



Student perspectives on building belonging through inclusive teaching and learning practices and learning opportunities

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Abstract

Fostering a sense of belonging is a priority in higher education. We used a qualitative approach to investigate how teaching and learning practices in a science curriculum and co-curricular opportunities in a student's journey influence their sense of belonging. We define co-curricular as opportunities where students can apply and develop the knowledge, skills and competencies acquired through their courses, such as paid placements, internships, and co-design curriculum initiatives. This study was conducted in partnership between staff and students, with co-created methodology and outputs. A thematic analysis of focus group data (N=23 students) identified three key areas which impact belonging: curriculum design which promotes diversity and adopts inclusive pedagogy and practice, designing inclusive co-curricular opportunities, and providing opportunities for students to build relationships and access appropriate levels of support in their learner journey. These findings provide nuanced insights into how belonging is experienced by students and, through the student voice, have enabled us to identify strategies both at the strategic and institutional level, as well as the curriculum level. These strategies can help foster a sense of belonging by adopting a holistic approach to students' learning experience which is underpinned by principles of inclusivity, active and authentic learning, and student co-creation.

Keywords

belonging, curriculum design, learning opportunities, inclusivity

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Introduction

A sense of belonging is increasingly recognised as an important aspect of student wellbeing and experience in higher education (HE) (Gilani, 2024). As universities' student bodies become more diverse, fostering an environment where all students feel a sense of belonging and wellbeing is important and difficult (Blake et al., 2022; Riva et al., 2024). Belonging in HE is defined as the extent to which students feel accepted, valued, included, supported, and can be their authentic selves within a university community (Goodenow, 1993; Lewis et al., 2016). Research suggests that students who feel a sense of belonging are more likely to persist and succeed academically (Hausmann et al., 2007); with belonging being identified as particularly crucial for marginalised or first-generation college students, who may face additional challenges in HE environments (Strayhorn, 2018). Previous research highlights the importance of students' learning experiences in supporting feelings of belonging (Blake et al., 2022). Whilst prior literature has looked at the relationship between institutional and teaching practices on belonging, there is a notable gap in the literature in relation to exploratory, qualitative investigations into learners' experiences and perceptions with teaching and learning practices and broader learning opportunities and how these can shape feelings of belonging in their course and the university (Allen et al., 2024).

Gaining a holistic in-depth understanding of these experiences, through the student voice, helps to enable the identification of potential challenges or barriers that students face towards feelings of belonging, as well as to uncover the nuanced ways in which teaching and learning practices, and broader learning opportunities, can impact belonging. Our findings provide valuable insights for educators and policymakers to develop student-centred recommendations in the design of inclusive learning experiences that foster belonging.

Students' learning experiences and feelings of belonging in higher education

Sense of belonging is influenced by a variety of factors in the student learning experience. A UK report released by HE sector organisations Pearson and Wonkhe in 2022, 'Building Belonging in Higher Education' (Blake et al., 2022), has been particularly influential on the UK HE sector. This report highlights the importance of inclusive pedagogy, and creating learning environments where all students feel included, valued and respected, regardless of their background or identity. This includes access to and accessibility of teaching and learning, and representation of diverse groups and voices in the course content. The report recommends a diverse curriculum, and it also recommends that the teaching staff body should be diverse and that individual teaching staff should be well trained in inclusive design and supporting diverse students (Blake et al., 2022). These recommendations are supported by the literature, whereby research suggests that when students see their backgrounds and experiences reflected in the curriculum, they are more likely to feel valued, engaged and a sense of belonging (Banks, 2001; Dewsbury & Brame, 2019). Furthermore, the presence of effective support systems, including academic advising, mental health services, and peer mentoring programmes, help students navigate the complexities of university life, promoting a positive campus climate, a sense of belonging, and enhancing student retention (Kahu & Nelson, 2018).

In addition to the core curriculum, the student learning journey also comprises broader, co-curricular learning opportunities. Such activities are not directly part of students' academic studies; rather they encompass opportunities including work placements, research internships, and opportunities to contribute to and co-design curriculum initiatives (Chapman et al., 2023). These are considered positive opportunities in a student's journey and demonstrate value beyond their curricular achievements that help secure jobs in an increasingly competitive labour market (Chapman et al., 2023). Winstone et al. (2022) argue that co-curricular activities play a significant role in the development of student identity, belonging and wellbeing, and are, therefore, a valuable learning opportunity for students. Dost & Mazzoli Smith (2023) also note that many students find it difficult to balance co-curricular activities with their studies. This can be attributed to paid work, caring responsibilities and whether students commute (Office for Students, 2024). Winstone et al. (2022) argue that the provision of opportunities that are accessible to a wide range of students would help promote equitable involvement in co-curricular activities. It is, therefore, important to identify what potential barriers may exist to access and participation, and how these experiences may influence students' feelings of belonging on their course and the university; gaining these insights will help to inform how co-curricular activities can be designed inclusively to remove such barriers.

The Pearson and Wonkhe 'Building Belonging' report also highlights the importance of the relationships students form within their academic community, positing that building strong, positive relationships can enhance students' sense of belonging, encouraging them to engage more deeply with their studies and university life (Blake et al., 2022). The report focuses primarily on connections with peers, exploring how these can be encouraged through classroom activities such as groupwork, but also touches on connections with academics, and other university staff. The report highlights strategies such as groupwork, social learning, communal course spaces, online or digital communities, and effective university communications in promoting meaningful interactions and a sense of belonging (Blake et al., 2022). Research indicates that connections in HE help mitigate feelings of isolation and stress, promoting overall wellbeing and resilience (Walton & Cohen, 2011), and that building these connections encourages positive interactions and support networks, thereby enabling students to thrive both academically and personally (Booker, 2016). It also supports students in adopting a 'deep approach' to learning through fostering greater levels of engagement and connection with their programmes (Biggs, 1994). It is, therefore, imperative to explore how these relationships can be facilitated through institutional practices, both inside and outside the classroom.

