The university campus and a sense of belonging: what do students think?

Hilda M. Mulrooney* & Alison F. Kelly

School of Life Sciences, Pharmacy & Chemistry, SEC Faculty, Kingston University, Penrhyn Road, Kingston upon Thames, London, UK.

*Corresponding author: Hilda.mulrooney@kingston.ac.uk

Abstract

The physical configuration of the university campus impacts upon student learning and experience, and can be used to signal institutional priorities. The extent to which campus, particularly in post 92 institutions, is designed as opposed to evolving as older buildings are repurposed or replaced is variable. Student experiences and perceptions of the campus physical space are also unclear. This study aimed to explore student perceptions using qualitative methods. Data were collected during 8 focus groups from 37 participants. The majority were young and female, with considerable ethnic diversity. Six major themes were identified, many of which did not directly relate to the physical space itself. Rather the impact upon students' emotional experience and engagement with the institution was emphasised. 'Belonging' was the most common theme; indicating that the nature of the physical space on campus is not neutral, but can affect the extent to which students can form attachments with each other and academic staff. 'Nature' was the second most commonly mentioned theme. Green space has therapeutic potential in stress management, important given mental health concerns in young people including students. The ideal campus as described by participants would include green non-smoking spaces with an emphasis on health promotion. Opportunities to include nature on campus should be taken, and future proposals to design the campus should canvas student views.

Introduction

Universities have multiple functions. They are primarily places of education and scholarship, teaching and research, but they are also important community hubs. In addition, their infrastructure can be used to reflect institutional priorities, such as sustainability (CABE, 2007), and to modify behaviours of campus users such as activity levels and eating behaviours (CABE, 2006). In this way, educational spaces form part of the physical capital of an area, and can be designed, maintained and managed to underpin priorities such as public health or sustainability (CABE, 2005a). The nature of the campus space is an important influence on how students learn and experience university (Band, 2012). This is not limited to the buildings but the wider campus space including outdoor space (Abu-Ghazzeh et al, 1999). While the formal teaching spaces such as classrooms, laboratories and studios place restrictions on the teaching and learning that can take place within them (Jamieson et al, 2000), the informal space also has an impact. Settling in at university includes developing relationships with peers and academic staff which help new students transition to higher education successfully (Thomas, 2012). Development of social communities is facilitated (or not) by the nature of the space available. It is also well known that natural landscapes are important for mental and physical health and wellbeing

(Ward Thompson, 2011). Mental health of students is an important and topical issue (Hubble & Bolton, 2020; UUK, 2015); the recent launch of Public Health England's *Every Mind Matters* mental health campaign for adults demonstrates national recognition of the need to support good mental health (PHE, 2019). Universities are also places where diverse groups intersect and different use of space by different groups may impact on their personal and educational experiences and feelings of belonging at university (Samura, 2018).

It makes sense that how the campus is designed impacts on the work of staff, learning and experience of students, use by the local community and the priorities of the institution. Yet campus development may happen less by design, more by the *ad hoc* repurposing and redevelopment of buildings which are historically present. Future-proofing of the campus tends to focus on aspects like the IT facilities available to students or the provision of landmark buildings (Rawlinson, 2019). However, while the facilities are undoubtedly important, flexible spaces which can be used for multiple purposes by different groups also matter (Morieson et al, 2018). Many UK post-92 institutions attract larger than average numbers of atypical students, such as mature, part-time, commuter or ethnic minority students (Wong, 2018). Their use of campus space may be different from those of other student groups, and it is important to explore this since campus space is not neutral but sends messages to groups about who and what is welcome on campus. This project aimed to explore student feelings about their campus, using a qualitative approach among a diverse group.

Methods

As part of a larger project examining the nature of the physical space on campus and whether and how it matched student expectations, a series of short activity sessions was held at the university. Ethics approval for the project, including these sessions, was received from the Faculty Research Ethics committee. These informal sessions were held in spaces frequented by students, such as the social and group study area of the library, and a large shared space used by students to socialise,

study and eat. Data were gathered on two of the four university campuses: the busiest campus (Science) and a smaller Arts campus. For context, they are in close proximity, approximately 5 minutes walk apart, but quite different in character.

