2023-12-14

'A freedom of students to choose': student and staff perspectives on the future role of online learning in higher education

Turner, R

'A freedom of students to choose': student and staff perspectives on the future role of online learning in higher education

Rebecca Turner[1a], Oliver Webb[1b] and Christie Pritchard[1c]

Correspondence information

[1]Library and Academic Development, University of Plymouth, Plymouth, UK

[a] rebecca.turner@plymouth.ac.uk / Orchid ID https://orcid.org/0000-0003-3953-618X / corresponding author

[b] oliver.webb@plymouth.ac.uk / https://orcid.org/0000-0002-9412-157X

[c] christie.pritchard@plymouth.ac.uk / https://orcid.org/0000-0001-7408-4268

Abstract

COVID-19 represented a time of considerable disruption but also of innovation, as online learning helped students to access and engage in their studies. With the pandemic stabilised, this study used survey data (N>600) to examine ongoing use and perceptions of online learning at a UK university. Despite some reversion to in-person practice, online provision continues to play a significant role. The key findings from this study indicated that firstly, relative to staff, students are more likely to hold positive perceptions of online learning, identifying benefits such as enhanced accessibility and skills development. They also believed it reduces the cost of teaching, raising questions about student knowledge recording the investment needed to development online provision. Secondly, students also evidenced exhibiting choice over how they choose to engage with studies. Finally, students with barriers to campus attendance (e.g., commuter students), who are growing as a proportion of the student body, were more positively disposed to online learning that peers who relocated to the university to undertake their degree.

This study highlights the need for universities to understand their diverse student populations, and to calibrate student and staff expectations regarding the role of online learning.

Keywords: online learning, commuter students, widening participation

Introduction

The COVID-19 pandemic accelerated discourse about online teaching and learning (UUK, 2022). To mitigate the spread of disease, universities entered a period of emergency remote teaching (ERT). With little time to develop and refine online provision, this period is recognised as disruptive and traumatic (Hodges, et al., 2020). Some challenges related to contextual factors, rather than the inherent pedagogic value of online delivery (Babatunde et al 2020). For example, many learners and educators lacked adequate equipment or, owing to closures of schools and workplaces, were working in crowded or noisy home environments (Watermeyer et al., 2021). Literature from the pandemic discusses social isolation and digital poverty (Cullinan et al., 2021; Frampton & Smithies, 2022). Balanced against these challenges, ERT demonstrated the 'art of the possible', showing that institutions could support online learning at scale (Guppy et al., 2022).

Discourse around online approaches predates the pandemic (e.g. Riley & Solic, 2017). In the UK, participation has increased amongst 'non-traditional' groups, who could benefit from online provision (Jones & Lau, 2010). The UK also has high rates of students in employment (Crockford et al., 2015), who may welcome flexibility afforded by online approaches. Online learning is also recognised as having *pedagogic* value. Advocates of the 'flipped classroom' see online preparatory activities as liberating synchronous sessions for more active learning (Freeman et al., 2014). Meanwhile, video capture of lectures facilitates revision and supports students with disabilities or English as a second language (Leadbeater et al., 2013).

Following the pandemic, additional factors have entered discourse around online approaches. Seeking to capitalise on the gains made regarding online learning, hybrid and hyflex approaches have been discussed. These models are seen as benefitting inclusion and access (e.g. Darby, 2021; Lee, 2022). They do, however, lie outside the remit of the current research, as the host institution did not support hybrid/hyflex teaching at the time of data collection. The cost-of-living crisis may drive students to reduce costs by taking employment or remaining in existing (familial) homes (OfS, 2023). Moreover, students may minimise trips to campus due to costly/unreliable transport (OfS, 2023). Whilst pandemic experiences were clearly powerful, these additional drivers and societal trends are pivotal to the longer-term role of online learning in HE.

