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Blended learning as a site of struggle: A critical realist analysis of students' perceptions of blended learning and its impact on their sense of belonging

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Blended learning as a site of struggle: A critical realist analysis of students' perceptions of blended learning and its impact on their sense of belonging

Abstract

This study explores students' perceptions of blended learning and its impact on their sense of belonging at a post-92 UK university. A critical realist framework that considers the interlocking domains of subjective experience, objective events and observations, and the mechanisms and structures that underpin them is used to situate these perceptions, while a mixed methods approach enables a multi-layered insight into the captured diversity of student experience. The quantitative and qualitative results demonstrate that while the student self-reported experience of blended delivery is mixed, its perceived impact on academic performance is negligible. The effects of blended and remote learning on students' sense of belonging, however, are profound and require a change in current practices to accommodate the affective aspects of learning and university experience. The study responds to the calls within the literature for more in-depth investigations of student experience, especially as regards student perceptions of that experience.

Practitioner Notes

1. Students do not perceive blended learning as intrinsically detrimental to their academic performance, including knowledge, skills, and academic confidence.
2. Blended and online learning have a negative impact on students' sense of belonging, and it ought to be prioritised in the blended learning context.
3. The sources of students' loss of belonging exist on multiple levels and require understanding of the macro and micro-drivers including university structures, socio-economic structures, teaching contexts, individual attributes, and application of technology.
4. A critical realist analysis reveals blended learning as a site of struggle where learning experience should not be equated with university experience.
5. Creating spaces for interaction and support, normalising learning as challenging, co-creating curricula with students, listening to their voice, and funding learning support services are some initiatives that promise to deliver meaningful change and improve student perceptions of their learning in the blended context.

Keywords

blended learning, student perceptions, sense of belonging, critical realism

Introduction

Blended learning (BL) has been widely recognised for its “transformative potential” (Garrison & Kanuka, 2004; Kaspar, 2018) in higher education (HE), especially when it comes to its versatility and increased opportunities for distributed learners. Nonetheless, the technological challenges it poses, alongside issues linked with policy, resources and support structures, have led to considerable resistance to the concept of blended practice in HE. It was the Covid-19 pandemic, which began affecting the UK in March 2020, that ultimately forced HE institutions to shift their traditional in person mode of delivery to blended (in theory but remote in practice) teaching, and do so in an abrupt way. Despite this mixed reputation attached to BL (Antunes et al., 2021; Lomer & Palmer, 2020), few studies have attempted to explore students’ perceptions of it, with most early research focusing on staff experience and technology (Torrissi-Steele & Drew, 2013; Bizami et al., 2023) and later investigations centred on assessing BL adoption and design while acknowledging its impact on students’ psychology and behaviour (Ashraf et al., 2021; Pokhrel & Chhetri, 2021). The context of the pandemic complicated BL further by temporarily moving all student experience into the realm of remote learning (RL) and losing all nuance between BL and RL.

Calls for more targeted consideration of students’ perceptions and understanding of higher education have been vocalised for some time now (Ashwin, 2009; Case & Marshall, 2009). This article is a response to these calls and contributes to the existing literature by approaching blended learning as a site of struggle (in the Freiran (1970) sense of seeking transformation) that exists on multiple levels, including personal, institutional and national, and which – when approached through the lens of critical realism – reveals the interlocking mechanisms that influence student perspectives on it. Critical realism, as a meta-theoretical position that sees the world as independent of our perceptions of it (Sayer, 2000), here anchors student experience in the mechanisms and structures that generate this experience, while avoiding some of the pitfalls of empiricism and interpretivism. It is predicated on not privileging either the subjective student agency or the objective social structure, but on seeing structure, culture, and agency as interlocking categories that offer a research approach with a rich insight into student experience with learning (Case, 2013). By seeing student experience through the lens of three domains: empirical (experiences), actual (events and observations that shape these experiences), and real (mechanisms and structures that influence these events), and by shifting the focus from “knowledge of manifest phenomena to knowledge of the structures that generate them” (Bhaskar, 1979), the critical realist perspective allows us to understand student experience, see the forces that shape it, and make recommendations for future actions that may improve it.

In line with the critical realist perspective, we began our inquiry into students’ perceptions of blended and remote learning by first looking into their self-reported experience of it, followed by a

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deeper examination – and unpeeling – of the structural layers that underpin it. Our investigation took place in the context of the pandemic-induced pivot from face-to-face to blended, hybrid, and remote learning in the academic year 2020/21. Across three survey rounds and through conversations in focus groups, we aimed to gain insights into student experience that would allow us to translate this understanding into recommendations with regard to curriculum design, teaching modes, and learning delivery for student engagement (Baeppler et al., 2014), as well as to help manage student expectations regarding BL. Our particular focus on students' sense of belonging revealed the extent to which university experience should not be equated with learning experience but seen holistically, therefore provoking questions around what it means to *be* at university and, ultimately, what universities are for (Collini, 2012).

Literature

Blended learning and sense of belonging

Blended learning understood as “the thoughtful integration of classroom face-to-face learning experiences with online learning experiences” (Garrison & Kanuka, 2004) sits between technology-enhanced learning and full online provision. As a concept, it has existed at least since the early 2000s, initially driven by the neoliberal reforms of the UK HE sector in the 1990s and initiatives encouraging innovation through e-learning (HEFCE, 2001; JISC 1995). Guides to best practice were soon published (Garrison & Vaughan, 2008; MacDonald, 2006; Stein & graham, 2014) and authors debated whether blended learning was a “dangerous idea” (Moskal et al., 2013) or “the new normal” (Dziuban et al., 2018). An early literature review (Torrison-Steele & Drew, 2013) mapping researchers' understandings of the concept revealed over 800 publications to date, the majority of which were focussed broadly on implementation (65.9%) rather than student satisfaction (25.63%) or academic practice and development (4.2%). While the review rightly signalled “a dire need for academic development and support,” it is worth pointing out that only 17.65% of all the identified publications were concerned with student experience of blended learning. Within this student focus, in addition to the less surprising findings, such as that student perceptions of blended learning were largely determined by their individual needs, preferences and general university experience (Mitchell & Forer, 2010), their digital competence (Holley & Oliver, 2010), as well as tutors' skills (Waha & Davis, 2014) and the peculiarities of the subject (Richardson & Turner, 2000), some researchers concluded that additional academic support, particularly in the area of developing metacognitive skills (Lust et al., 2011), was needed to ensure learner satisfaction. A more recent study (Lomer & Palmer, 2020), however, demonstrated that negative preconceptions about blended learning can also lead to considerable opposition from the learners, which is additionally reinforced by neoliberal ideological and consumerist attitudes as well as by associating blended learning with a sense of isolation and implied loneliness.