The Science campus is home to approximately 6000 students across two faculties and many of the buildings are old, inherited from the previous incarnation as a technical college. A small students' union is based at this campus, the front of which opens onto a busy road and there is access through the main building directly to the back and onto a car park. As a result, the facility is constrained in terms of space. By contrast, although only a 5-minute walk away, the Arts campus is much smaller, housing approximately 4000 students whose work is often exhibited in the large, open area directly off the entrance which is backed by a wall of glass. Both campuses have had a lot of construction on the last 18 months; a large open plan 'statement' building with a new library, dance studios and community hub on the Science campus, and a new set of studios for the Arts campus.

Participants were approached at random as they passed by or where they sat and invited to participate. Those who did completed a short survey to enable characterisation of the sample by demographic (e.g. age, gender & ethnicity) and study characteristics (e.g. mode and year of study, commute time & distance).

A range of materials were laid out on large tables and participants were invited to choose any or all of them to exemplify their feelings about the physical space of their campus, its strengths and weaknesses and how they would improve it, if they could. Sessions were intentionally informal and open-ended. Materials used included Lego, Evoke cards (cards with an image and emotion word on alternate sides), catalogues, the university prospectus, flipchart pages and pens. Once participants had chosen as many of the materials as they wished, they laid them out on a blank page and talked about why they had made their choices and what the items represented to them. Conversations were voice-recorded (using Olympus Digital Voice Recorder WS-893); additional contemporaneous written notes were taken.

Two facilitators were present at each session. Their role was solely to clarify any ambiguities and ensure that each choice was thoroughly discussed. Materials chosen were also photographed as a visual record.

Data analysis

The conversations and notes were collated and analysed using basic thematic analysis. Demographic and study characteristics of the group were collated and tabulated. Visual artefacts were collated and recorded.

Results

A total of eight focus groups were held over a period of three months. Thirty seven students participated. The majority of participants were female and aged between 18-21 years. Just over a third were white. The ethnic diversity apparent in the sample is similar to that of the institutional faculty, although a lower proportion of Asian students and a slightly higher proportion of White students took part (Faculty data for 2019/20 was White 27.5%; Black 16.6%; Asian 40.8%; mixed 13.7%; PNS 1.3%). Demographic characteristics are shown in table 1.

The majority of participants were studying full time. While a small proportion of respondents were either foundation (Level 3) or postgraduate students, there were similar proportions of Level 4, 5 and 6 respondents. Almost half of the participants travelled 0-2 miles to campus, while almost a quarter travelled >6 miles. The average travel times were 0-30 mins. However, 27% of the student sample had a travel time of between 60-120 mins. Public transport or mixed modes of transport were most frequently used. Study characteristic data are shown in table 2.

A total of 171 comments about the campus' were made, which fell within 6 major themes. These, along with subthemes and illustrative comments are shown in Table 3.

A number of artefacts are shown as examples of the dual representation of the same campus by two different students on separate occasions (figures 1 & 2). Representation of the 'ideal campus' identified by different participants is shown in figure 3.

Gender					
Male			Female		
4 (10.8)			33 (89.2)		
Age[1]					
18-21 years		22-25 years	26-29 years		≥30 years
26 (70.3)		6 (16.2)	3 (8.1)		1 (2.7)
Ethnicity					
White	Black	Asian	Mixed	Other	PNS
13 (35.1)	6 (16.2)	6 (16.2)	3 (8.1)	8 (21.6)	1 (2.7)

Table 1 Demographic characteristics of student focus group participants, expressed as numbers (%). [1]One participant did not state age (2.7%).