Student partnership and co-creation

Empowering students through partnership and co-creation, and actively seeking and valuing their voices, is an important aspect of belonging in HE. Furthermore, it acknowledges the role that students play in the creation and dissemination of knowledge within HE (Neary, 2020). Co-creation involves students working collaboratively, as partners, with educators and peers to design, implement and deliver aspects of their education (Lister et al., 2022). Bovill (2020) emphasises the benefits of co-creation, noting that it can lead to more relevant and meaningful learning experiences and higher levels of engagement and satisfaction. Co-creation can also question and challenge power imbalances in educational settings (Wilson et al., 2024), although never completely remove them (Neary, 2020). Cook-Sather (2020) argues that involving students in decision-

making processes can help create more democratic forms of education and help to validate student perspectives. However, this should be done in a meaningful way with training, payment, accreditation, support, and transparency about how student involvement has had an impact (Saunders, 2022).

Co-creation can also be adopted as part of the research process with students involved in some or all of the stages, including design, data collection, writing up, and dissemination of findings (Neary, 2020). This approach can promote belonging, confidence and wellbeing, as well as a sense of ownership and accountability among students. However, participatory practice in co-creation projects is not easy for staff or students. Research highlights that it can be time-consuming, costly and can require the development and application of different skillsets than business-as-usual practice (Lister et al., 2021, 2022). Furthermore, many students are becoming increasingly time-poor with the competing demands of study, paid work, caring responsibilities, health and wellbeing, and commuting reducing the time available to be involved in co-creation activities, with these inequalities weighted more heavily across different sociodemographic groups (Neves et al 2025). Perhaps for these reasons, the literature highlights that participation, at least in published research, tends to be tokenistic and that very few studies exist where participants have been involved throughout the entire research, including data analysis and dissemination (Jackson, 2008; Rix et al., 2020). However, it is important to keep in mind that what is important is the development of relationships of mutuality that can develop between staff and students and the creation of living knowledge (Roggero, 2011) wherein the students are the subject rather than the object of the educational process (Neary, 2020).

Current study

The present study adopts an exploratory, qualitative approach to investigate students' perceptions and experiences with their learning and co-curricular opportunities, and how these can support, strengthen or hinder sense of belonging in HE. Given that sense of belonging is often articulated as a multi-dimensional concept that is influenced by a variety of determinants (Allen et al., 2024), the present study focuses on both curricular and co-curricular learner experiences, to gain a holistic and nuanced understanding of how belonging is shaped through the learner journey.

A strong focus in this study is student partnership and co-creation throughout the entire research process. The focus groups were facilitated by UK undergraduate students from the School of Psychology (Author AE) and the School of Physics and Astronomy (Author GP) at the University of Nottingham, who were involved in the project as paid research assistants and had the additional role of being senior course representatives in the Faculty of Science, representing the student voice in key staff and student decision-making committees. Student partners were recruited via open recruitment across the Faculty of Science and received training in key aspects of the research process, including facilitating of focus groups. Student partners were involved in all aspects of the research, including co-designing of focus group questions, facilitating the focus groups, contributing to the writing of reports and publications, and in developing recommendations for practice based on the findings from this research. Student co-creation of these recommendations provided key insights into how changes in practice on the basis of these recommendations would be experienced by the wider student cohort, and thus, developed with the student perspective as the central focus.

Given that student belonging is a strength of feeling based on experiences, students themselves are best positioned to articulate it. Capturing student voice, in relation to perceptions and experiences, can offer valuable insights and an in-depth understanding into how these experiences may influence feelings of belonging (McDonald et al., 2024). Therefore, in addition to student partnership in the planning stages of the study, facilitating focus groups and developing recommendations for practice, the current research draws themes from learners' articulation of their experiences and belonging, and recommendations for practice through the focus groups.

Focus groups were deemed a useful data collection method in the context of this research, a decision that was co-created with student partners in this study, as it was felt that this provided a useful approach in capturing in-depth and nuanced accounts of students' experiences with their learning. Interactions between participants can often also lead to more elaborated accounts of experiences on a particular topic (Wilkinson, 1998). The study took place in a UK university using a diverse sample of undergraduate and postgraduate students, and where strategic focus involves supporting student belonging. This study forms part of a larger project conducted within the Advance HE 'Building Belonging' programme that took place in 2023-24.

Materials and methods

Participants

Undergraduate and taught postgraduate students were recruited across the Faculty of Science at the University of Nottingham through student course representatives, email, and social media, to take part in a focus group. Four focus groups were conducted in total. Students were provided with an inconvenience allowance of £15 for participation in the study.

Twenty-three students took part in the focus groups in March 2024, sharing their experiences of learning and teaching and co-curricular learning opportunities at the university. Fifteen participants were undergraduate students and eight were postgraduate students, from the following departments in the Faculty of Science: Biosciences, Chemistry, Computer Science, Mathematical Sciences, Physics and Astronomy, and Psychology. Participants' ages ranged from 19 – 31 years ($M = 21.05$, $SD = 2.82$). One participant did not report their age. Participant demographic information can be found in Table 1.

