Perceptions of University Waste Management within the International Cohort

Isaac Berger
LSE Change Makers

Eden Centre for Education Enhancement

LSE STUDENTS' UNION

Background

Regardless of whether a given student spends a short or long period on campus, use of the waste bins is a daily necessity. Waste management is arguably the most visible of any organisation's green efforts. Staff and students expect to be able to use waste bins on each floor of each building.

The proposal for this research was rooted in a broader interest concerning the diversity of recycling services across the world. As a British student, I was struck by questions surrounding the accessibility of the university recycling system for the significant proportion of students coming from abroad.

Some students come from countries where more materials are recyclable than in the UK, while others come from countries without recycling services. This research sought to answer how international students perceive the design of the university recycling service and whether this affects the usage of the service overall.

Given that public information on recycling is often opaque and technical, the university plays an important role in helping new students overcome immediate barriers. In order to show participation in a circular society, the LSE's recycling bins should be purposefully accessible as well as simply available.

Literature review

An individual's likelihood to engage in recycling can be said to pertain to two categories. The first consists of personal factors. In relation to this research, scholarship has found little variation in pro-environmental concerns between countries or regions. Recycling is a learned and normative task, meaning participation can be low in the years after a public service is initially implemented. Individuals tend to report increased concern when problem sites are visible in their daily lives, such as waste-polluted public spaces or landfills. Place attachment also motivates pro-environmental engagement (Gifford & Nilsson, 2014).

The second category consists of situational factors which influence the degree of effort individuals face when recycling. Individuals must be more environmentally concerned to undertake greater efforts (Schultz et al., 1995). This intuitive observation helped to structure survey questioning by focusing on the potential elements of the university's waste service that demotivate recycling.

Most relevant to this study was the measurement of antecedent factors. These could include visible prompts to recycle, clear instructions and information, intuitive bin designs and the presence of recycling bins beside general waste bins.

One-third of students indicated a "neutral" stance towards having time "[…] to recycle day-to-day waste", reducing the likelihood they will seek further instructions when LSE's information is confusing.

Methodology

A survey was selected as the method for data collection in order to analyse the opinions of a larger number of students. After cursory demographic questions, the main body of the survey contained statements with Likert-scale response boxes, with five categories ranging from strongly disagree to strongly agree. Figure one indicates how each category was numerically coded for analysis.

Strongly Disagree	Disagree	Nuetral	Agree	Strongly Agree
1	2	3	4	5

Fig. One

The choice of a scaled survey was motivated by the shorter amount of time required for each response. One assumption was that shorter answer times would motivate students to take and complete the survey. Another was to use this time advantage to increase the breadth of responses gathered, in order to better distinguish different sources of opinion. This is at the expense of gathering more fine-grained, interview-style responses, although several respondents elaborated their thoughts in writing on the survey margins. Most relevant for the final analysis were sections one and three. Section one comprising of statements ascertaining the felt importance of recycling for the wider environment, adapted from Vincente & Reis (2008). Section three centred on experiences and opinions of the university recycling service, largely adapted from Chung & Leung (2007). Section four looked similarly at views of recycling at private term-time housing, to offer a comparison. Responses were obtained by approaching students on campus with paper surveys.

Findings

The final dataset contained 83 valid survey responses, covering 20 of the 27 university departments that provide courses. 48 responses came from undergraduates and 34 from postgraduates. Country groups were identified by asking where respondents spent "most of their time" prior to LSE. The only groups large enough for individual analysis were the UK (22) and China (10). Combining the remaining countries into a subset was the best available means of providing a general comparison of recycling perceptions within the international cohort. Figure **two** shows the mean coded response for each national subset. Contrary to the hypothesis, UK students are markedly less satisfied with the design of the university waste service despite informational advantages. This most likely indicates that international students feel the university recycling service is better than their home service, or that they have been educated and exposed to recycling practices to a greater extent. One exception is that all students expressed an even level of uncertainty about the materials that are restricted to each bin.

	UK Students (n=22)	Chinese Students (n=10)	All Other Students (n=48)
"On campus, I recycle as much as I can." (3.1)	3.81	4	4.11
"I am certain about what materials go in which bin." (3.2)	3.43	3.6	3.46
"I am satisfied with the design of the waste separation in general." (3.4)	3.14	3.9	3.52
"I trust the university recycling service to send my waste to the correct processing facilities." (3.7)	2.71	4.2	3.64

Fig. Two

These results prompted an investigation into further factors. Variation of opinion was most notable when comparing those who lived with and without public recycling prior to LSE. Figure three shows that the 15% of students in the "no" category were 10% less likely to recycle on campus and felt 8.5% more strongly that the university should further promote recycling. The "no" subset comprised students from a diversity of countries, including the UK, Saudi Arabia, India, and France.

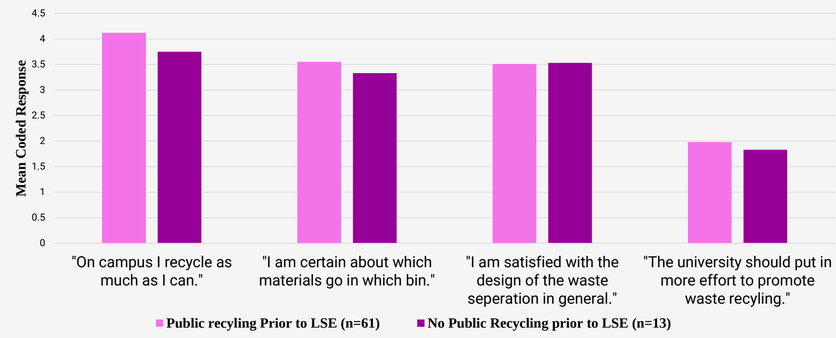

Fig. Three

The lowest mean score for section three concerned whether the university should further promote recycling. This statement was reverse-coded, with a score of 1.98 indicating student dissatisfaction. No differences in section three responses were found when comparing students on one-year and multiyear courses. Hence, those at the university for a longer period do not typically invest further into understanding the recycling service. Students were also 27% less likely to recycle at home compared to at LSE. A larger dataset would assign greater validity to the results. It must be considered that some respondents would start selecting the same Likert category repeatedly. Equally, it is common for behaviours perceived as undesirable by the respondent, such as opting not to recycle, to be underreported (Groves et al., 2004).

Recommendations

- Release a line of posters in high footfall areas that visualise how to separate common waste such as coffee cups and meal deal packaging. Responses showed students of all demographics were confused about the sorting of waste materials. Posters would simplify the consumption of recycling information for students.
- Circulate an email to all new students, summarizing what can be recycled and the corresponding colours of designated bins, similar to the online facilities guide posted by the Estates Division. This would help inform those who did not have a recycling service prior to moving to LSE.
- Make the colour-coding of the recyclable waste, organic waste and non-recyclable waste bins clearer. This was suggested on the margin of two surveys. Then colour-code the examples on the posters accordingly, providing students with a cognitive shortcut when separating their waste.

References

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