Most of the studies on the effectiveness of BL before the 2020 pivot were conducted either as experiments with in-person control groups (McKenzie et al., 2020) or in the context of specially designed courses (Mitchell & Forer, 2010) and nascent institutional pedagogies (Sharpe & Amellini, 2019). After 2020, BL became accepted as the dominant mode of university delivery and new studies emerged exploring more specific pedagogic adaptations including using immersive

technologies (Colreavy-Donnelly et al., 2022), while focusing on student engagement (Buckley et al., 2021b; Vellank & Bandu, 2021), development of critical thinking skills (Sudirman et al., 2023), and sustainability (Chen, 2022; do Lago et al., 2023). Notwithstanding the ubiquity of BL, adapting to the new educational paradigm proved a challenge for both educators and students (VanLeeuwen et al., 2021; Wallengren-Lynch et al., 2021) and the impact of online teaching (BL and RL) on general student learning worldwide has been well demonstrated (Jamalova & Bálint, 2023; Oliveira et al., 2021; Pokhrel & Chhetri, 2021).

Despite these changing and varied contexts, the scholarship on BL tends to agree that blending face to face (F2F) with online delivery correlates positively with various academic gains, including deeper learning (Motteram, 2006) and reducing the achievement gap (Luna & Winters, 2017), with benefits particularly well pronounced in STEM disciplines (Vo et al., 2017). The success of blended delivery, however, depends on a range of factors, such as digital access and information literacy, certain student characteristics, such as autonomy, motivation and confidence, as well as institutional relationships, student expectations and their overall university experience. Indeed, researchers warned from the start that blended learning was not about delivering “more of the same ... content in a new medium” (Garrison & Kanuka, 2004, pp. 96-97) but called for new content design, one that would enrich student experience and enhance, rather than simply repackaging, the usual in-person content with only minor adaptations.

This is not quite what happened in the global 2020 pivot to blended and online learning. The lack of appropriate pedagogies in this emergency remote teaching (ERT) context often resulted in the “translation” rather than “transformation of practice” (already witnessed before the pivot – see Graham, 2006, p.13), not only leading to the popular perception of blended learning as less valuable but also threatening to reverse all the benefits the pivot afforded to both the staff and students (O’Dea & O’Dea, 2022). Aware of the ambiguities of the term (Hrastinski, 2019; Lomer & Palmer, 2020), the Student Futures Commission (2022) began to openly promote a terminological shift from “blended” to “multi-modal” delivery. Despite the ostensible clash between the ideal developed in the literature and the perceptions influenced by ERT, the findings presented in this paper will demonstrate that by listening to the students and understanding their experience we have a chance to rewrite the future of blended learning.

What has always been clear is that one of the key challenges faced by remote and blended learning environments that contributes to their negative perception concerns developing, supporting and monitoring students’ sense of belonging (Bowskill et al., 2022). Understood as perceived sense of “connectedness” (Strayhorn, 2012), belongingness and community are strongly linked to student satisfaction and academic success (e.g., Bliuc et al., 2011; Braxton et al., 2014; Neves & Brown, 2022; Strayhorn, 2012; Suhlmann et al., 2018). This central human need had already been demonstrated to be less felt among part-time students (Kember et al., 2001) and in online learning environments (Thomas et al., 2014), often resulting in lower retention (James et al., 2016). It is also generally more difficult to achieve a sense of belonging to the institution than to the specific cohort or programme (Kember et al., 2001).

Creating belongingness had been a challenge for universities even before the pandemic, as manifested by the consistently low UK National Student Survey (NSS) scores on community (OfS). Crucial to developing a sense of belonging are friendships that often flourish outside formal study spaces, although lasting and meaningful peer relationships can also be stimulated via well-

designed classroom activities (Noyens et al., 2019; Xerri et al., 2018). A range of recent studies in different contexts have confirmed the predictable impact of the pandemic on students' sense of belonging (e.g., Buckley et al., 2021a; Capper & McVitty, 2022; Mooney & Becker, 2021) and our research makes a very specific contribution to understanding this aspect of student experience in the context of blended learning.

Terminology

The key challenge of defining blended learning for the purpose of this paper lies in the tension between the traditional understandings of BL as reviewed in the literature above and the way it was enacted by most universities in the ERT context of this research. As the pandemic precluded any form of integration of in-person and online learning, BL was in fact enacted as RL, but inaccurately presented to students as BL. As a result, student perceptions of BL were based on their experience with RL, which not only complicated learners' understanding of what BL involves, but also created unrealistic expectations that led to profound disillusionment with the practice (O'Dea & O'Dea, 2022). Consequently, in this paper we refer to BL as *the students understood and experienced it at the time of the study*, namely as a learning environment that integrated digital methods and resources with opportunities for live interaction in the form of either in-person contact or socially distant classrooms when government guidelines allowed, or synchronously delivered online teaching sessions. Nonetheless, we avoided using the term explicitly when communicating with our respondents, replacing it instead with the more general phrase "learning experience," in an attempt to minimise the potential for triggering anticipated negative responses associated with BL but instead to focus on an in-depth understanding of the experience itself.

Our approach to the complex and ineffable notion of belonging was originally based on understanding it as a sense, or perception, of "connectedness" (Strayhorn, 2012) a student might have from feeling part of the environment they operate within. The turbulent context of the pandemic required particular attention to understanding how the relationships at the complex student-staff-institution nexus changed and affected how connected the students felt and where they looked for help to improve these relationships and increase that sense of connectedness. Nonetheless, we also share Graham and Moir's (2022) critical stance that challenges "a functionalist view of belonging to the university" (p.4, emphasis in original), which requires conforming to the dominant culture, and instead sees belonging as a way of "relational being" (p.10), which allows students to develop meaningful relationships with/in their university ecosystem that can empower them to engage with – and even change – the world they inhabit. We thus join Graham and Moir's call to colleagues to engage more critically with the concept of belonging (p.3) for a more equitable, genuine, and meaningful university experience for students.

Method

The key aim of our study was to capture students' perceptions of blended learning as they understood and experienced it at the time, and to appreciate its impact on their sense of belonging. In keeping with the critical realist perspective, we were interested not only in students' own interpretations of their experience (empirical domain) but also in understanding how this experience was mediated by objective events (actual domain) and embedded in the larger social, economic, and political structures (real domain).

As critical realism advocates for methodological pragmatism, our methods were designed in accordance with the problems we tried to solve (Danermark et al., 2002) and thus combined quantitative and qualitative processes. Our research questions were also the consequence of this approach; we were seeking to understand the impact of the variety of delivery modes our university offered students, often without a thoughtful pedagogical underpinning, on different aspects of their learning and their sense of belonging. Within this context, we focused our inquiry on how students experienced what was presented to them as blended learning; what perceived impact it had on their knowledge, skills, and confidence (three areas that form our standard LD measures of students' perceived academic development post-LD workshops), and how the changes in modes of delivery affected their sense of belonging. Consequently, we asked students questions (Appendix 1) about their perceptions of the impact of BL on their knowledge, skills, academic confidence, and sense of belonging, and encouraged them to share what they appreciated about the experience and what was lacking. We were interested in the factors that helped and hindered the respondents' sense of belonging, however they subjectively understood it, and asked for specific examples of actions that supported or thwarted both their learning and belonging. Finally, we were interested in the networks and relationships the students relied on or attempted to develop in order to enhance their learning and feeling of belongingness. We kept the number of questions in our questionnaire to the minimum to avoid posing an undue burden on the already weary learners.