Table 1. Participant demographic information

Gender	Ethnicity	Learning difference or disability	Student status
Female (83%)	Asian (30%)	Presence of learning difference or disability (9%)	UK (65%)
Male (13%)	Black (22%)	Unsure (17%)	International (35%)
Non-binary (4%)	White (48%)	None (70%)	
		No response (4%)	

Procedure

Ethical approval was granted by the School of Psychology Ethics Committee at the University of Nottingham (Reference: F1509). Focus group questions were designed to capture students' experiences with their learning environment, some of which were adapted from McDonald et al. (2024), perceptions around inclusive learning and teaching practices, and feelings of belonging in their course and the university, as well as potential challenges or barriers to engagement and belonging. Students were also invited to share their experiences with engaging in co-curricular activities during their time at the university. The focus group questions were collaboratively created by students and staff. This dialogue helped to co-create a set of questions considered to be more accessible for focus group participants. Focus group questions can be found in Appendix 1.

Focus group discussions lasted between 90 and 120 minutes. Informed consent was obtained from participants prior to participation in the focus group. Discussions were audio recorded for transcription and analysis.

Data Analysis

Focus group data were analysed using inductive thematic analysis, following the methodological approach developed by Braun and Clarke (2006, 2012). This allowed us to develop a thematic map of students' learning experiences and feelings of belonging. Development of themes was driven by the data, rather than existing literature, with themes grounded in participants' responses. An essentialist/realist epistemological framework was adopted, where the focus of the analysis is on participants' experiences and the meanings of those experiences.

Results

Three themes were developed in the analysis associated with building belonging through the design of inclusive practices: (1) Inclusive pedagogy and curriculum, with two subthemes: (a) promoting and supporting diversity and (b) creating effective learning environments through inclusive approaches to teaching and learning; (2) Building inclusivity beyond the core curriculum; and (3) Relationships and broader support networks.

Theme 1: Inclusive pedagogy and curriculum

Theme 1 focuses on curriculum design, in particular, content and approaches to teaching and learning which impact inclusivity and belonging.

Subtheme 1: Promoting and supporting diversity

This subtheme reflects perceptions about the lack of alignment between the curriculum and students' background, skills, and prior educational experience.

Building ethnic diversity in the curriculum

Focus groups highlighted the need for strategies to build diversity in the curriculum, both in relation to content delivered and in how students engage in learning activities. Participants noted that Western cultural references may not be universally understood, with a negative impact on belonging. One participant commented: "90% of students are Chinese or Indian [on the course], but lecturers give [...] examples from Western pop culture [...] I saw students Google a lot of things [...] easier for people to hear examples

that they would understand. So, having more universal language or [...] give a brief explanation of what this is" (P2, FG 1).

Participants also discussed the benefits in creating diverse peer groups in the context of learning activities. They noted that people tend to form friendships based on background factors like ethnicity, culture, and language, which can reduce feelings of belonging for those who do not share these attributes. One participant commented, "[...] people tend to stick with each other if they have something in common like culture and language, and it makes me feel like I do not belong there" (P2, FG1). Therefore, creating opportunities to interact and collaborate with peers from different ethnic backgrounds in learning activities can positively contribute towards feelings of belonging. Students spoke of the benefits of lecturers assigning students to diverse groups, rather than enabling self-selection. One participant noted, "[in lab work] [...] if they're making a group of people, they make sure [it is comprised of] diverse people. So any [single] student won't feel like they do not belong [...]" (P1, FG4). Groupwork can further facilitate greater understanding of other cultures (e.g., "[...] we have done projects in groups [...] now we are totally aware about each other's culture [...] because of the groups"; P1, FG4).

Diversity in knowledge, prior experiences, and learning preferences

Focus group discussions revealed concerns about some lecturers' perceived lack of awareness of students' skills, knowledge, and prior educational experiences, which can hinder feelings of belonging. There was a feeling among participants that some lecturers did not understand the different educational and cultural experiences among increasingly diverse cohorts of students. This was felt strongly when lecturers made assumptions about students' subject knowledge. This often led to students feeling like an outsider, experiencing feelings of otherness, and detachment from their course. As one participant commented, "[...] people are coming from different backgrounds, maybe not everyone's done A-levels [...] you will have covered this [...] I'm the odd one out? [...] when there's [...] assumed knowledge or that comment is made, that is really hindering" (P3, FG1).

Students expressed similar feelings when lecturers used terms which were unfamiliar to them, particularly without further explanation, or presented high volumes of content, which can be overwhelming, e.g. "sometimes they put a lot of terms that I'm not [...] familiar with [...] sometimes they're not as specific with what terms mean ... the slides can be quite overwhelming because they put like quite a lot of information on there [...] where do I start" (P2, FG2).

International students commented on the challenges they experienced in transitioning to their course (e.g., from undergraduate to postgraduate studies, or from a non-UK university). As one participant commented: "[...] the degrees in [country] are [...] different than the UK [...] so there's a knowledge gap [...]" (P1, FG4), whilst another mentioned "[...] difficult to get good marks in the exam because in [country] the way of writing is different [...]" (P2, FG4).

Certain strategies, such as including visual aids and signposting content, were seen as helpful, particularly for neurodivergent students. As one participant commented, "[...] visual processing is something I struggle with [...] I find it more helpful if they put a visual aid on" (P4, FG1). Identifying appropriate means of communicating complex subjects, relevant to the discipline, can also support students in engaging with the content (e.g., "[...] in physics [...] people struggle [...] loads of equations [...] the best way of learning [...]

is writing it on a board, which actually allows people to process things at a reasonable speed [...]" (P5, FG1).

Subtheme 2: Creating effective learning environments through inclusive approaches to teaching and learning

This subtheme captures students' experiences and perceptions of inclusive teaching and learning practices and effective use of physical and virtual learning spaces, and how these contribute to feelings of belonging.

