

# Using Food Related Images to Explore Food Values and Belonging in University Staff and Students

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### Abstract

Food has multiple roles within individuals' lives, with the potential to bridge gaps between different groups and enhance belonging. This project sought to explore through food-related images submitted by staff and students, the themes and values identified, and explore whether taking part enhanced belonging at university. Data were collected using a questionnaire and optional interviews. The questionnaire included information about demographics, food-related questions, and a link to upload a food-related image. University staff and students were invited to participate by email. A total of 23 staff and 67 students filled in questionnaires, and 13 interviews (4 staff and 9 students) were completed.

Multiple themes were identified from the findings. These included food as an evocation of place, time and people; food in relation to tradition; the use of food to bring people together and to share, and food-related skills such as cooking and growing. Health and wider themes such as the environment and global warming were also highlighted. Demographic, study or work characteristics had little impact on either food-related beliefs and behaviours or sense of belonging at the institution. Participation increased sense of belonging in 39% of staff and 49% of student participants. Decrease in the sense of belonging was not observed.

### Introduction

Belonging and developing a sense of connection to an institution, is important for

both students (Thomas, 2012) and staff (O'Brennan et al., 2017). Belonging has four components: social and academic connections, personal space and surroundings (Ahn & Davis, 2019). For those from atypical backgrounds, belonging may be more difficult for a variety of reasons (Reay, 2010; Wainwright & Marandet, 2010; Waite, 2013; O'Shea, 2015, 2016; Southall et al., 2016; Barnes et al., 2021). Food is intrinsic to every culture and community with multiple meanings including personal, cultural, religious and health-related associations (Lupton, 1994; Rozin, 2005; Williams et al., 2012). It can be used to help people belong or potentially weaponised to 'other' them (DeSoucey, 2010; Ion, 2020). The current educational climate recognises the importance of valuing and supporting ethnic and cultural diversity (Basit & Tomlinson, 2012; LERU, 2019; OECD, 2020).

Food experience represents a potential mechanism to understand cultural experiences and perspectives. This project explored whether participation in the project enhanced belonging at the university among participants. It also sought to understand, using food-related images and interviews, the role and importance of food in the lives of higher education staff and students at a large diverse UK university with a widening participation focus. It recognised and celebrated cultural diversity through the invitation to participate, the value acknowledged in each image and interview and the sharing of the project outcomes.

## Methods

All university staff and students were eligible to take part. Data were collected using a short bespoke online tool comprising distinct sections. One section collected participant demographic (for example age, gender, ethnicity), and study characteristics (for example year and mode of study or work). Another section included a link through which participants were asked to submit an image which represented their food values or experiences (images could not contain identifiable people). They were asked to explain the personal meaning and value of the image, and why they had chosen it. They were also asked to rate their levels of agreement with a series of food-related and belonging-related statements (the latter adapted from Gehlbach, 2015; Gehlbach & Brinkworth, 2011 & Yorke, 2016), using a 5 point Likert rating scale (from 'strongly agree' to 'strongly disagree'). Finally, participants rated their sense of belonging at the university and whether and how participation in this project affected it. Participants were also offered the option of taking part in interviews held online or face-to-face, as preferred.

Participants were invited to participate via university email addresses and module lists. Those who wished to be interviewed submitted their university contact details to organise the interviews. Data were downloaded from Microsoft Forms into Excel and coded; quantitative data were analysed using IBM SPSS version 27. Kruskal Wallis tests with posthoc Dunn's adjusted for ties and Bonferroni correction were used to assess the impact of demographic characteristics upon levels of agreement with food and belonging statements. Chi square tests were used to establish if there were differences between staff and student responses to questions. A cut-off value of  $p < 0.05$  was used to establish statistical significance. Finally, reliability analysis between staff and students for similar statements was carried out using Cronbach's analysis.

## Results

A total of 67 students and 23 university staff completed the questionnaires. An additional 4 staff and 9 student interviews were carried out. No secondary data were used.

### Demographics

Most student participants were aged 18-21 years; by contrast, the majority of staff were aged  $\geq 30$  years. In both groups, female participants predominated. The majority of staff (74%) were white while student participants were more ethnically diverse. No staff participants considered themselves to have a disability while 8% of students did. The majority of both groups were full-time, and most spent at least 45 mins commuting each way to campus either 'usually' or 'often' (Table 1). The majority of staff participants taught both under- and post-graduate students (30%) or were in non-academic jobs (48%) (data not shown).

### Responses to food statements

There were no significant differences between staff and students in responses to food-related statements ( $p > 0.05$ , data not shown).

### Staff responses to food statements

Among staff there were no significant differences in responses by gender, ethnicity, age, disability, type of job (academic vs. non-academic), levels taught, campus or mode of work (full vs. part-time). However, those who 'usually' travel at least 45 mins each way to campus were significantly less likely to strongly agree that they usually did the food shopping compared with those who 'seldom' commuted ( $p = 0.03$ ).