Mode of study					
Full time			Part time		
35 (94.6)			2 (5.4)		
Level of study					
Level 3	Level 4	Level 5	Level 6	Postgraduate	PNS
1 (2.7)	12 (32.4)	12 (32.4)	10 (27.0)	1 (2.7)	1 (2.7)
Distance from campus[1]					
0-2miles		2-4miles	4-6miles		>6miles
16 (43.2)		6 (16.2)	3 (8.1)		9 (24.3)
Travel time to campus[1]					
0-15 mins	15-30 mins	30-60 mins	60-90 mins	90-120 mins	>120 mins
13 (35.1)	8 (21.6)	2 (5.4)	5 (13.5)	5 (13.5)	1 (2.7)
Travel mode to university[1]					
Uni bus	Walk	Cycle	Public transport	Drive	Mixture of modes
2 (5.4)	10 (27.0)	1 (2.7)	12 (32.4)	1 (2.7)	8 (21.6)

Table 2 Study characteristics of student focus group members, expressed as numbers (%). [1]Three participants preferred not to state distance from campus, travel time or mode of travel (8.1%).

Figure 1 Evoke cards chosen to illustrate the crowded, concrete busy town campus

Theme	Subthemes	Illustrative comments
Belonging (*n*=44; 25.7%)	Collaboration; Community; Relationships with staff & peers; Comfortable; At home; Accepted; Inclusion; Teamwork; Safe	*'Trust everyone. Feels homely. Feels like everyone looks out for each other. It's a mix of the people and the place. Security after 9pm makes it feel safe to work late'.* *'Comfortable here, get work done. Creative space. Feel at home here'.*
Nature (*n*=27; 15.8%)	Green space; Outdoors; Wildlife; Calm; Natural	*'River itself helps to inspire; check with nature & it has the answers. Helps to gather people around. Bench by the river – people gather in the space there. Share ideas/materials/where to buy things. Triggers collaboration'.*
Crowded (*n*=24; 14.0%)	Distractions; Noise; Hectic; Disruption; Out of control; Lively; Happening	*'Need to slow down and walk slowly as [campus] is so cramped and crowded'.* *'Feels very difficult to get from one part of the campus to another and takes time which is irritating'.*
Monotone (*n*=12; 7.0%)	Grey; Lack of colour; Mood; Motivation	*'Strong sense of order plus the grey tones'.* *'Want to focus on the colours, don't want people to work in grey and white colours. Affects your mood'.*
Encouragement (*n*=10; 5.8%)	Guide; Help; Support	*'Lecturers concerned about you, always reaching out'.*
Space (*n*=7; 4.1%)	Open; Freedom; Perspective	*'Like the openness of library but problem of noise as a result'.* *'Sound travels, open plan, can't make them quiet'* *'Library is so open, people stay for long periods. Has high ceilings; low ceilings would feel like suffocating'.* *'Like the library, space & light. +++knowledge gained there'.*

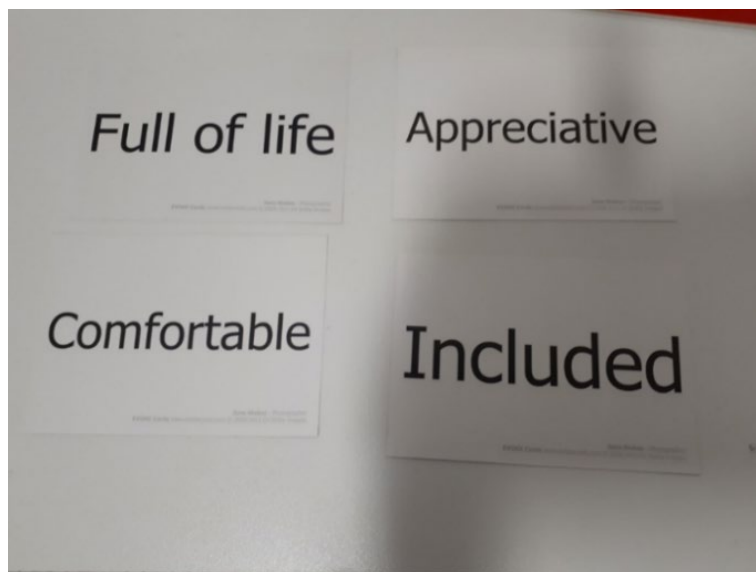**Table 3** The main themes and subthemes identified by focus group participants.