Space and place

Conversations focused on the use of space and perceptions around spatiality in teaching and learning. Participants commented on the challenges of back-to-back sessions (e.g., "[...] we had a block of four hours straight of just lectures [...] twice a week [...] so it was quite intense [...] my productivity [...] went down because I was kind of just exhausted [...]]" (P4, FG2), lack of attention breaks and a didactic 'chalk-and-talk' teaching approach. One participant noted that didactic teaching was not seen as supporting the learning of individuals with learning differences or disabilities (e.g., "I always think about ADHD [...] you're not gonna be able to sit there for two hours [...] and concentrate [...]]" (P3, FG3), highlighting the importance of adopting broader, more inclusive teaching and learning practices.

Participants expressed that smaller group teaching can facilitate greater interaction between students and thus a stronger sense of belonging, compared to larger lecture classes. Emphasis, however, was also placed on 'lecture time' being utilised in better ways than mainly didactic teaching approaches, with responses highlighting that interactive activities can be incorporated in teaching and learning even in the context of large lecture theatres. For example, one participant commented, "[...] you could really incorporate better ways of using those 50 minute lecture slots [...] you could still be in the lecture theatres, but [...] you can't be talking for 50 minutes" (P4, FG3), whilst another participant suggested "[...] you have to include an activity [...] some specific time to do a question [...] talk to the person next to you or in small groups. You can still work in those lecture theatres" (P5, FG3).

Embedding opportunities for interactivity and engagement

Having opportunities for interactivity with content, peers, and teaching staff was talked about positively by participants. Active learning approaches to teaching were often discussed as reflecting inclusive teaching and learning practice (e.g., "inclusive teaching is [...] actively teaching [...] we have diverse students [...] the way of the teaching so that the student won't feel left out [...]"; P1, FG4), with a wider range of learning benefits for students. Participants also spoke about the benefits of group activities in facilitating knowledge exchange on a particular topic between students from various backgrounds, through a process of peer learning (e.g., "[...] a lot of students from different backgrounds [...] having a discussion [...] about that particular topic, this really helps [...] exchange our knowledge [...]"; P1, FG4).

Focus group conversations centred heavily on how to embed interactivity in the classroom to support inclusivity and engagement. Findings show that creating a balance between active learning and didactic teaching is preferable for students (e.g., "[...] We should be able to have a mix [...] the important thing is getting the balance right" (P5, FG1). Teaching sessions can be designed to incorporate a range of in-class activities, such

as small group discussions, short quizzes and longer activities. Interactive activities which may be seen as non-compulsory, unstructured, and where the objective for their inclusion in a teaching session is not clear to the learners can hinder engagement.

To encourage engagement, activities brought into the classroom need to, therefore, be seen as valuable and contributing towards learning and embedded in a structured way. Students spoke about how the use of technology to facilitate interactive activities can support engagement and sharing of ideas amongst all students, rather than engaging with particular groups of students within a lecture theatre (e.g., “[...] some lecturers [...] engage really with the front [...] rows, [...] the people who are sitting at the back or more to the middle [...] are not as involved with that”; P4, FG2), and can provide students with opportunities to input and share their ideas or enquire about content. For example, as one participant noted, “[lecturers] use [an audience response tool] in lectures ‘if you have any questions that you're like too shy to maybe raise your hand to talk about’” (P2, FG2). These findings illustrate the importance of designing strategies which facilitate inclusive means of embedding interactivity in the classroom.

Beyond teaching and learning in the physical space, the virtual learning environment and supporting technologies can facilitate learning and engagement. Lecture recordings support learning and ease pressure when students miss sessions and support them in coming in prepared for teaching sessions and staying on track. As one participant expressed, “[...] having all of those recordings [...] takes the [...] pressure of having to go to every single one, even if you're really ill [...]” (P4, FG2). Some international students who took part in our focus groups noted that recorded materials and transcripts support understanding of content (e.g., “[...] we get really problem with the accent [...] going through the record and reading the transcript, it's really helpful [...]” (P6, FG1).

Pre-lecture materials can support engagement in live sessions. For example, as one participant commented, “[...] we have one module where pre-lecture you have a recording of some material [...] you [...] need to watch [...] to prepare for the in-person lecture and it just lets you understand what we're talking about more” (P2, FG1). Focus groups discussions, however, suggest that when designing a blended learning approach to teaching and learning, this needs to be scheduled formally as part of a course and communicated to students, to manage expectations. As one participant suggested, “[...] schedule [...] time [...] look at your online resources, learn. And then you go in for this hour lecture and then you do something active [...] timetable it so that everyone's aware of it [...] if everything's timetabled and then the active learning takes place as well [...]” (P5, FG3).

Participants noted that the virtual learning environment is primarily used as a resource repository; whilst students acknowledged the benefits of its use to access resources, some commented on its low utility (e.g., “[...] Moodle [...] is just used for lecture recordings [...] you see the slides [...] and then some [...] papers [...] It's not used much” (P1, FG1). Asynchronous learning activities that facilitate engagement with content in a different format (e.g., laboratory simulations) and peer learning tools can support engagement (e.g., “[...] people can create their own questions and others will answer them”; P1, FG1).

Theme 2: Building inclusivity beyond the core curriculum

Theme 2 captures students' experiences with co-curricular and broader learning opportunities.

Co-curricular activities were generally seen as positive opportunities in a student's journey. Focus group discussions, however, revealed challenges in accessing and engaging with certain initiatives at the university. Some initiatives were perceived as more relevant to undergraduate than postgraduate students (e.g., "[...] a lot of career related opportunities [...] are mostly aimed at [...] undergraduates [...] because even their summer internships like I'm writing my dissertation in summer"; P2, FG 1).