The chronology of events affords a valuable opportunity for future-facing research. Post-pandemic, stakeholders have heightened familiarity with online methods, allowing them to reach informed views (UUK, 2022). Even students early in their studies will recognise elements such as web lectures, virtual learning environments, and online assessment from ERT in compulsory education (Tilak & Kumar, 2022). There is, however, a helpful distance from the pandemic, and no related legal requirements. Hence, perspectives should be less coloured by stresses experienced at the pandemic's peak. Whilst large-scale data sets are available regarding perceptions of online approaches, some were collected during the uncharacteristic stress of the pandemic, when for example, lecturers were struggling to translate their teaching and student support to the online environment (e.g., NUS, 2020; Watermeyer et al., 2021; Yang & Huang, 2021). Others, meanwhile, focus on staff *or* students, such that *mutual* understanding between groups cannot be established (e.g. Younis & Elbanna, 2022). Several data sets also lack any demographic sub-analyses, aside from gender (e.g. Guppy et al., 2022; JISC 2020b; NUS, 2020; Watermeyer et al., 2021).

Prophesies of an online revolution, and the exodus from campus-based universities, discussed during the pandemic, did not materialise (Watermeyer et al., 2021). Nonetheless, anecdotal evidence signalled that lecturers wish to retain some practices from the pandemic (e.g., ongoing use of video-conferencing platforms). The future for most universities likely involves leveraging online technologies *and* campus-based assets. Course leaders may identify elements of the curriculum or student support suited to delivery online whilst retaining in-person approaches elsewhere. Adoption of online approaches is also likely to be influenced by interplay between social, demographic and geographic factors. The study institution, for example, serves a sizeable area of Southwest England with pockets of pronounced social deprivation, and offers some courses that typically attract learners with (parental) responsibilities, who commute to campus. Post pandemic, online learning may appeal if it increases opportunities to stay in an existing home, minimises costs and commuting time, and avoid disruption to schooling/childcare.

This study contributes to debates about the future role of online learning. Students and staff responded to a mirrored question set, providing insights to the consistency of their perceptions. Students' demographics and residential arrangements were also recorded, to identify differences in perceptions of online learning. The research questions (RQ) were:

- RQ1: How do students and specific student subgroups access different aspects of their university experience (i.e., synchronous teaching, personal tutoring)?

- RQ2: How do staff, students, and specific student subgroups perceive the value of online learning?

Research design

Ethical approval was granted by the host HEI. Pre-pandemic, undergraduate provision at the host institution followed a traditional model of fulltime, campus-based attendance, with online or distance provision is limited to specialist postgraduate courses. This study targeted first-year students who joined the institution in September 2021, after the majority of compulsory HE-specific pandemic measures had ended. From December 2021 Covid 'Plan B' measures were introduced for six weeks (GOV.UK, 2021). These measures coincided with the Christmas holidays though may have had some impact as they returned to university in the New Year. The first year is a crucial period, shaping students' university experience (Krause & Coates, 2008). Hence, there is value in examining the role of online learning in this timeframe.

A cross-sectional, exploratory design was adopted, with respective online surveys for students and staff. Online surveys are used extensively in pedagogic research, being an efficient and effective means of collecting data (Park et al., 2019). Syntax of the respective surveys was revised, such that student respondents described their experience, whilst staff commented on the main group of students they taught (Tables 1-3 show student wording). Survey items were drawn from validated, peer-reviewed instruments underpinning the JISC Learning and Teaching Reimagined report (JISC, 2020a), and guidance on online learning (e.g., QAA, 2020). To address RQ1, staff recalled how different learning activities were delivered at three time points: pre-pandemic (before March 2020); during the pandemic (2020-21 academic year); and post-pandemic (2021-22 academic year). Respondents indicated if they used online approaches 'at least some of the time' and 'at least half of the time' (Figure 1). They could use an open-text option to explain their responses. Additionally, both surveys probed how students currently accessed key components of their programme (Table 1). To address RQ2, respondents indicated their agreement with potential advantages (Table 2) and disadvantages (Table 3) of online approaches. Again, open-text box could be used to elaborate.