### Student responses to food statements

Among students, there were no significant differences in responses by gender, disability, campus or mode of study. Those not in paid work were significantly less likely to try new recipes than those in paid work ( $p = 0.00$ ). Those who were not first-in-family to university were significantly less likely to agree that they 'would eat anything, they were not too bothered' compared with those who were first-in-family ( $p = 0.00$ ).

Those living at home with the family were significantly less likely to do the cooking most days or usually do the food shopping compared with those living in private accommodation with friends ( $p = 0.006$  &  $p = 0.002$  respectively).

<b>Age (years)</b>					
	<b>18-21</b>	<b>22-25</b>	<b>26-29</b>	<b>≥30</b>	
Staff (n=23)	1 (4.3)	0 (0.0)	0 (0.0)	22 (95.7)	
Students (n=67)	38 (56.7)	17 (25.4)	3 (4.5)	9 (13.4)	
<b>Gender</b>					
	<b>Female</b>	<b>Male</b>	<b>Non-binary</b>		
Staff (n=23)	18 (78.3)	5 (21.7)	0 (0.0)		
Students (n=67)	46 (68.7)	19 (28.4)	2 (2.9)		
<b>Ethnicity</b>					
	<b>White</b>	<b>Black</b>	<b>Asian</b>	<b>Mixed</b>	<b>Other</b>
Staff (n=22)*	17 (73.9)	3 (13.0)	0 (0.0)	0 (0.0)	2 (8.7)
Students (n=64)*	26 (38.8)	5 (7.5)	19 (28.4)	7 (10.4)	7 (10.4)
<b>Disability status</b>					
	<b>Yes</b>		<b>No</b>		
Staff (n=22)*	0 (0.0)		22 (95.7)		
Students (n=66)*	5 (7.5)		61 (91.0)		
<b>Mode of study/work</b>					
	<b>Full-time</b>		<b>Part-time</b>		
Staff (n=23)	18 (78.3)		5 (21.7)		
Students (n=67)	65 (97.0)		2 (3.0)		
<b>Commuting distance</b>					
	<b>Usually</b>	<b>Often</b>	<b>Seldom</b>	<b>Never</b>	
Staff (n=23)	6 (26.1)	6 (26.1)	5 (21.7)	6 (26.1)	
Students (n=67)	23 (34.3)	15 (22.4)	7 (10.4)	22 (32.8)	
<b>Length of time in HE (years)</b>					
	<b>0-5</b>	<b>5-10</b>	<b>10-15</b>	<b>≥15</b>	
Staff (n=22)*	7 (30.4)	6 (26.1)	4 (17.4)	5 (21.7)	

**Table 1:** Descriptive statistics of participant demographics. Data are expressed as numbers (%).

Those whose commute to university one-way was at least 45mins 'often' compared with 'never' were significantly less likely to usually do the cooking or the food shopping ( $p=0.02$  &  $p=0.001$  respectively). Those aged 18-21 years were significantly less likely to agree that healthy eating was a priority compared to those aged 22-25 years ( $p=0.05$ ), as were Asian compared with white students ( $p=0.04$ ).

### Belonging at Kingston University

There were no significant differences between staff and students in responses to belonging-related statements ( $p>0.05$ , data not shown). Among staff, overall sense of belonging was significantly lower in those who had worked in higher education for 5-10 or  $>15$  years compared with 0-5 years ( $p=0.02$  and  $p=0.04$  respectively). Postgraduate students were

significantly less likely to agree that the university was welcoming compared with Level 3 ( $p=0.00$ ) or Level 5 students ( $p=0.02$ ). Asian students were significantly less likely to agree that they are shown respect by university staff than white students ( $p=0.03$ ).

Taking part in the project increased sense of belonging at the university in more students than staff (49% vs. 39% respectively) and did not decrease it in any group (Table 2).

High levels of reliability were shown for statements about food for staff and students (Cronbach's alpha 0.78 and 0.73 respectively). Similarly, high levels of reliability for statements about belonging were seen in staff and students (Cronbach's alpha 0.87 for both groups).

In relation to my sense of belonging to this university, taking part in this project	Increased it	Decreased it	Made no difference
Staff (n=23)	9 (39.0)	0 (0.0)	14 (60.9)
Students (n=67)	33 (49.3)	0 (0.0)	34 (50.7)

\*Not all participants answered this question

**Table 2:** Impact of participation in the project upon sense of belonging to the university in staff and students. Data are expressed as numbers (%)

### Food functions

A total of 57 words were used by staff and 140 by students to describe the perceived functions of food. The most common four words for each

group are shown in Table 3. Clear overlap was apparent between the groups, with 'pleasure' or 'enjoyment' chosen most frequently by both.