International students felt that there were fewer opportunities available to them, such as internships. This was often attributed to restrictions on paid work. For example, one participant commented, "I can't do an internship and a lot of those opportunities are for people from the UK because as an international student [...] I'm only allowed to work 20 hours a week and I can count employers who would agree to do that on my fingers on one hand. So career opportunities for international students and for master's students [...] are non-existent [...] you feel like you're sort of a subsection of the university [...] because you're at all of those [careers-related] events and then you find out that they were not for you, or people who hold those events. They just don't know what to do with you [...] and you're just left with yourself" (P2, FG1). These findings also highlight the need for better awareness of and support associated with postgraduate student engagement with learning opportunities and employability.

Participants also noted that the timing and location of co-curricular opportunities are crucial, with most activities taking place over the summer (e.g., "I think my only barrier was, because mine was after my lease was up, which is why I couldn't stay to like do it because I had to leave..."; P2, FG 3). Other barriers include lack of funding for travel and accommodation for placements, as well as the voluntary nature of some of those opportunities. For example, one participant noted, "[...] the internships [...] are the summer period [...] I can't like leave work for like two weeks. They're not going to let me come back [...]" (P3, FG 3).

Theme 3: Relationships and broader support networks

This theme reflects perceptions and experiences about support mechanisms in a student's journey and how they can facilitate sense of belonging. These include opportunities to develop relationships with staff and peers, as well as to support students with studies and employability.

Building positive relationships with peers and staff

Opportunities for interaction with peers and teaching staff contribute towards a sense of belonging. Embedding personal and constructive interactions within programmes was also something that students commented on in the focus groups. Frequent interactions with tutor groups provide a feeling of belonging (e.g., "[...] We were randomly put in tutor groups [...] and [...] even if you do feel out of place, you see them every two weeks. So [...] you start to get more familiar with them and it helps [...]" (P9, FG1); whereas lack of contact from staff and where staff may be seen as not supporting students in their learning journey can hinder sense of belonging.

Small group teaching sessions and broader classroom interactivity help students meet others in their programme, fostering a sense of belonging. As one participant commented, "if they put me into a small group [...] and they asked me to answer a question with my group, I feel, as I can use the information they have taught me to contribute to better understanding what I'm being taught and helping others understand the content as well"

(P9, FG1). Gaining familiarity with peers can also facilitate student engagement in sessions, for example through contributing to the session and voicing their thinking or by asking questions. Some students further commented that low attendance from peers negatively impacts opportunities to develop belonging, suggesting the importance of attendance and connectivity in creating a sense of belonging.

Participants discussed the benefits of having spaces where staff and students can socialise outside formal teaching activities, which supports interactions. For example, one participant mentioned, "We quite often have [...] lunches and coffee together [lecturers and students] [...] that means I've gotten to know my lecturers on like quite a personal level which definitely helps if I have any troubles or questions [...]" (P6, FG2).

Broader level of support across the university

Participants spoke about the support available at the university and how this is linked with feelings of belonging. Careers-related support was identified as key, often impacting students' engagement with co-curricular opportunities. Similarly, communications for events on campus were often discussed positively (e.g., "[Student's department] they have a lot of activities [...] or spaces [...] to just socialize and they have things like LGBT [LGBTQIA+] office hours [...] they're pretty good at trying to make sure everyone's involved or can go talk to someone" (P3, FG 2).

Opportunities for students to obtain a learning support plan through the university's disability service was seen as positive. However, students felt that better signposting of support available would greatly benefit their learning experience (e.g., "I personally didn't think that the support plans were signposted well because I only found out about them existing like halfway through my first year [...]"; P3, FG2). This includes advice on financial support and dedicated support for international students. One participant commented, "Maybe if the university has systems in place for [...] help which are directed [...] for international students; I don't think they get enough information on all the aspects [...] such as how to get part-time jobs, if you wanted to add an industry year [...]" (P5, FG2). This highlights barriers to inclusivity around awareness and accessing student support, especially for international students.

Some students felt that being part of a larger cohort contributed to perceptions of less personalised support, whereby individualised support aligned with specific contexts would enhance a sense of belonging. For example, one participant commented "our course [...] because there's [...] so many people [...] it's so hard to actually [...] contact supervisors or anything like that to get help. Because everyone needs help [...] [to help facilitate feelings of belonging] Maybe [...] targeting the help that you need [...] Like in that situation [...] come for meeting [...] or I'll [...] pin posts into things other than the [standard course resource]" (P3, FG3).

Discussion

This study aimed to explore how students' learning experiences contribute to feelings of belonging within their courses and the broader university environment. The findings highlight three key areas that have an impact on student belonging: curriculum design which promotes diversity and adopts inclusive approaches to teaching and learning; designing inclusive co-curricular opportunities; and providing opportunities for students to build relationships and access appropriate levels of support throughout their learner journey. These findings have implications for practice at curriculum level and broader

institutional level strategy. As such, the discussion identifies changes that teaching staff can implement in their teaching practices and those that require strategic planning and structural change at faculty or institutional level.

Inclusive pedagogy and curriculum

Our findings highlight the need for institutions and teaching teams to recognise and respond to diversity associated with their student cohort's background, knowledge, and learning experiences.

Adopting a culturally responsive approach to learning

Adopting a culturally responsive approach to learning and teaching is one way to facilitate this change. This approach targets both the content covered in a programme and how content is delivered. Students discussed the need for greater diversity in curriculum content to reflect the distinctiveness of the student cohort and promote different standpoints, voices, and approaches to learning and teaching. These perspectives align with the decolonising the curriculum movement, which aims to reconnect, re-order and reclaim knowledge, and teaching methodologies that have been submerged, hidden or marginalised due to cultural biases and hidden curricula (Arshad 2021). Students commented that when they see their backgrounds and experiences reflected in their programmes, they are more likely to feel a sense of belonging, underlining the importance of diversifying curriculum content (Banks, 2001; Dewsbury & Brame, 2019).