When we began this research project, we were interested in studying the impact and perceptions of BL as a new mode of delivery. After the initial emergency pivot to online delivery in March 2020, with the Covid-19 cases decreasing the following summer our university opted for BL in September, which promised opportunities to keep the best of both worlds: offer online resources and teaching to those who were sheltering or preferred this type of delivery while providing opportunities for in-person teaching and socially distant use of university facilities for those who wanted or could participate in a more traditional student experience. However, as programmes were given control over the most appropriate method of delivery for their context and some chose to move all instruction exclusively online, not all students benefited from the more traditional blended teaching. This particularly affected international students, some of whom decided (or were forced) to return to their home countries and learn remotely. In addition, following a spike in Covid-19 cases, at the beginning of December all in-person teaching was again moved fully online, a shift that lasted until mid-May 2021. Consequently, the study we conducted encompassed both blended and remote learning, with unexpected opportunities to identify the impact of the online shift and compare students' perceptions in these distinctive periods.

Despite the undeniable and powerful context of the pandemic, we focused our inquiry on students' perceptions of *learning*, rather than the impact of the pandemic per se, not only because the latter has been demonstrated elsewhere (Capper and McVitty, 2022) but also because our objective was to achieve a more granular picture of the experience of this form of delivery. It allowed us to see the difference between the damage the pandemic wrought in general and what universities did, or did not do, to ameliorate it in particular.

We used methodological triangulation in order to extract trends and patterns from quantitative data elicited through surveys, while capturing nuance and complexity behind individual and group meanings from qualitative analysis. The range of voices was not only deepened and enriched by

the quality of responses the open questions and focus groups obtained, but also created opportunities for a more democratic and participatory research. As a consequence, our mixed-methods approach allowed for more confidence in our research findings (Cohen et al., 2011).

Participants and data collection

Between November 2020 and May 2021, three questionnaires (Appendix 1) were administered to students who had agreed to take part in the study. Both of us were at the time Learning Developers and we used convenience sampling, contacting all the students (n=1,917) we had met in Learning Development (LD) workshops as well as PALS leaders and Writing Café mentors, but including only those who volunteered to participate (out of the 82 volunteers, 38 gave consent to process data and 36 responded to the first survey). We did not offer any incentives to participate. While the sample represents only 2% of the students we contacted, and therefore denotes some bias, demographic data indicates that we captured responses with diverse characteristics (Table 1), although with substantial female overrepresentation. The first (December 2020, n=36) and third (May 2021, n=29) questionnaires were filled when more traditionally understood blended learning was the university’s policy (even if inconsistently applied) and the second (February 2020, n=34) questionnaire when all learning moved online. This allowed for some contextual comparisons regarding the impact of reduced F2F delivery, alongside an assessment of the evolving student perceptions about their experience.

Table 1

Socio-demographic characteristics of the participants.

	All participants	Focus groups
Gender		
Male	9	2
Female	27	4
Year of study		
Foundation	2	0
Year 1	13	3
Year 2	5	2
Year 3	11	1
Postgraduate	5	0
Programme of study		
Arts & Humanities	13	3
Sciences	23	3
With dependents		
Yes	10	2
No	26	4

The surveys were followed by focus groups in June 2021 (n=6). There is considerable variety regarding how focus groups are conducted and running multiple groups is preferred (Carlsen & Glenton, 2011). Due to the limited number of available participants, we created two groups of four (one in person and one online), as it is generally advised that two smaller groups can generate

better data than one large group (Fern, 1982). Due to unforeseen circumstances, the online group shrank to two participants on the day, but both groups were diverse (regarding characteristics such as sex, age, programme, and year of study). Since the students' statements in both sessions revealed similar themes, we felt that theme saturation was reached and more responses would not have added significantly to the breadth of data.

The survey results guided our conversations within the focus groups, as we reflected back to the participants the initial insights and elicited more complex interpretive responses. We were hoping to gain insight into “the uncertainties, ambiguities and group processes that lead to and underlie group assessments” (Bloor et al., 2001, p.4) and we wanted to see how the participants drew upon each other's experiences to make sense of both their own and the collective understandings, while arriving at a consensus regarding their needs for learning and belongingness. The focus groups also allowed us to share the preliminary results from our study with the participants, thus empowering and enhancing their voices.

Our position as Learning Developers was of no little consequence to the authenticity of the results we obtained. Located in the so-called “third space” of academia (Whitchurch, 2008) we work behind the scenes and inhabit the less formal space for students to share ideas and express (especially negative) feelings. At the same time, we acknowledge that we still hold some position of power over the students, as representatives of the university structures. In addition, the first author was also a lecturer in the same department as a few participants in the focus groups, although did not teach or supervise these participants at the time the conversations took place. This positioning gave us an additional insider insight (Mercer, 2007) while avoiding a conflict of interest. In the focus group conversations we were guided by the approach Denzin and Lincoln (2011) advocate: a dialogic conversation. The conversation could therefore be considered as a performance that transformed information into a shared experience. We were hoping that the choice of focus group as a method would facilitate participative decision-making (Bloor et al., 2001) and as such allow us to make recommendations for the future. Indeed, all participants openly expressed that a possibility of effecting change was what motivated them to participate in the discussions.

Data analysis

Quantitative data analysis was conducted in R, an open access statistical analysis software package (R Core Team, 2022). Across the three surveys we measured the changes in students' perceptions and learning experience with regard to learning (divided into three categories: knowledge, skills, and academic confidence) and sense of belonging. To ascertain the impact of changed delivery modes on these four categories, we conducted comparisons using non-parametric statistics, namely Friedman's test to compare responses across the three timepoints, and Wilcoxon's-signed rank test (with continuity correction) for pairwise comparisons (8 participants could not be included in the statistical analysis because they did not provide scores at all three time points, therefore $n=28$). The pattern of statistical significance was identical when equivalent parametric statistical tests were used (repeated measures ANOVA and t -test). We then further interrogated this quantitative data with in-depth analysis of students' open-text responses and focus groups.

We decided to conduct qualitative data analysis of surveys using thematic analysis (TA), following the six-step systematic process developed by Braun and Clarke (2006). TA was chosen for its effectiveness in gaining an insight into individuals' experiences and meanings while reflecting on the socially constructed nature of these meanings. This interpretivist stance (Cohen et al., 2011) was enriched by a critical realist framework (Sayer, 2000) that acknowledges power structures and values the voices and concerns of the participants in order to construct research environments as emancipatory spaces able to enact change. The variables we measured in the surveys became evidence for emergent regularities whose complexities could only be explained by examining the webs of meaning and individual experiences of the participants in focus groups. The data from the focus groups do not necessarily validate the data obtained in the surveys; they do, however, "deepen and extend the initial analysis" (Bloor et al., 2001, p.15).

