaning the cup	Washing station	Providing water	Providing water pressure strong enough to clean the cup		
7.2.3	Packing the cup	Consumer	Store cup	Pack the cup in bag or backpack		
End-of-life phase for ReturnCup						
7.3.0	Locating the coffee cup return bin	Consumer	Finding a return bin	Looking around or knowing where return bins are located	- Physical Affordances - Embodied Competences	
7.3.0	Locating the coffee cup return bin	Cup return bin	Being visible and at convenient location	Design that helps to recognize it as a return bin and location that is easy to reach / will be reached automatically	- Social Regulation - Physical Affordances	Should be clearly visible and maybe linked to ReturnCup by using the same color
7.3.1	Approaching the coffee cup return bin	Consumer	Reaching the return bin	Walking towards the return bin	- Social Regulation	
7.3.2	Scanning the ReturnCup's barcode	Consumer	Linking cup to account	Taking the time to scan the cup and having registered with the cup provider and downloaded the App	- Physical Affordances - Embodied Competences	Not very convenient step and exposed to IT difficulties
7.3.2	Scanning the ReturnCup's barcode	Barcode	Being visible	Stay scannable throughout hundreds of washing cycles		
7.3.2	Scanning the ReturnCup's barcode	App on mobile phone	Scanning cup	Managing consumers deposit balance and offering insights in ReturnCup consumption	- Social Regulation - Physical Affordances - Embodied Competences	Could include gamification
7.3.3	Returning the ReturnCup	Consumer	Getting rid of cup	Putting cup in return bin, seperated from other forms of tra		
7.3.3	Returning the ReturnCup	Cup return bin	Ensuring clean environment; no trash	Having space for the disposed cup		

Appendix 3: Cost and Savings Estimation

Insights from LSE Catering and industry experts allow for the following calculation of financial and environmental costs

	Single use cup (LSE Catering)	**ReturnCups (expert indications)**
Cost per cup	£ 0,11	£ 0,20
Additional costs	Waste collection + CO_2 emissions (currently free)	Fee for cup collection and distribution
Electricity saved / cup	-	~0,14 kWh (if single ReturnCup is used over 250 times)
CO_2 emissions saved / cup	-	~2,05 g (if single ReturnCup is used over 250 times)
Landfill waste saved / cup	-	~1,4 g (if single ReturnCup is used over 250 times)
Cups/month sold Beveridge Cafe	7.500	7.500
Cups/month sold all LSE Catering	26.000	26.000
Cost per year	Beveridge Café: £0,11*7500*12 = **£9.900** All LSE Catering: £0,11*26000*12 = **£34.320**	Beveridge Café: £0,30*7500*12 = **£18.000** All LSE Catering: £0,30*26000*12 = **£62.400**
Savings per year all LSE Catering	**None**	Electricity: 0,14*26000 = **3.640kWh** CO_2 emissions: 2,05*26000 = **533 Kg** Landfill waste: 1,40*26000 = **364 Kg**

Appendix 4: Campus Project "100 Green Ideas" on Single-Use Plastic Reduction



THE LONDON SCHOOL OF ECONOMICS AND POLITICAL SCIENCE

Part 2: RESEARCH SURVEY

nus greenimpact 100 Green Ideas LSE 100

Impact:

- **199 members of the LSE community responded to the survey**, including 136 students and 63 members of staff.
- This survey reached students and staff across the School (via emails to 1750 LSE100 students and all departments), and the results will be shared on our website and Moodle.

Findings:

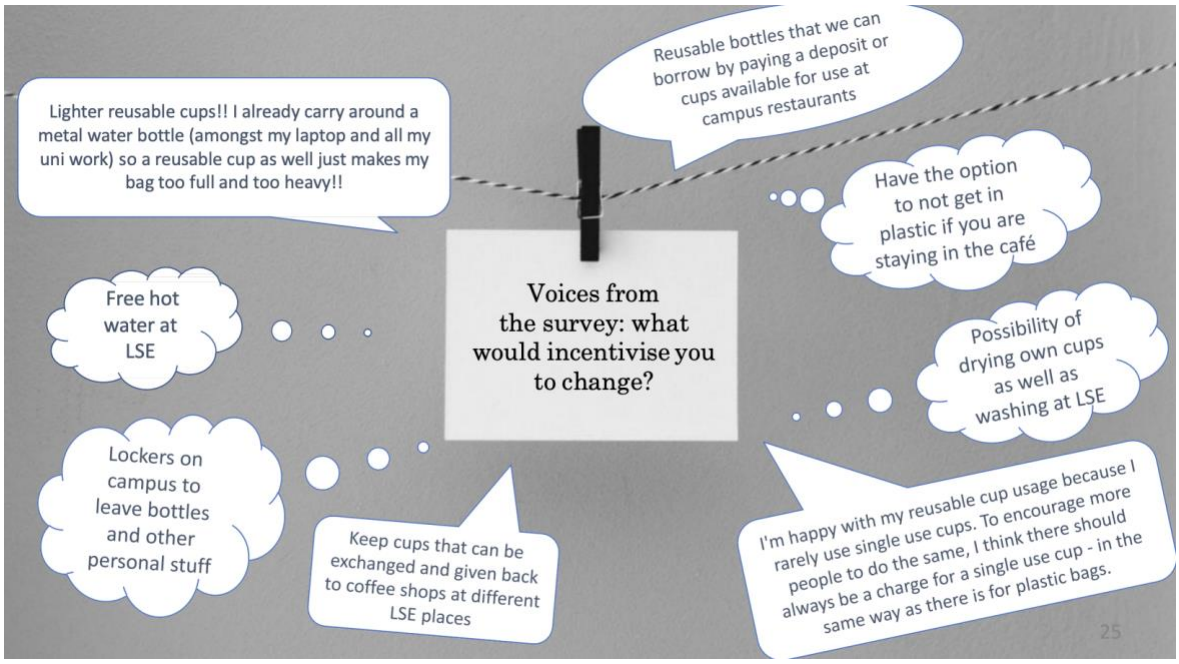
- A majority of the respondents try to avoid buying water in single-use plastic (29% never buy it, 43% buy it once a month or less). Those who do buy it more often would change if there were more water fountains at the campus (39%), subsidised reusable bottles to purchase at the campus (25%) and places to wash the bottle at the campus (24%)
- There is more work to be done with single-use coffee cups. 32% respondents buy them a few time a month, 15% at least once a week and 9% every day! Almost half of respondents (44%) actually own a reusable cup but forget to bring it. 39% responded that a min 50p discount on beverages purchased at LSE in a reusablecup would make them less forgetful.
- Majority of the respondents never or rarely use single-use cutlery (e.g. with take-away lunches). Those who do pointed out availability of green alternatives in lunch places around LSE (42%) and availability of cutlery to use with own lunch on campus (35%) as arrangements that would incentivise them to change.

Tweets from our team about the survey

LSE100 @TheLSECourse
As part of this year's #GreenImpact initiative to reduce single-use plastic, we are launching our #100GreenIdea research project! Please take part in our survey and hel to better understand how LSE students and staff use...

Marta Wojciechowska @wojciechowa · Feb 25
One more week to go to take part in the @TheLSECourse **#100GreenIdeas** survey on how to reduce single-use plastic! If you haven't had a chance yet to send us your answers, go straight bit.ly/LSE_100GreenId... Project is a part of LSE #GreenImpact @SustainableLSE

24



THE LONDON SCHOOL OF ECONOMICS AND POLITICAL SCIENCE

Part 2: RESEARCH SURVEY

nus greenimpact
100 Green Ideas
LSE 100

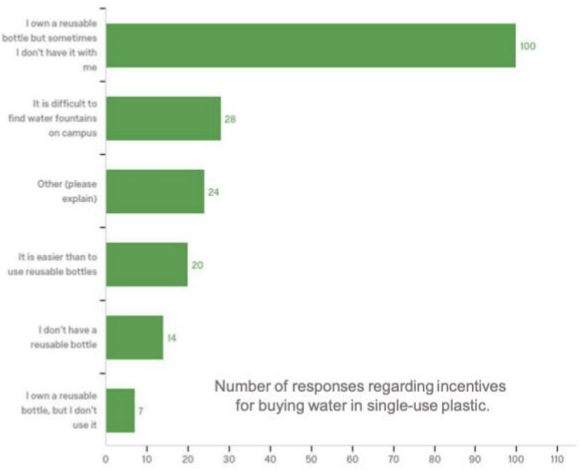
Suggestions for action at School level:

1. It would be helpful to install more water fountains around campus
2. Do more to highlight existing discounts for beverages purchased at LSE with reusable cups
3. LSE catering outlets should offer more re-usable cutlery
4. Make facilities available for students to wash their own cutlery/cups

Such actions will incentivise LSE staff and students to use fewer single-use plastic products!