A specific example highlighted by students that can negatively affect feelings of belonging was the use of Western-centric cultural references. While these references may be familiar to some, they are not universally understood and can alienate students from diverse backgrounds. One way to address this is for teaching staff and students to co-create content to ensure a range of cultural references are used and that they are explained and understood by all students (Laville et al., 2022). This approach not only promotes inclusivity but also enhances the overall learning experience by making it more relevant and accessible, which can contribute to feelings of empowerment and belonging (Aasebø & Willbergh, 2022). An institutional-level approach should also be adopted with appropriate structures in place to help shift change towards more culturally responsive approaches to learning through curriculum design, rather than just isolated efforts within specific curricula.

Group work was also identified by students as a strategy that can facilitate the development of connections between learning and support feelings of belonging, both in our findings and prior literature (Blake et al., 2022). Students in the focus groups spoke about the benefits of creating culturally diverse peer groups within learning activities and formal group assessments, as a means of supporting belonging as well as a means of integrating diverse viewpoints around course content. Students proposed that teaching teams are better placed to lead this rather than relying on students, who tend to form groups based on existing friendships or similar heritages. Cultural diversity within groups can help foster a sense of belonging and can promote improved behavioural and cognitive engagement when working collaboratively (Poort et al., 2020). Gibbs (2010) also found that when teachers created culturally and academically diverse groups, group work was more effective for formal assessments.

Implementing group work in learning and teaching activities with diverse groups is something that teaching staff can incorporate into their practice to enhance student belonging. However, it is important for teaching staff to design group work activities that promote inclusivity and support student engagement. Acknowledging that group work may pose challenges for some learners means it is important to consider inclusive practices associated with group work, particularly when formally integrated into curriculum design (Butcher & Lane, 2024). This includes providing support for students to engage effectively in group work and offering alternative means of engagement where reasonable adjustments are required.

Strategic planning should ensure that group work is formally integrated in curriculum design in a way that supports inclusivity and addresses potential challenges for some learners. This involves developing policies and resources to support inclusive work practices and enhance student experience and engagement. By addressing both these areas, teaching staff and universities can contribute to creating more inclusive and supportive learning environments that foster a sense of belonging.

Enhancing awareness of our student cohort

Students reported that teaching staff sometimes made assumptions about their prior learning experiences, subject knowledge, and academic skills. This was particularly felt during key transition points in their learning journeys, such as starting university, progressing through levels of study, e.g. undergraduate to postgraduate or moving to an overseas university (Cheng et al., 2021). When teaching staff assumed that students already understood certain foundational or threshold concepts, these topics were sometimes not covered or explained clearly. As a result, some students were left feeling confused or disadvantaged in their learning (Meyer & Land, 2006). This lack of clarity contributed to feelings of anxiety for some students, especially international students, and those who may already doubt their academic ability (Blake et al., 2022).

The findings suggest that strategic focus should be placed on understanding the characteristics of student cohorts, to enable institutions to identify and effectively address the diverse needs of students, thus promoting a high-quality academic experience for learners (Office for Students, n.d.). Strategies may include institutional dashboards, pre-arrival or post-arrival surveys.

These discussions further highlight the importance of inclusive pedagogy and curriculum design, whereby creating a supportive learning and teaching environment is crucial for students to feel safe to express difficulties with content and ask for additional scaffolding (Holley & Steiner, 2005). More thought needs to be given to the promoting and supporting of differentiation across content and delivery, ensuring that students with diverse educational needs and experiences have equal access to a meaningful learning environment where they can thrive and feel a sense of belonging (Jørgensen & Brogaard 2024, Morgan & O'Hara, 2023). This is referred to as differentiated instruction and uses students' levels of preparedness, motivation and learning preferences to adapt content and processes to support equal access to learning (Godor, 2021). Creating a more inclusive student experience encourages 'deep learning' and greater levels of engagement and connection to their programmes (Biggs, 1994).

Institutions should develop policies and provide appropriate resources to ensure a supportive learning and teaching environment, including integrating support mechanisms

into the curriculum, such as induction programmes, training for staff on how to create safe spaces for students to express challenges and request additional support.

Developing effective and inclusive modes of engagement to support belonging

Our findings show that active learning can promote inclusivity and a sense of belonging among students. However, the effectiveness of active learning depends on how it is integrated into the curriculum. As Kolomitro (2019) highlights, active learning can be either superficial or meaningful, depending on how it is executed. To be effective, learning must be clearly linked to learning outcomes and supported in ways that encourage student engagement. Our findings suggest that the design and delivery of active learning within the curriculum can significantly influence student engagement, aligning with previous research (McDonald et al., 2024).

Our findings also highlight the significant role that space and place play in learning, particularly in how teaching and learning spaces are used, often referred to as the learning landscape (Neary & Saunders, 2011). Students identified challenges they encountered in lecture theatres, noting how the physical set up tended to dictate the teaching approaches that were adopted. However, they also offered suggestions for using these spaces in more interactive ways to effectively facilitate collaboration. This highlights the importance of considering the learning landscape not only for its impact on learning and teaching but also for creating a sense of belonging. This includes rethinking how existing formal and informal learning spaces are used, as well as the design of any future learning and teaching spaces (Neary & Saunders, 2011).

Our findings also suggest that when blended learning is used effectively, especially when the purpose of the approach and expectations for both student and staff are clearly set out at the outset, can have a positive effect on student engagement and learning. In addition, students raised concerns about how teaching sessions are scheduled, specifically they reported difficulties with long teaching blocks scheduled on a single day, which often led to cognitive overload and reduced effectiveness. This is a structural barrier to effective learning and teaching that prioritises space utilisation over the effectiveness and experience of those spaces (Neary & Winn, 2009).