We were trying to think through and rethink the data, connecting ideas, experiences and concepts as well as recognising the differences in experience (Brewer, 2000). Attaching meaning to the themes was a "messy" process (Murchison, 2010) and the practice of interpretation continued as we prepared a conference paper outlining initial findings, discussed it with colleagues in research seminars, and shaped ideas in the writing up stage of this article. The coding and reflexive thematic analysis (Braun & Clarke, 2006) was an iterative process, where we identified themes and organised and re-organised data accordingly. The themes were identified based on prevalence and ability to capture the aspects of students' responses that spoke most directly to our research questions. Over multiple sessions, we went through Braun and Clarke's six stages of analysis, immersing ourselves in the data, searching for meaning, coding and organising, whilst also keeping our critical realist framework at the forefront to better distinguish the factors that influenced our participants' experiences. While focusing mostly on semantic themes, we also recognised latent themes in order to achieve a fuller interpretation of the data. We then used the three domains of critical realism to organise the themes into a coherent story (Braun & Clarke, 2006) that reflected our focus on the three domains: real, actual, and empirical. Despite the relatively modest sample, the questions we asked generated very rich responses, representation of which we present below.

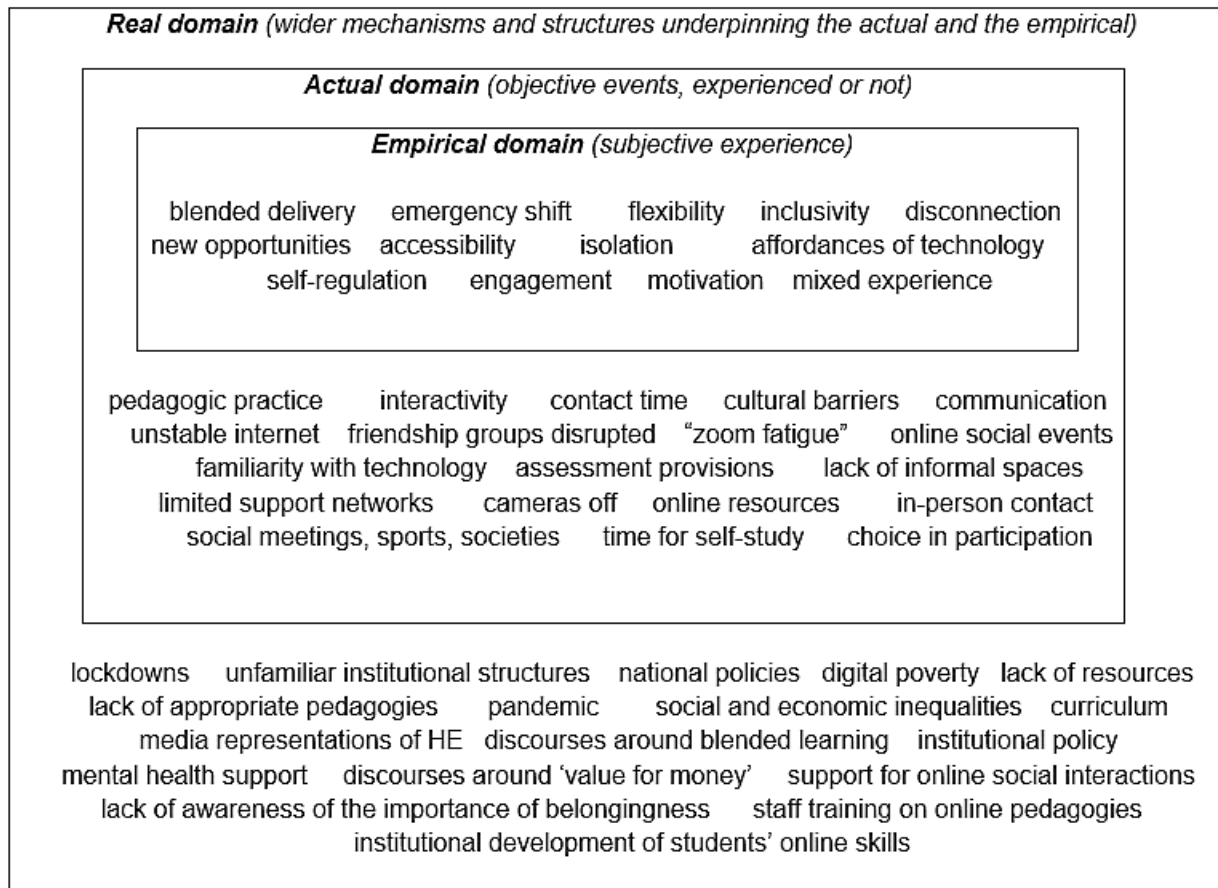
Results and discussion

Our research question focused on the perceptions of students' experience of blended learning and its impact on their learning and sense of belonging. Conversations with students and the subsequent thematic analysis of the data made it clear that the blended or remote delivery *per se* was not perceived as detrimental to their university experience. Analysed through the critical realist lens, that experience, the empirical domain, was influenced by a range of events in the actual domain. These in turn had roots in the real domain, including the wider national and institutional factors. The factors within these domains articulated by students are collated in Figure 1. What it shows is that the institutional and individual actions were often constrained by the national policies as well as other social and economic structures within which students were operating. For example, while many tutors were developing extra support for students, the learners' frequent inability to connect in a stable way to the internet would not allow them to participate. Whilst a caring pedagogy was adopted from university staff members, digital

infrastructure challenges and what we might term digital poverty impacted their ability to engage with this approach. While students may have had stable social networks, national policies meant they had to leave their accommodation and often sever these relationships and support. Universities provided formal learning spaces, yet informal structures and support were disrupted and opportunities for participation were stifled and restricted.

Figure 1

Perception of factors shaping students' experience of blended learning as identified through coding of the data from surveys and focus groups.



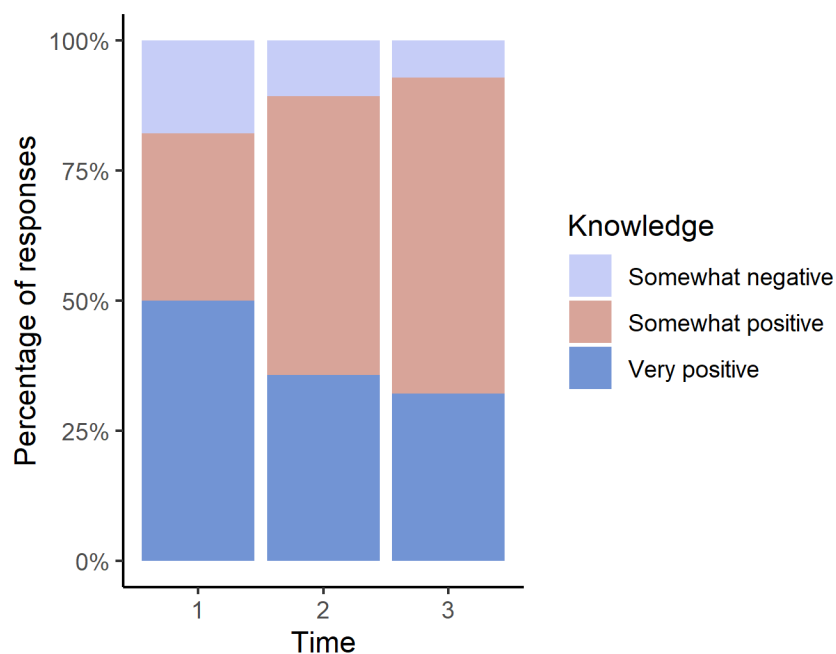
Student perceptions of the blended learning experience