Demographics of the survey respondents:

Answer	%	Count
Student	68.34%	136
Staff	31.16%	62
Other (please clarify)	0.50%	1
Total	100%	199



Number of responses regarding incentives for buying water in single-use plastic.

26

Appendix 5: Campus Project "Ditch the Disposable"

THE LONDON SCHOOL OF ECONOMICS AND POLITICAL SCIENCE

Gold winner

Ditch the Disposable

Garrick

nus greenimpact

The Problem

Many customers simply opt for their hot beverage in a single-use plastic cup. To raise awareness of the need to reduce reliance on plastics, we wanted to achieve this by focusing in on reducing the number of single use hot cups used in the LSE Catering Department.

The LSE is the home to students from across the world and we need to inform all students of the importance of reducing single use plastics and that this involves them and why. Through a simple action of adopting a reusable cup our students and staff can help have a positive effect on the environment.

Project Overview

- Since Welcome Week September 2018 , we ran awareness raising campaigns targeting students and staff and promoted Keep Cups in all our units across campus.
- At the start of the new academic year we **introduced a 10p levy on disposable hot drinks cups**, increased the discount to reusable cup holders to 25p and with funding from LSE Sustainable Futures Fund, offered Keep Cups at the discounted price of £5.00.
- Our project is specifically targeted at reducing single use plastic hot drink cups.

THE LONDON SCHOOL OF ECONOMICS AND POLITICAL SCIENCE

nus greenimpact

Ditch the Disposable

Garrick

Impact

- Before this project, the percentage of sales in a reusable cup was **0.03%** and this project has **increased reuse rates to 18%.**
- **49, 375 single-use cups have been saved** as a result!
- The figures collected have been taken from till data so we have been able to monitor and measure the effectiveness of our project and campaigns.

Learnings

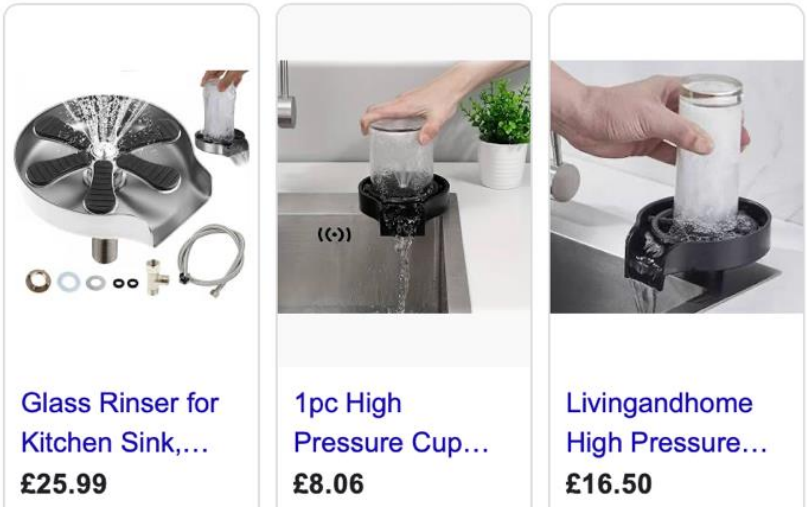
We have learnt that our staff can send out a positive message to students and staff which can help alter behaviours and encourage customers to adopt the regular use of a Keep Cup/reusable cup.

KEEP CUP SALES, DISCOUNTS AND % REUSABLE CUPS SALES.

MONTH	Keep Cup Sales	10p Tax	25p Dcount	Total Drink Sold	% Reusable	China Cups	COMMENTS
SEPTEMBER 2018	422	3367	592	5433	11%	1052	
OCTOBER 2018	653	26768	7854	41804	18.8%	6597	
NOVEMBER 2018	326	21502	6611	37753	17.5%	7510	
DECEMBER 2018	105	10805	3469	17733	19.6%	4217	
TOTAL	**1506**	**62,442**	**18,526**	**102,723**	**18%**	**19,376**	
							Cost of providing 25p discount £5,947.00
JANUARY 2019	308	16679	5262	28152	18.7%	6211	
							Total single use cups saved(China and reusable) 49,375
TOTAL	**1814**	**79121**	**23,788**	**130875**	**18.2%**	**25587**	

Appendix 6: Material Environment and Messaging Visualisations

Pressure cup washer for KeepCup Program



Return Bins for ReturnCup Program

KeepCup *(currently available)*

ReturnCup *(Example)*

Example visualisation for campus campaign

Sample tote bag for the starter pack