Designing inclusive co-curricular activities

Our findings show that access to and engagement with co-curricular activities is not equally distributed. Participants identified several barriers, including undertaking paid work, funding, location, timing, and perceptions about who these opportunities were for. These challenges have been further intensified by the cost-of-living crisis, which has seen an increase in students engaging in paid work (Advance HE, 2023a; Neves, 2025). Additionally, some students may also have caring responsibilities (de Main et al., 2022), health issues, or be commuter students. Other factors include transitioning into HE, cultural expectations, and staff support for co-curricular activities (Crabtree, 2023). However, what is required is more equitable access to co-curricular activities (Winstone et al., 2022), which is sensitive to the diverse circumstances of students and responsive to the barriers they face.

To address this, teaching staff can play an important role in promoting co-curricular activities in an inclusive way and integrating them into the core curriculum when

possible. Universities also need to review and adapt policies that ensure equitable access. This can include flexible scheduling of co-curricular activities, provide greater financial support, and recognise co-curricular activities within academic programmes as credit bearing modules so that they are visible and inclusive of all student demographics.

Relationships and Support

Our findings demonstrate the important role that relationships between peers and staff play in fostering feelings of belonging. Building these connections helps to increase confidence among students (Blake et al., 2022). Opportunities to build relationships should be intentionally designed into both formal and informal settings, encompassing classroom interaction, extra-curricular activities, and the wider student experience (Advance HE, 2023b). However, students discussed how low attendance within timetabled learning sessions can make building these relationships more difficult and given that students are becoming increasingly time poor, creating opportunities for relationship development within formal learning and teaching opportunities can be challenging. While low attendance can be attributed to increasing time pressure faced by students (Neves 2025), ensuring that learning and teaching is accessible, inclusive, active and is constructively aligned can help students see the value of attending and engaging (Biggs 1994)

Students also commented that relationship development could be facilitated through the personal tutoring system. Students valued contact from their personal tutor as well as the relationships they built with peers through the tutoring system (Wakelin, 2021). Teaching staff can enhance this by proactively engaging with students in one-to-one and small group formats, and by encouraging peer interaction within tutoring systems. A further means of facilitating belonging is via mentoring programmes, peer support networks, and providing opportunities within the classroom for greater social interaction and collaboration (Morgan, 2023). Students raised the impact of cohort sizes on developing relationships. While teaching staff can adapt their practice to maximise interaction (Wang & Calvano, 2022), addressing class sizes and resourcing smaller group teaching requires institutional level planning.

Students also discussed the importance of accessible and responsive support whilst at university. This includes careers, learning support plans and financial support. Having well-defined, articulated, and inclusive support systems is fundamental to building a sense of belonging (Blake et al., 2022). Furthermore, these systems can also help students scaffold their learning to help build independence and agency (Advance HE, 2023b).

From a strategic point of view, universities should embed support services within programmes and across university services has the greatest potential to address feelings of otherness and imposter syndrome (Blake et al., 2022). Developing student support networks can include pre-arrival sessions (for undergraduate and postgraduate students), inductions (such as welcome weeks), student support plans, wellbeing services, academic skills, and career services. Support can also be offered as curriculum-adjacent spaces that allow students to reflect and make sense of their learning and can be credit-bearing modules or timetabled personal tutorials (Maxwell & McVitty, 2023).

However, connecting student support services in a way that is not experienced as disjointed by students can be difficult (Maxwell & McVitty, 2023). Not only does this evidence the support that is required by students, but also the perceived issues around

accessing existing services. More is required to connect support services around the student (Maxwell & McVitty, 2023). Our findings highlight the importance of articulating and raising awareness of the support services that exist within the university. This could also be further supported with the greater inclusion of student voice and co-creation in the design and delivery of these services.

Limitations

The present investigation was conducted at a single Russell Group University within one specific faculty (Faculty of Science), which may limit the representativeness of the findings. Additionally, the sample group was self-selecting, which may have led to an overrepresentation of students who are more engaged, motivated or able to participate in the research and share their views. Further research on inclusive student experience and student belonging needs to include students with lower levels of engagement, willingness or ability to share their views. This would allow for a deeper and more rounded exploration of issues that affect inclusive student experience and students' sense of belonging within HE. Furthermore, a high percentage of the students were female (83%), which could introduce a gender bias into the findings limiting its applicability to the diverse composition of the student population. Nevertheless, despite these limitations, the research does provide a rich and contextual insight into inclusive student experience and sense of belonging within a Russell Group University that may be transferrable to similar HE institutions.

Conclusion

The research found that developing a sense of belonging was an important part of the HE experience for students. Not only does student belonging help create stronger bonds between students and their programmes, school, faculty and university, it can also support students to better engage with their studies by creating a more inclusive student experience. While the conceptual definitions of student belonging are contested, there are overlaps between them, especially when it comes to connection, inclusion, support. Taking an exploratory, holistic approach, the research encouraged students to articulate their own definitions and experiences of belonging. Inclusivity, active and authentic learning, and student co-creation are key principles that underpin the research findings of this study and are integral to curriculum design and planning, learning and teaching practices, co-curricular activities, and the development of supportive learning relationships with academics, peers and support services, offering valuable insights into how students experience inclusivity and belonging at university. The significance of these findings highlights the need for further research in this area, especially encouraging other HE institutions to explore inclusive practices and student belonging with less engaged students and those who are unwilling or unable to share their views to help gain a deeper and more rounded understanding and promote inclusive learning experiences and student belonging across the HE sector.

Declaration of interest statement

The authors have no relevant financial or non-financial competing interests to report.