Participants tended to describe their subjective learning experience, or the empirical domain, in positive terms. They were positive about the opportunity for inclusivity and flexibility provided and when it comes to knowledge (Fig.2), notably, none of the students in the first survey thought that blended learning had a very negative impact on this aspect of their experience, with only 20% stating it was somewhat negative, but that number steadily decreased over time. Their subjective experience was not negatively impacted by the mode of delivery alone. Skills and academic confidence (Fig.3-4) were assessed slightly more negatively by the students, but again, by the

third survey these perceptions improved. It is worth noting that there was a slight decrease in very positive responses across the three time points. However, Friedman's tests indicated that mean knowledge ratings ($X^2(2) = 0.45, p = .80$), skills ratings ($X^2(2) = 3.65, p = .16$) and confidence ratings ($X^2(2) = 3.52, p = .17$) did not reliably differ across the three time points. The figures below illustrate these responses:

Figure 2

Responses to the survey question regarding the perceived impact of blended learning on students' knowledge across the three time points.



Interestingly, other studies have shown that students who have experienced in-person learning tend to be less satisfied with blended learning (de Freitas et al., 2021). In our study, first year students seemed more negatively impacted than second or third-year students, even if they admitted they would not have known any better. This adverse perception was fuelled by their more acute sense of detachment from the unfamiliar institutional structures and peer networks. This demonstrates the close entanglement of the cognitive and affective needs when evaluating students' learning experience and the relationship between the domains.

Figure 3

Responses to the survey question regarding the perceived impact of blended learning on students' skills across the three time points.

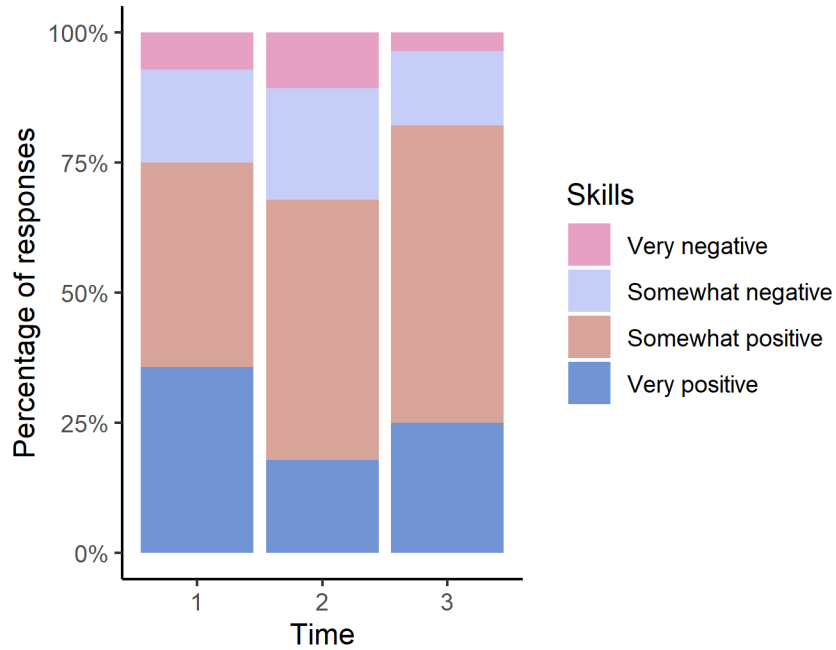
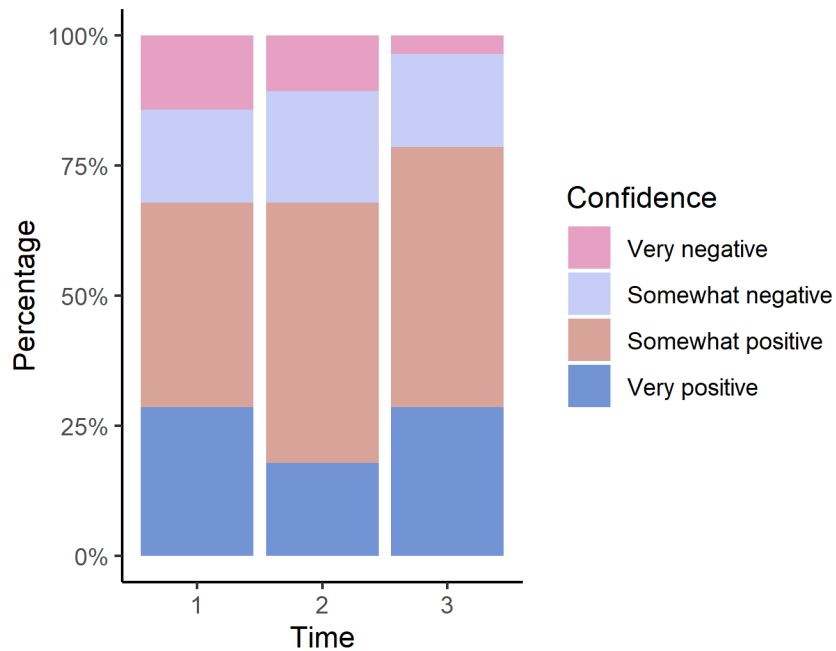


Figure 4

Responses to the survey question regarding the perceived impact of blended learning on students' confidence across the three time points.



While our study took place during the pandemic, we did not elicit responses about its impact on the students, but rather focused exclusively on their perceptions of the new mode of delivery. In this sense we did not specifically ask them about how the real domain of our framework, the national factors, influenced or impacted their experience directly. In comparison, the survey by the UPP Foundation Student Futures Commission (2022), which focused on the pandemic experience per se, found that 57% of students across the UK thought that the pandemic had a negative impact on their knowledge. This difference in findings (where our study demonstrated a more negligible impact on knowledge) might indicate that it was the pandemic with all its broad consequences, rather than blended or online learning specifically, that was blamed by the students for the negative impact on their state of knowledge. While these influences are certainly difficult to disentangle, our qualitative data confirms that most students decoupled the teaching mode from other factors affecting their learning.

Overwhelmingly throughout all stages of the survey, students talked positively about their lecturers' efforts to support them in blended and remote learning and recognised the hard work of staff in adapting their courses to keep learning opportunities continuing – the actual domain. Some students also used the survey as an opportunity to express their deepest gratitude for not only delivering high quality teaching but also opening spaces to share feelings about personal struggles. Contrary to the negativity associated with the teaching landscape of neoliberal HE (Anonymous Academic, 2015) a few students went so far as expressing deep empathy for lecturers, "wish[ing] they didn't feel stressed or overworked." What students missed the most was being on campus and the in-person contact involved in usual learning activities.