Students provided their ethnicity and disability, using questions based on the UK Census (ONS, 2020). These characteristics were selected as they are central to the host institution's Access and Participation Plan (a statutory document produced by all UK-based HE providers). Students also provided their vacation-time postcode which, used in conjunction with published data sets, established the HE participation rate (POLAR) and deprivation level (IMD) in their neighbourhood of origin. Finally, students were asked for their residential status i.e. whether they had moved to attend the university (Relocated Students), or they commuted to the university from the host city or surrounding area (Commuter Students). To simplify interpretation, demographic variables were structured into binary format. Students were categorised as coming neighbourhoods with lower (POLAR quintiles 1-2) or higher (quintiles 3-5) HE participation, and higher (IMD deciles 1-4) or lower deprivation (deciles 5-10). Initial inspection showed predominantly White respondents, with insufficient responses from individual ethnic minorities to conduct granular analysis. Consequently, students were reclassified as 'White' or 'Minority Ethnic'.

Following piloting, a convenience sample was derived by opening the survey to staff and students from 11 of the University's 14 academic schools, in Spring 2022, ensuring representation of respondents from across Arts, Health and Science based disciplines.

To address RQ1, Table 1 items were compared between staff and students. Student responses were then compared according to disability, ethnicity, deprivation, HE participation and residential status. As can be seen in Table 1, relative to other demographics, sample sizes for deprivation and HE participation were lower, as these variables are not available for overseas students in the sample. To address RQ2, an identical course of analyses was conducted on Table 2 and Table 3 items. In two instances, (Table 2; items 2.1a and 2.1e) formal tests were not conducted as high agreement rates meant a low number of respondents in the other cells, so violating requirements for Chi-square analysis. All analyses were 2 x 3 Chi-square tests,

with a *p*-value <.05 considered significant. Wherever significant main effects emerged, post hoc analyses were conducted using a Bonferroni-corrected p-value of <.0166 to identify significant group differences in the 'agree', 'neutral' and 'disagree' values, respectively. Significant post hoc effects are shaded grey in Tables 1-3. For all significant main effects, a measure of effect size (Cramer's *V*) was also calculated. In analyses with two degrees of freedom, *V* values of >.07, >.21 and >.35, reflect 'small', 'medium', and 'large' effects, respectively (Cohen, 1988).

Findings

Overall, 120 staff and 505 students responded. The number of responses from individual Schools was insufficient to conduct meaningful discipline-specific analyses.

Using online approaches to access learning

Figure 1 depicts lecturers' self-reported use of online approaches. Across activities, online methods were minimal pre-pandemic (lefthand bars), rising dramatically during the pandemic (central bars), echoing trends in HE nationally and internationally (JISC, 2020a; UN, 2020). The righthand bars, representing the post-pandemic period, show any retention of online practice. For lab sessions, the pivot to online methods was less marked than for other activities, with a stronger reversion to campus delivery, echoing sectoral data (JISC, 2020a). Resumption of campus-based delivery for labs comes despite innovation during the pandemic. In disciplines where practical, experiential, or studio-based practice are commonplace, there was an impetus to identify alternative modes of delivery, suited to the online environment (Bangert et al., 2022; Rixon et al., 2021). Practitioners drew on existing understanding about how to enhance accessibility of practicals; prepare students for lab-based learning; promote flexibility; and

mitigate pressure on lab spaces (Cann, 2016; Rayment et al., 2022). Findings suggest that staff retain a strong appetite for campus-based lab learning, as apparent from qualitative responses:

> *'I think that face to face practicals and fieldwork are essential […] students coming through that have had significant online provision are lacking practical hands-on skills.'* Science lecturer

Another lecturer recognised the value of online approaches in supporting students' *preparation* but felt laboratory sessions should be in-person:

> *'Lab and fieldwork did not work well online, although the materials developed provide useful support materials for face-to-face teaching […] in my view they were less effective than face-to-face where the delivery could be adjusted to the response of the students.'* Science lecturer