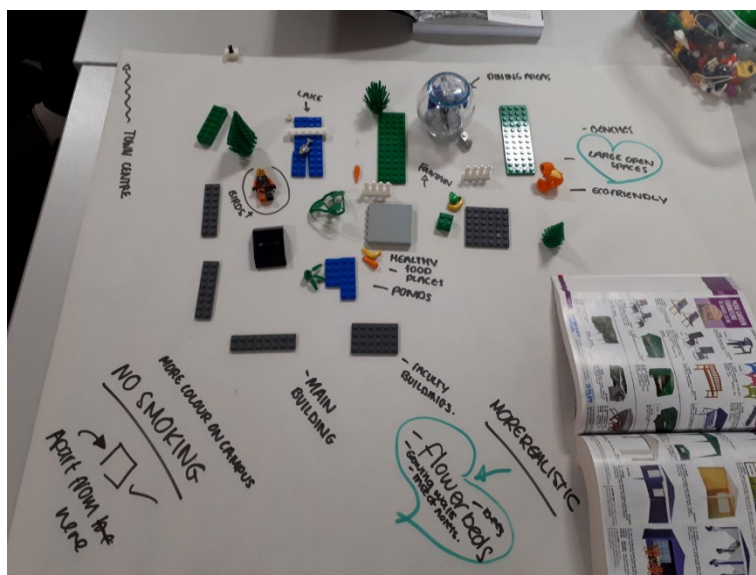**Figure 2** Evoke cards chosen to illustrate liveliness & inclusivity of the same busy town campus.

Figure 3 The 'ideal campus' constructed by participants, with a focus on enhancing the current campus by incorporating nature & highlighting health.

Discussion

Although the subject of this project was the physical space on campus, the main themes raised by participants were belonging, integration of nature on to the campus (or not), use of light and colour and support from staff. These are not themes that might typically spring to mind when 'physical space' is mentioned, but it was quickly apparent that how students related to physical space on campus was primarily emotional, resulting in feelings of belonging or not belonging. When they thought about the physical space and how it made them feel, the emotions they described such as 'accepted', 'inclusive', 'comfortable' and 'safe' all related to the overall 'vibe' of the campus, rather than to specific physical spaces. In fact, specific spaces and buildings were rarely mentioned; rather students focused on the overall feeling they had from their campus. The fact that belonging, and emotions related to belonging, were mentioned so frequently is important, given the links between a sense of belonging and improved attainment and retention in both university (Strayhorn, 2012; Hausman et al, 2009; Freeman et al, 2007; Thomas et al, 2017) and school students (Dwyer 2017; Korpershoek et al, 2019; Oldfield et al, 2019; Rivera Munoz et al, 2019).

'Belonging' is not a single concept but has been shown to include four domains: academic & social engagement, surroundings and personal space (Ahn & Davis, 2019). It is variously described as 'cared for' 'safe', 'at home', 'one of the family', 'included' (Ahn, 2020; Cureton & Gravestock, 2019). Many of these terms were also used by our participants to embody their feelings of belonging. In addition, 'inclusion' was used; important in light of the diverse nature of the student and staff body at this institution, which is a post-92 university with a strong focus on widening participation. Participants themselves made overt links between belonging and academic achievement. The importance of feeling comfortable and safe in relation to freeing up mental capacity to work was summarised by one participant:

'Comfortable here, get work done. Creative space. Feel at home here' [Science campus, White female]

Contrary to the subject of the project, no single specific physical space was highlighted with relation to belonging, rather it appeared to relate primarily to the relationships students formed with each other and with staff. It appeared that the spaces on campus contributed to the development and maintenance of social relationships. Along with peer friendships, relationships with staff have been highlighted as important contributors to a sense of belonging in students (Levett-Jones et al, 2009). It has been suggested that part of the successful transition to higher education involves developing a secure student identity, to which support from academic staff contributes (O'Sullivan et al, 2019). A feeling of mattering to academic staff, and of being personally known by them, is an important signal to students that they are individuals and that the university is not an impersonal space, but one in which each student is valued.