As a consequence of this sense of loss, students' views of the newly discovered affordances of technology were somewhat ambiguous. Alongside the efforts of their lecturers, students were generally grateful for the digital platforms available to them and for their features. They talked of small groups being more positive than entire cohort sessions in an online environment, and discussions and chats with lecturers helping them to feel part of a community. At the same time, however, they blamed the same technology for feeling anxious, disconnected, and lacking in motivation:

Having access to lecture recordings has been incredibly helpful, as my poor internet often means I drop out of my live lectures for brief periods of time, which leads to me missing snippets of lecture content that I have to catch up on later.

I find it easier to just not attend online lectures whereas I'd physically have to head into uni previously.

A lot of lecturers are understanding, but for some people talking over zoom is daunting.

The results of our study align with the UPP Foundation's (2022) findings where 90% of students expressed a preference for in-person teaching while appreciating having access to recorded material. However, they are also in direct contrast to UPP's indication that 52% students felt they underperformed academically during the ERT. Most of our respondents in the same context highlighted the quality of subject knowledge delivery and the richness and accessibility of online learning resources, not noting a negative impact on performance:

The online lectures and Xerte presentations have been exceptional. They have given a good basis for further reading and seminar work.

The quality of my lectures is excellent, and I don't feel that the actual delivery of lecture content ... has been significantly impacted by the transition to blended learning.

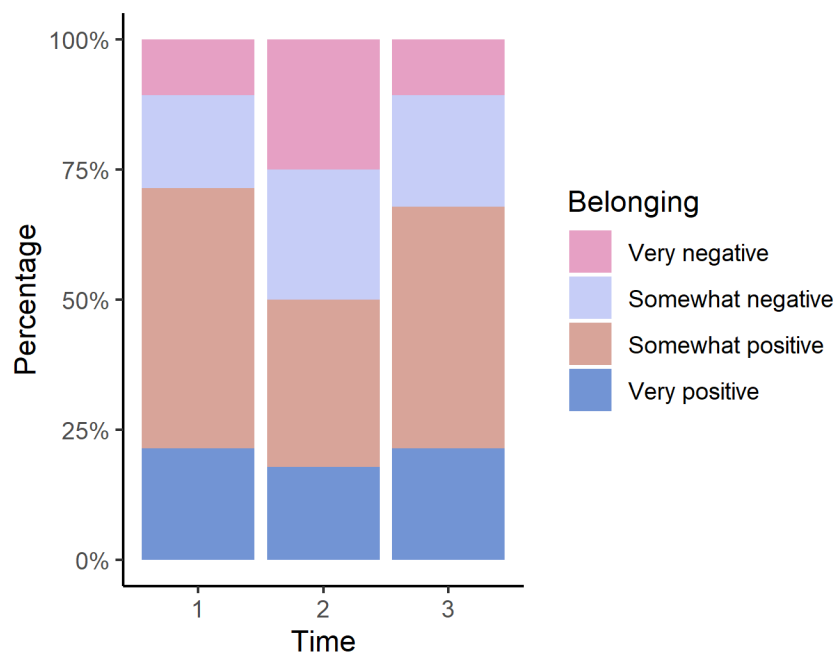
Combined with the quantitative data that showed a limited perceived impact of blended and remote learning on students' knowledge and skills, these responses were reassuring. Unsurprisingly, the most appreciated aspect of the new mode of learning was its perceived flexibility. This included adopting the standard elements of blended and flexible learning, synchronous and asynchronous delivery, new assessment provisions, tutors' understanding and adaptability, better balancing with work and family commitments, more time for self-study and more perceived choice regarding how to approach and make the most of one's personal learning journey, especially in the face of difficult personal circumstances. One respondent confided: "As a disabled student this has been an absolute boon to me." While there is a lot of nuance in students' responses, the general trends revealed in quantitative data are largely reflected in qualitative findings when it comes to students' perceptions of blended learning and its largely unobjectionable impact on their knowledge, skills, and levels of confidence. This finding should provide a lot of reassurance to knowledge facilitators – knowing that academic learning can be developed well both remotely and in the blended mode, even in emergency conditions (ERT), they can afford to pay more attention to making sure that students' sense of belonging is equally supported and developed.

Student perceptions of their sense of belonging

The shift in the tone of responses to the question about the impact on the sense of belonging (Fig.5) was more striking and clearly visible in the quantitative analysis. A Friedman's test indicated that here was a statistically significant difference in the mean belonging ratings across time points ($X^2(2) = 6.25, p = .04$). Follow-up pairwise comparisons indicated that belonging ratings at time 1 were significantly greater than those at time 2 ($V = 79, p = .013$), but no different from those at time 3 ($V = 48.5, p = .85$). Belonging ratings at time 2 were significantly lower than those at time 3 ($V = 13.5, p = .04$).

Figure 5

Responses to the survey question regarding the perceived impact of blended learning on students' sense of belonging across the three time points.



The same numerical trend in belonging ratings (Fig.6) was evident when only the data from the focus groups ($n = 6$) was examined, but the Friedman test was not statistically significant ($X^2(2) = 4.66, p = .10$). The responses from focus group participants followed the pattern of the larger group (Fig.7) and thus the focus group sample could be considered representative of all the participants.

Figure 6

Focus groups participants' responses to the survey question regarding the perceived impact of blended learning on students' sense of belonging across the three time points.