The pattern for taught sessions (i.e., lectures and seminars) was different. Whilst a return to pre-pandemic approaches was possible, online delivery remains prevalent (Figure 1); 29% of lecturers reported using it in at least half of their sessions, with a majority (53%) using it for some delivery. Ongoing pandemic effects may contribute to these findings. Although in the data collection window all *sectoral* directives had been lifted, some regulations remained for *individuals* (e.g., compulsion to self-isolate if infected). Hence, remote approaches may have been retained temporarily, to accommodate learners in self-isolation (Essen-Fishman, 2023). Nonetheless, the scale of ongoing online delivery, and tone of lecturers' comments, indicates that, for many, this was intentional:

> *'Lectures online work really well as students don't have to travel, we can focus expertise and students are able to re-watch material as often as they like.'*
> Health lecturer

INSERT Fig 1 here.

A fundamental question exists; are staff delivering some sessions exclusively online, such that *all* participants engage this way, or are they embedding choice for students to engage either online or on-campus? Following the pandemic, researchers predict that students will be more attentive to mode of delivery, expressing agency over *how* they access learning (Guppy et al., 2022). Here, Table 1 is informative. In terms of whether students have choice (item 1.1a), raw values suggest diverse perspectives. An agreement rate of 51% means there is a substantial remainder of staff who do not see choice embedded into the student experience. Importantly, data showed a statistically significant difference, whereby disagreement that choice existed was lower amongst students (24%) than staff (38%). Thus, it appears important to calibrate staff and student understanding about the learning environment and capacity for choice on each course.

Staff and students were more consistent regarding online technologies for *asynchronous* learning. There was substantial agreement that lectures were recorded to revisit later (1.2a), and that online learning activities were embedded in the curriculum (1.3a). There were, however, significant differences in perceptions that students engaged with online preparatory tasks (1.4a). This suggests staff may lack confidence to use online approaches going forward, as they are concerned students will not complete asynchronous tasks. With more development time, relative to the period of ERT, staff could embed methods for optimising student preparation ahead of class (e.g. formative online tests of flipped material, with instant feedback; Freeman et al., 2014).

When asked if the focus remained on campus-based delivery (1.5a), significant differences emerged again. Students were less likely to agree and more likely to disagree, consolidating the impression of a student body with more fluid perceptions of the university

experience, in terms of flexibility of access. Subgroup analyses showed a moderate-sized significant effect for residential status (1.5f). Relative to counterparts, commuters were much less inclined to perceive delivery as campus-based. These findings demonstrate heterogeneity amongst student subgroups, underscoring the importance of incorporating socio-demographic variables. Growing literature suggests that commuter or 'live at home' students may not seek the 'traditional university experience; focusing on programme-specific activities; adopting 'stay at home' strategies to accommodate studies around wider commitments (Clayton et al., 2009; Thomas & Jones, 2017).

Insert Table 1 here

Tutoring often occurs one-to-one or in small groups; a format that translates well in online platforms (e.g. Zoom). Figure 1 shows on-going use of online approaches for tutoring, with 40% employing it at least half of the time. Qualitative comments indicate this is an intentional shift:

> *'[...] so people can avoid unnecessary travel, for privacy, scheduling etc, offering tutorials online allows for flexibility- we have fewer students not turning up for the tutorials. It's a win win!!'* Arts lecturer
>
> *'More flexible delivery and a freedom for students to choose a time and interaction modes on tutorials.'* Science lecturer

In Table 1, the Personal Tutoring sections shows that relative to counterparts, minority ethnic (1.6c) and commuter students (1.6f) were significantly more likely to report meeting their tutor online. Campus-based tutorials present physical and financial challenges to commuter students (Donnelly & Gamsu, 2018). Given the ease of providing online tutorials, it

is concerning that, relative to staff, significantly fewer students report expressing choice in how they access tutorials (1.7a) and meeting their tutor online (1.6a). A power dynamic may persist, whereby staff retain control over how tutorials are conducted, or students lack confidence to request choice (Symonds, 2021).