'When I started uni I could see the horizon. Knew what I wanted but someone else could guide me & show me the way' [Science campus, black female]

'Comfortable. Accepted by staff & teachers' [Science campus, female, mixed race]

Nature, and green space, was the second most frequently mentioned theme, and it was raised in discussions on both campuses. In the Arts campus the discussion was very positive. The proximity to outdoor space by the river was equated with creativity and collaboration. One participant spoke of a bench by the river where ideas were shared in casual conversations:

'Helps to gather people around. Bench by the river – people gather in the space there. Share ideas/materials/where to buy things. Triggers collaboration' [Arts campus, White male]

Therefore, the outdoor relaxed informal space contributed both to social and learning opportunities. Informal learning spaces, including the outdoors, are recognised as providing important opportunities for social networking and the development of informal peer support networks (Abu-Ghazzeh, 1999; Harrop & Turpin, 2013), potentially enhancing learning (Waldock et al, 2017). Nature is recognised as important in building enthusiasm and resilience in children, motivating them to learn (CABE, 2004). However, evidence of direct relationships between improved learning outcomes and informal learning spaces are lacking (Berman, 2020). Instead it is proposed that informal spaces and how they may promote a sense of belonging among students, thus affecting their experience, should be explored (Matthews et al, 2011). We have no evidence that our participants actually had improved learning outcomes from their use of informal spaces. However, they described how the spaces themselves facilitated social interactions and enhanced collaboration, which is likely to improve their experience at least.

In addition to potentially enhancing learning and social relationships, outdoor space has an important role to play in physical and mental health, and reduces stress and boredom among students (Abu-Ghazzeh, 1999; Lu & Fu, 2019). While green space is recognised as therapeutic in stress management, research suggests that different types of outdoor spaces are used differently by patient groups, so knowledge of the interactions between people and green space is needed to optimise provision within a medical context (Ivarsson & Grahn, 2012). The university campus is used

by diverse groups, from young students to staff nearing retirement, as well as community members. Therefore, a variety of outdoor space is required to reflect this diversity of use, and how this should be configured should be informed by input from users.

On the Science campus, which is a largely concrete space with very limited outdoor space, the discussions about nature were less positive and more wistful. Students spoke of their wish for more green space, whilst acknowledging the difficulties of integrating this into a small campus where space is at a premium. A pragmatic approach was expressed by some participants, who spoke of improving what was already there rather than starting from scratch. Adding in features such as insect hotels, birdfeeders, growing walls, seating areas and bat boxes were all practical suggestions made which could be implemented. However, some students suggested that where outdoor seating is available, they did not tend to use it, seeing it as the province of smokers:

> *'The cigarette smell prevented myself from sitting down there and catching up with people'* [Science campus, white female]

This illustrates that space is experienced differently by different groups. Non-smokers felt unwelcome to use the limited outdoor space available because it is used by smokers. The so-called 'spatial cues' (Samura, 2018) embedded within physical space signal the behaviours which are, and are not permissible, and the ownership of the space by different groups. Perception of a space requires three types of knowledge; knowledge of its attributes, how it makes users feel and the behaviours that are permissible there (Abu-Ghazzeh, 1999). As one participant stated:

> '*How a place makes you feel is very important'* [Arts campus, Asian male]

Higher education establishments can use their physical infrastructure to signal their priorities, and it is feasible that smoking could, arguably should, be banned entirely from the university campus. If this were done the outdoor space would feel quite different, perhaps feeling more welcoming to non-smokers, who are subtly

discouraged from using it at present, because they object to the smell of tobacco and the health consequences of second-hand smoking. In fact, health was a subject that was highlighted by participants, both directly in relation to smoking and the provision of healthy foods on campus, and indirectly through discussions of the calming influences of green spaces. These are illustrated in Figure 3, an artefact of the ideal campus constructed by participants.