Staff words (n=57)	Student words (n=140)
Enjoyment/pleasure 11 (19.3)	Pleasure 24 (17.1)
Nourishment 7 (12.3)	Fuel/energy 19 (13.6)
Fuel/energy 5 (8.8)	Health 11 (7.9)
Survival 5 (8.8)	Nutrition & taste. Both scored 10 (7.1)

**Table 3:** The four most common food functions identified by participants. Data expressed as numbers (%)

### Food images

#### Staff

Themes from staff food images included 'family' and the use of food for social occasions, celebrations, traditions and in conversation. They also included environmental themes and skills such as growing and cooking, food in relation to health and emotions such as memories of people, place and times (Figure 1).

#### Student responses

Similarly, 'family' was a major theme for student participants, as illustrated in these quotes: '*Mum's cooking just hits differently*' & '*I tried a lot of different cuisines, but in my heart, it is my mother's cooking, always*'.

Food represented a way of being with others: '*[Food] symbolises spending time with the family and interacting with no disruptions*'.

There was also a strong theme of aesthetic value of food: '*The right food should induce appetite, for me it's all about taste and colours*'.

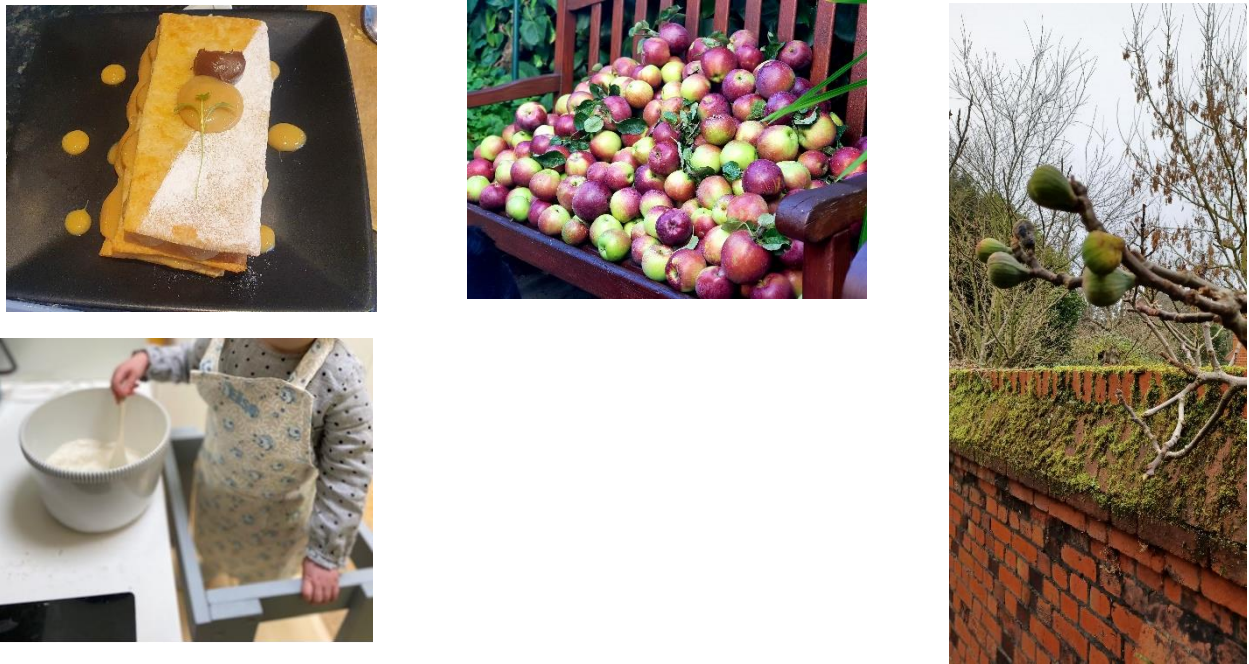
Using food to explore cultural and heritage and family connections was also apparent, as shown in Figure 2, which denotes two images shared by students.

## Discussion

### Impact of living circumstances on food-related behaviours

Longer commutes impacted on food-related behaviours like shopping and cooking in both staff and students, those with lengthy commutes to campus being significantly less likely to do the food shopping. Similarly, students living at home were significantly less likely to do the food shopping or cooking every day.





**Figure 1: Images from staff.** Clockwise from top left: *mille feuille* made in a friendly challenge to maintain connections across distance; organic apples grown in garden & shared with family, friends & local community; fig tree budding early, possible sign of global warming; family member learning to make cake for family celebration.