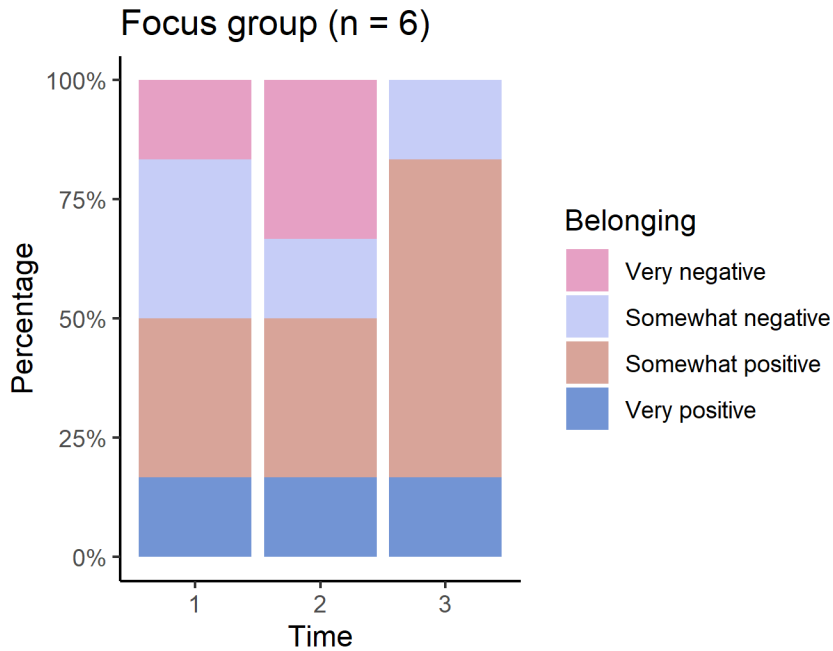
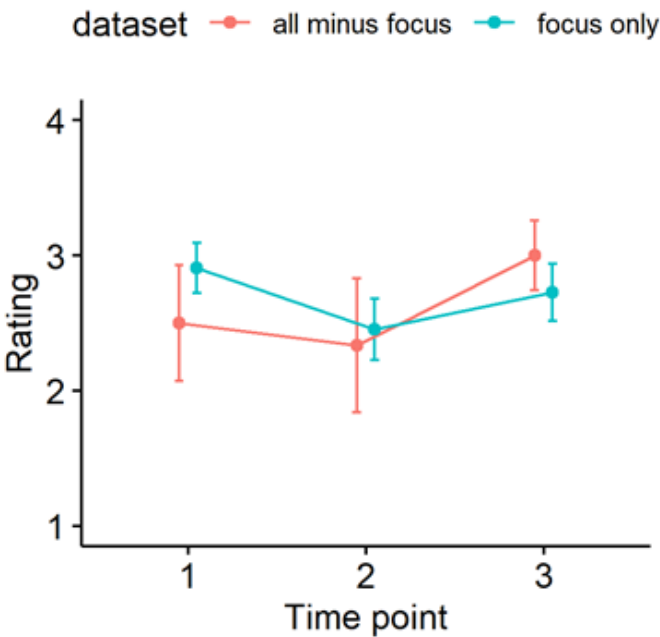


Figure 7

Mean belonging ratings of the focus groups (n=6) versus the remaining sample (n=22) (error bars denote standard error of the mean).



In their open responses, few students perceived the new mode of learning as positively impacting on their sense of belonging to their peer group and the university in general, especially when blended delivery turned into exclusively remote delivery. What helped them feel part of the community was the support received from lecturers, personal tutors, and other students; taking the initiative to use technology and social media for communication with peers; existing friendships and family networks; email updates from programmes and management; some virtual social activities; and the “we’re all in this together” attitude. The following responses are indicative of the appreciation students expressed for any attempts to make the most of the very limited opportunities for connection:

The break-out rooms have kept me feeling connected with the other students, and the interactivity with most of the lecturers. Zoom has not only been for lectures, I initiated a tutor group meet-up first on WhatsApp then on Zoom where we get together to discuss our work and assist each other.

the bonds i have made with friends, we have cried together and been annoyed together and frustrated and happy and excited about being in a classroom and I feel a special connection to my peers and the lecturers due to our journey through covid together. i wouldn't change anything I love my area of study and I'm so pleased I made the choice to study through covid rather than defer.

Overall, however, the tone of responses regarding the sense of connectedness and belongingness was decidedly negative. Despite everyone’s best efforts and intentions, students reported that “with very little interaction it can be hard going sometimes.” Whilst this experience could be interpreted as their empirical domain and students’ perceptions of connectedness, this is likely to be impacted heavily by the wider landscape of their life experiences, the actual and real domains. Their entire world was impacted, including relationships for support. The most repeated words describing the experience included “isolation,” lack of “in-person contact,” “barriers,” “less interaction,” lack of “engagement” and “motivation”, and simply the “virus” itself. To the question, “what helped you feel part of the community?”, students typically responded:

This year not much. We had a few zoom get togethers as the whole course but they are rather hard to do, as only one person can be talking at a time, so you don't get the same feeling as if we were meeting as we normally would. I have felt much more isolated this year than I have in previous years, not only from my friends and family but from the university as well. However, I have had regular meetings with my tutor who has checked in with me each time, and that has helped.

There have been days where I have sat at home to study and I put on my Uni ID lanyard just to physically remind myself that I am part of the university.

The hindrances to developing a sense of community were particularly felt by international students, who found it more difficult to break through the language and cultural barriers in online communication. Home students, however, sometimes mentioned their “personality” as a cause of their disengagement, with some hinting at the link between their mental health and inability to develop a sense of belonging – a finding largely in line with the Wonkhe study (Capper & McVitty, 2022). Nonetheless, the way belonging is defined by Capper and McVitty, as “associated with feeling confident about your abilities,” has not been confirmed in our study

Overall, the data across the three time points we surveyed the students shows that their perceptions of blended learning at first were less favourable, yet improved as time went on. However, their sense of disconnection from peer groups, the university, and teaching and support staff increased, especially when learning moved fully online. Those who reported they found benefits to blended learning talked of feeling part of a community that supported each other. However, these positive perceptions were heavily outweighed by feelings of a loss of social interaction and contact. The greatest impact on a student's sense of belonging was not being able to meet new people, or having little communication with people studying alongside them. Whilst they recognised they were able to use chat functions and other digital solutions, the main feature that impacted their sense of belonging came from the wider student experience features of HE. Social meetings for tea and coffee, sports, and societies outside their peer groups, including extra-curricular activities in the broadest sense, were pointed out as lacking in their experience and rated even higher than their desire for face-to-face learning opportunities.

All these findings were reinforced in one of the focus groups which developed a long discussion about the challenges and opportunities students found in the new modes of studying. Even though we could tell that one first year student felt particularly vulnerable when sharing their experience of isolation, the empathy shown to them by the rest of the group and their tendency towards identifying the silver lining in the difficult circumstances created group meanings that tended towards the positive. However, in the second focus group, one student's negative experience seemed to dominate and shift the conversation into the realm of disappointment and loss. It became an opportunity to air resentments while expressing a hope that their experience would contribute to meaningful change in the way the university implemented ERT. While in both focus groups the themes discussed were similar and students did not add any new tropes to the bank of ideas and experiences, the more therapeutic nature of the first group and the more negative inflection of the second group illustrated the difference between individual and collective experience that the focus group method has the power to highlight (Bloor et al., 2001).

The context of ERT certainly helped intensify staff concerns over students' ability to make the most of their learning (Gilmour, 2021). As our analysis has shown, this caring pedagogy may have in fact saved many students from a disastrous university experience. Tang et al.'s (2021) recent study clearly demonstrates that in challenging times students thrive when met with caring behaviours and receptivity from their teachers, while the perceived lack of care results in feelings of helplessness and demotivation. It is thus vital that universities not only support but also promote this culture of care and pedagogies of kindness (Denial, 2020) in order to foster connection and deepen the declared commitment to wellbeing in HE outlined in the Mental Health University Charter (Hughes & Spanner, 2019). Creating spaces for interaction and support, normalising learning as challenging, co-creating curricula with students and listening to their voice, as well as funding learning support services and providing institutional support to academic teachers to experiment with course redesign are some initiatives that promise to deliver meaningful change.