Comments about the degree of crowding on the Science campus were expressed by several participants. For some participants this was positive, and gave them a feeling of campus being a 'happening' place, the place to be:

> *'Always something happening'* [Science campus, female other ethnic groups]

> *'Full of life, busy. Everything going on here – people of all different backgrounds'* [Science campus, white female]

This illustrates the importance of social networks and the use of extracurricular opportunities like clubs and societies to supply those. Social networks and good relationships with peers contribute to a sense of belonging (Meehan & Howells, 2018), so even if many of the opportunities to develop them are extracurricular, their development is arguably an academic concern. However, this positive view was not universal and for the majority of participants, the degree of crowding limited their ability to move freely around the campus or to find suitable places to eat or work, which frustrated them. One participant chose a figurine of The Hulk to illustrate this which she said was:

> *'Me, when trying to work with the noise'* [Science campus, white female]

Figures 1 and 2 show the conflicting views of the same busy campus by participants. In one case the grey concrete monotony, in which difficulties navigating the crowds and finding suitable places to sit, eat and work (figure 1), is viewed as a comfortable lively place in which a

lot is going on, and the participant feels welcomed, enthused and included (figure 2). Crowded spaces can be a positive for some, who enjoy the opportunities for social interaction, whereas others may feel overwhelmed, finding that they limit opportunities to think or to talk (Abu-Ghazzeh, 1999). Areas of pedestrian flow, especially outdoors, should be examined to see where the pinch-points are and how they may be altered to encourage conversations and social interactions (Abu-Ghazzeh, 1999). Principles of inclusive design suggest that users should be consulted about the design of spaces, and that aspects such as signage, materials and lighting should be considered as well as major aspects such as accessibility for all (CABE, 2008). Our participants also discussed the impact of colour or lack of colour on campus, finding grey spaces monotonous and unmotivating. On the contrary, the use of colour and light were stimulating, not just personally but academically:

'Educational establishment greyish colours associated with little dimension. Colourful makes you want to be there. Stimulates brain in a positive way' [Arts campus, mature Asian female]

'Bright colours like yellow might make you feel more enthusiastic' [Arts campus, Asian male]

The library was a space that mattered to students and it was the only physical academic facility that was mentioned by our participants. While it was clearly of importance for study, it was also highlighted as a social space, illustrating the multiple uses of the same space by different groups. Libraries should support multiple types of learning (Waxman et al, 2007), so that group learning and individual study are accommodated. However, these differing functions of the library resulted in some tensions, in particular in relation to noise:

'I am someone who goes to the library to study…people don't respect the space…sound travels, open plan, can't shush them' [Arts campus, mature Asian female]

The provision of a landmark building in which a library was situated, resulted in tension between the functions of the library and those of the building, and the differing expectations of users. New buildings are not always viewed positively by users (Jamieson et al, 2000; CABE, 2005b), and it is important that the needs of learners are not secondary to the functions of buildings as public spaces or statements about the institution, or perceived to be so by students using them.

Overall, our qualitative data showed that experience of the physical infrastructure of the university could not be distinguished from their overall emotional relationship with the institution. University is far more than a set of buildings or facilities, and attending university is far more than gaining a qualification. The physical spaces on campus can contribute to a sense of belonging, in particular through provision of informal learning and social spaces, allowing students to meet each other and share ideas. How that might look will depend on the campus structure and the makeup of users, who should be consulted about potential changes to campus design, including buildings but also outdoor spaces. The use of the campus to overtly promote health through the provision of healthy foods, water fountains and opportunities to interact with nature (however limited) in a smoke-free environment should be investigated. In this way not only would institutions align with sustainability principles but would demonstrate that the mental and physical health and wellbeing of staff and students are a top priority.

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