While this is understandable and frees up time, it also means responsibility for food choices is largely devolved to others. University is a key transition time for young adults, when health habits can be developed with potential to persist into adulthood (Mikkilä et al, 2005; Papadaki et al, 2007; Lake et al, 2009). Among UK university students, variable dietary habits have been shown, with males more likely to adopt unhealthier and more expensive eating habits (Sprake et al, 2018). Less healthy diets were also associated with unhealthy lifestyle behaviours like smoking. Weight gain is common among university students particularly in their first year (Finlayson et al, 2012; Nikolaou et al, 2014), important since prevalence of overweight and obesity are already high in England (NHS Digital, 2020). Gaining excess weight during young adulthood is associated with developing obesity in adulthood (Neumark-Sztainer et al, 2011; Guo et al, 2000), and obesity is a well-documented risk factor for mental and physical ill-health (PHE, 2018). Mental wellbeing is an important issue for university students (Tinsley, 2020;

Neves & Brown, 2022), and good nutrition contributes to mental and physical wellbeing. Given this, it is also of concern that younger students (18-21 years) and Asian students were less likely than other groups to consider healthy eating as a priority.

Students in paid work in this study were significantly more likely to try new recipes. This was a relatively small study, but if this finding were replicated it could indicate that working students are mixing with a wider circle, being exposed to and influenced by more diverse external factors, or that because they are working they have more disposable income to try new foods. Limited income means that food choices are constrained and less risk with new foods can be taken (King et al, 2015), and many students are recognised as food insecure (Bruening et al, 2017; Hagedorn-Hatfield et al, 2022). A survey of students in higher education carried out in April 2020 in 1 US and 3 UK universities found that almost 35% of respondents reported low or very low levels of food security; and 41% were



*'This is my grandmother with some squashes that we grew. This summer I spent a lot of time doing agricultural/farm work with her on the family 'Dacha' in Ukraine. It is hard work as we plant a lot on the acre of soil, and it has taught me the value and beauty of growing and collecting the food on your table. The labour makes you appreciate the luxury of everyday life in the city'.*



*'Apart from my dad, baklava was the only physical connection I had to a national identity I still know little about'.*

**Figure 2:** Students images denoting the interplay between food, family, culture and values.

concerned that their food would run out. In addition, mental health was associated with level of food security (Defeyter et al, 2020). Those who were first-in-family to higher education were significantly more likely to agree that they 'would eat anything', which could indicate lack of discernment or openness to variety in the diet.

This data, while derived from a relatively small sample, suggests that work with students is needed both in relation to the importance of healthy eating but also to alleviate food insecurity if possible. This is an issue currently being discussed, given the cost-of-living crisis and further rise in bills likely at the start of the new academic year (Dickinson, 2021; Kernohan, 2021).

### **Functions of foods identified by participants**

Multiple functions of food were identified. Some of these were transactional, for example food as a fuel and a necessity for survival. However, the pleasure of food and eating was highlighted by both groups, as was the role of food in evoking people, place and time. Food and eating behaviours, while intensely personal, also shed light on society and relationships (Julier, 2013). Eating together has social,

communal and networking functions (Dunbar, 2017). As such, food and eating has the potential to enhance social relationships at university, of importance since establishing social relationships with peers and staff is an important part of developing a sense of connection or belonging at university (Ahn & Davis, 2019). Beyond this, several important themes were highlighted. The use of food to maintain relationships during the pandemic, enhanced understanding of the value of food grown through involvement in the labour of food production, the importance of time spent together cooking and preparing food and the role of food in marking special occasions (in this case, a birthday cake), were all themes identified by participants. While many of these have intense personal resonance, others have significance well beyond the individual. These include food production and global warming. Education for Sustainable Development (ESD) aims to address interconnected common problems which include climate change, loss of biodiversity, unsustainable use of resources, and inequality (UNESCO, 2022). Higher education has an important role to play in ensuring that graduates are global citizens (Horey et al, 2018), with the knowledge, skills and competencies required for a sustainability-focused future (Žalėnienė & Pereira, 2021).

That these sorts of values were expressed by participants in a project about belonging suggests that for at least some, food represented an important medium through which such values could be demonstrated, and highlights the multiple roles it plays in our lives.

### Impact of participation on belonging

Previous work has shown that sense of belonging to an institution was enhanced by a recipe and story-sharing initiative, increasing in 74% of participants (Mulrooney, 2021). By contrast, less of an effect was seen in this project, perhaps because food images lack some of the associations that recipes shared with family and friends, sometimes across generations, may have. Nonetheless, participation in this project increased belonging in a large proportion of participants (39% and 49% respectively in staff and students) and did not decrease it in any. Initiatives such as this have the advantage of being accessible to all, and do not require specialist knowledge. This offers the possibility of using food to help bridge cultural differences, and to enhance sense of connection within higher education. In addition, food epitomises many of the global principles which ESD seeks to embed, and as such represents an ideal medium for education.

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