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Appendices

Appendix 1. Focus group schedule

Experience with learning and teaching in students' programme of study

1. We would like you to think about a teaching session or a particular module in your course where you have engaged in active learning. Can you tell us about your experience and engagement with the session (or module)?
2. Overall, what have you found the most challenging, if anything, with sessions or modules adopting a more active learning approach?
Thinking about more didactic approaches to teaching (e.g., lectures), what do you feel are the benefits or challenges for you in terms of engagement and your broader experience in these types of sessions.
3. We would now like to focus on your experiences with your virtual learning environment (VLE) at the university. Can you tell us if you have experienced any challenges with your VLE?
4. What does inclusive teaching and learning mean to you?

Sense of belonging in the department and the university community

5. We would like you to consider your 'sense of belonging' in your School and university student and staff community. Firstly, what does sense of belonging mean to you?
6. We would now like to think about your feeling of belonging particularly in relation to your course.
Thinking about your feelings of 'belonging in your School's community', which aspects of your learning environment or broader learning experience in your

course do you feel help to support your feeling of belonging in your School's community?

7. Which aspects of your learning environment or broader learning experience in your course may hinder your feeling of belonging in your School's community.
8. What specific actions, strategies, or adjustments do you feel would enhance your sense of belonging in your course or School community?
9. Thinking about your learning experience more broadly, please outline any factors (e.g., personal, course design) which you feel may act as barriers to your engagement with aspects of your course.

Co-curricular learning experiences at the university

10. Have you engaged in any co-curricular learning experiences at the university, e.g. work placements, internships, practice or research-like activities? If so, which ones?
11. To what extent have you experienced any challenges or barriers in applying for any co-curricular learning experiences?
12. Have you experienced any barriers while involved in any of these co-curricular learning experiences?

Appendix 2. Themes and associated codes

Inclusive Pedagogy and Curriculum		Building inclusivity beyond the core curriculum	Relationships and broader support networks
Promoting and supporting diversity	Creating effective learning environments through inclusive approaches to teaching and learning		
<i>Building ethnic diversity in the curriculum</i>	<i>Space and place</i>		<i>Building positive relationships with peers and staff</i>
<ul style="list-style-type: none"> • Disconnect with course content (e.g., unfamiliar cultural references) • Lecturers creating opportunities for students to interact with peers from different ethnic backgrounds in teaching sessions contributes to belonging • Lecturers creating groups in sessions supports belonging, rather than students self-selecting groups • Engaging in group work as part of the course enables greater understanding of other people's culture 	<ul style="list-style-type: none"> • Attention breaks given in class support inclusive teaching practice • Lack of interactivity in class in a complex subject is challenging • Didactic teaching not supportive of individuals with learning differences • Blocked teaching negatively impacts learning experience (implications for timetabling) • Teaching time could be utilised better as opposed to pure lecturing • Smaller group sessions can facilitate peer interactions • Active learning can be incorporated in T&L even in large lecture theatres 	<ul style="list-style-type: none"> • Co-curricular activities seen as positive opportunities • Challenges in accessing and engaging with certain initiatives offered • Barriers to engagement include lack of funding, location of placements, timing • International students face barriers accessing co-curricular opportunities • Perceptions that co-curricular opportunities are better suited to undergraduate home students 	<ul style="list-style-type: none"> • Opportunities for interactions with peers and staff support belonging • Frequent interactions with tutor group enables meeting peers • Lack of staff contact/response hinders belonging • Small(er) group teaching facilitates belonging • Low attendance in teaching sessions negatively impacts on belonging on course • Challenging to voice opinion/contribute in a session if unfamiliar with peers

Inclusive Pedagogy and Curriculum		Building inclusivity beyond the core curriculum	Relationships and broader support networks
Promoting and supporting diversity	Creating effective learning environments through inclusive approaches to teaching and learning		
<p><i>Diversity in knowledge, prior experiences, and learning preferences</i></p> <ul style="list-style-type: none"> • International students experience knowledge gaps at key transition points leading to challenges with their course • Content perceived as too advanced and lecturer making assumptions about prior knowledge have a negative impact on belonging • Awareness of diverse educational backgrounds of incoming students important • High volume of complex content on slides and use of unfamiliar terms in teaching sessions contribute to feeling overwhelmed and 	<p><i>Embedding opportunities for interactivity and engagement</i></p> <ul style="list-style-type: none"> • Broader benefits of active learning experienced by students • Balance between active and didactic preferable • Students engage with interactive tasks when these are embedded in a structured way and the value and objective are made clear to students • Providing means for all students to engage in interactive tasks is important (e.g., use of technology to facilitate active learning, engagement and sharing of ideas in the classroom) • Availability of lecture recordings can ease pressure and support student learning • Digital resources through the VLE support student preparation for teaching and staying on track 	<ul style="list-style-type: none"> • Recruitment companies attending careers fairs lacking knowledge around PGT courses and eligibility • Awareness of opportunities available (e.g., through communications) supports belonging 	<ul style="list-style-type: none"> • Space to socialise with staff peers seen as supportive of belonging <p><i>Broader level of support across the university</i></p> <ul style="list-style-type: none"> • Opportunities to obtain support plan to support studies seen as positive • Tailored/individualised support aligned with students' context/circumstances supports belonging in course • Better signposting on accessing support is needed • Communications around events scheduled on campus discussed positively • Careers-related support can impact student

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<p>disengagement with content</p> <ul style="list-style-type: none"> • Diverse approaches to teaching helpful from a neurodivergent perspective 	<ul style="list-style-type: none"> • Creating a blended learning (e.g., flipped learning) environment that is timetabled and communicated to students supports engagement • VLE primarily used as a repository of T&L resources • Asynchronous online activities can support learning and facilitate peer learning 		<p>engagement with co-curricular opportunities</p> <ul style="list-style-type: none"> • Large cohorts contribute to feelings of less support available for individual students • Perceptions around lack of careers-related support and advice for international students