Limitations of the study

One of the limitations of our study was the relatively small sample confined to one UK university, which precludes making broader generalisations. We do not claim that the results represent the authentic voice of the student body; that was never the intention of this research project. Despite

ongoing institutional research, we still know relatively little about how the perceptions of our participants differ from the rest of the students at the University of Plymouth and how representative they are of the perceptions beyond our institution. At the same time, as Braun and Clarke (2017, p.742) instruct, “Bigger isn’t necessarily better. The bigger the sample, the greater the risk of failing to do justice to the complexity and nuance contained within the data.” More research in a non-pandemic context is required in order to bring out this “complexity and nuance.” Other measures, especially those focused specifically on belonging (e.g., the Sense of Belonging Scale (Yorke, 2016)) might be also used to validate our results and make them more generalisable.

We are also conscious of the fact that while focus groups may be empowering environments for the “unheard,” the consensus they often seem to create may in fact silence the less popular voices or, conversely, augment radical positions, especially negative biases – the result we in fact observed in our own study.

Lastly, while we recognise that mental health is strongly linked with belongingness, we did not ask specific questions about mental health in our study. Students' mental health undoubtedly suffered in the pandemic and as a result may have exacerbated the feelings around belongingness in ways that we did not intend to measure specifically, although we did note cases where students nonetheless shared such observations.

Conclusion

At the time of this writing, the world has been still recuperating from the global Covid-19 pandemic, which has allowed us to see the well-known challenges in HE in a new light. While this study is largely influenced by these unique circumstances that defied many patterns we might have expected – from exacerbating some problems to relieving others – our findings demonstrate phenomena not unique to the pandemic context and offer us an opportunity to rethink and redesign our hopes for the future university.

What our study has demonstrated and confirmed is that learning in blended and remote delivery cannot be universalised as either poor or excellent, as wide differences in institutional policies, teaching practices, and pedagogic approaches provide a mixed picture of student experience and thus mixed perceptions of it. On the one hand, for many institutions that had not practised blended delivery before 2020, the ERT created a range of opportunities for learning enhancement. Long-held concerns about lecture capture were largely overcome and students benefited from an easier access to learning. Less accessible physical spaces removed barriers and asynchronous delivery benefitted working or disabled students. Blended learning largely served its purpose and HE became more flexible. At the same time, that very flexibility posed problems for students who prefer structure and rigidity in order to stay motivated and focused on academic work. Critically, the lack of physical presence on campus, with its void of meaningful peer relationships, combined with the more accommodating university, had a profound impact on students’ sense of belonging.

Taking the critical realist approach allows us to see that the sources of students’ sense of loss in terms of belonging exist on multiple levels. The analysis of data across the three domains (empirical, actual and real) highlighted that structural macro and micro-drivers were evident in

students' experiences. These included university structures (the university as a space and an institution was not prepared to address the needs of affective learning); social structures (social and cultural inequalities); economic structures (digital poverty prevented full immersion in the online university experience); individual attributes (levels of personal resilience, commitment to studies, existing friendship networks); and application of technology (from positive engagements to "zoom fatigue" and detrimental screen exposure). These interlocking systems and mechanisms operate on different levels and may manifest independently or interact. A student may have all the economic privileges but suffer from mental health issues; they may benefit from online teaching resources but not be able to connect online socially; they may be committed to studies but unable to participate synchronously. This complexity of factors precludes unequivocal diagnoses regarding the impact of blended and remote learning on students' learning experience. In the context of our study, the only conclusion we can be certain of is that it was not so much the online learning per se that made students unhappy in the academic year 2020/21, but the fact that their entire world was significantly reduced in opportunities for connection due to the restrictions inherent in the pandemic context.

Students' experience of blended and remote learning cannot be separated from the subjective perceptions of the objective events and structures that situate it. Causally dependent on them, that experience will improve only if we take action in a way that changes, rather than reinforcing, those structures (Freire, 1970) and, as a consequence, leads to a change in the perceptions of that experience of social reality. Considered through this critical realist lens, the findings of this study have therefore generated two key questions that need addressing in our approaches to blended learning and curriculum design:

- What small scale actions (actual domain) and systemic changes (real domain) might bring desired outcomes for student perceptions and experience of blended learning?
- What small scale actions and systemic changes might positively impact students' sense of belonging as critical being in HE?

There is no doubt that blended learning, remote learning and other types of flexible learning forced upon universities in 2020 radically impacted HE, and although some of the ERT-induced changes have already been reversed by many institutions, BL is here to stay. Both as a concept and praxis, BL remains a site of struggle, perpetually "in process" (Freire, 1970), perpetually seeking liberation and transformation. In order for universities to truly transform it and begin changing student perceptions around it, including reinventing and enhancing their experience of belonging, we should return to the even more critical and heretofore unresolved conundrum: "what are universities for?" (Collini, 2012). While the question has not been satisfactorily answered by Collini himself and may remain largely rhetorical, it is not enough to attempt addressing it by resting on the functionalist approach that centres universities' role on the production and dissemination of knowledge. We must strive to redesign HE institutions as places that allow students to exercise "the right to be included socially, intellectually, culturally and personally" (Bernstein, 2000, p. 7). This should be seen as the greatest aspiration of the future university.

There is no simple answer to the challenges of connection and belongingness involved in blended and remote delivery, as not all the three realms discussed in this paper lend themselves to transformation in the Freirian sense; nevertheless, we affirm the necessity to design future

learning for different and diverse needs, while bearing in mind both cognitive and affective needs of students. In addition to studies such as the one presented here, which emphasises the criticality of care for students' sense of belonging, initiatives including the recent Student Futures Manifesto (2022) are the first steps towards building that new future. Special issues of journals such as the *British Journal of Educational Technology (BJET, 2021)* and the *Journal of Learning Development in Higher Education (JLDHE, 2021)* also extensively documented academic responses to the ERT challenge and proposed new approaches to future online HE. In addition, the recent special issue of the *Journal of University Teaching and Learning Practice (JUTLP, 2022)* on "Pedagogies of belonging in an anxious world" shone a light on the critical nature of student belongingness in HE. In Eringfeld's (2021, p.147) words, "This blended post-colonial university will need to encourage new forms of belonging to ensure that HE remains an embodied and communal experience." We need to keep reviewing our flexible teaching to ensure best practice, promote caring pedagogies, support student wellbeing, involve learners in the transformation of the existing structures, and nurture institutional cultures that underpin quality experience of university. Most critically, we must see social interactions, informal spaces, extracurricular activities, and initiatives prioritising a sense of belonging and being at university as integral to a positive student online experience. Belongingness matters because it leads to a sense of empowerment (Capper & McVitty, 2022); empowerment matters because it instils confidence that leads to greater student engagement; and engagement matters because it leads to academic success and an improved university experience (Suhlman et al., 2018).

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Conflict of Interest

The authors disclose that they have no actual or perceived conflicts of interest. The authors disclose that they have not received any funding for this manuscript beyond resourcing for academic time at their respective university.

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Appendix 1

Questionnaire

(submitted as a PDF)