Finally, the pattern for placements is enlightening. Although online placements reduced post-pandemic, a third of staff reported using them at least some of the time (Figure 1). National lockdowns catalysed innovation in promoting students' employment prospects via virtual work experience and internships, (Twogood et al., 2020). UUK (2022) identified expansion of such opportunities as an unexpected benefit of the pandemic. Ongoing use could benefit students from widening participation backgrounds, who are deterred from pursuing professional placements due to time and expense (Molyneux & Yetton, 2021).

Perceived value of online learning

As Table 2 shows, most staff and students recognise that an online approach 'enables anywhere, anytime learning (2.1a), and 'breaks down geographic barriers to delivery' (2.2a). Potential advantages were vividly expressed as follows:

> *'Being able to learn online has allowed me to pursue a career in [xxxx] - it would be a real struggle to get childcare for three children, four days a week, particularly as I travel over 100 miles to get to campus.'* Female, health commuter student

Insert Table 2 here

Temporal and geographical flexibility of online learning were indeed the primary advantages cited by university leaders (JISC, 2020a).

Staff and students were more muted regarding commercial advantages (see items 2.3a, 2.4b). Reluctance amongst staff may stem from frustrations with online learning experienced during the pandemic, and fears regarding its future role (Watermeyer et al., 2021). Even pre-pandemic, lecturers using online learning as part of campus-based provision had reservations related to, for example, workload, poor IT infrastructure, and low confidence (Oliveria et al., 2021; Paudel, 2021; Hill & Smith, 2023). Any plans to expand online provision should recognise these concerns. In Table 3, item 3.4a also relates to commercial implications. A significant effect emerged between staff and students, driven by the higher proportion of 'neutral' responses amongst the former. This may indicate that staff are more ambivalent about the marketing appeal of the University than recently recruited students. More importantly, staff and student data showed a lack of consensus, with high levels of both agreement and disagreement for this item. This suggests that, presently, online provision is not central to the how universities are perceived in the competitive market for student recruitment.

Greatest divergence occurred around potential advantages for student *outcomes*; 67% of students agreed that online teaching could 'level the playing field for disadvantaged students', versus 37% of staff (2.5a). Relative to staff, students were also two or three times as likely to agree that online learning 'improves student skill development' (2.6a), 'improves learning outcomes' (2.7b), and 'provides a better learning experience' (2.8c). Setting aside 'neutral' respondents, percentage values in Table 2 show that a majority of students perceive online learning as beneficial to their outcomes, as illustrated by qualitative data:

'Allows students struggling with mental health to escape from the stressful environment without missing out on course content.'

Male, health student, resident in university accommodation

'Students who are reserved can have a louder voice.'

Female, health commuter student

'Those with disabilities are able to access at a time more suited to them'

Female, disabled, commuter student studying a health programme.

'Allows me to work at my own pace and revisit areas. Alleviates stress and pressure associated with studying at university.'

Female, health commuter student

That these advantages are less visible to staff suggests some lecturers may take a teacher-centred, not student-centred, approach to online learning (Lee et al., 2022). A significant effect again emerged for residential status (2.2a), whereby commuters were more likely to agree that online learning improved skill development. Thomas & Jones's (2017) recommend that technology can contribute positively to commuter student experiences.

Two items captured practicalities of online delivery. Relative to staff, students were significantly more likely to agreed that online teaching 'reduces the cost of teaching (2.9a)' and less likely to agree that it is 'more difficult to deliver' (Table 3; item 3.2a). If students do not perceive online learning as costly or complicated to deliver, they may expect reduced fees. During the pandemic, concerns about value for money featured in discourse around online provision (Neaves & Hewitt, 2021) and students tabled petitions for fee refunds (House of Commons, 2020). Students may be unaware regarding true costs of successful online provision, underscoring the importance of managing expectations.

Turning the focus to disadvantages, both groups held reservations about online approaches. Raw agreement rates confirm that many feel that 'the student experience is not as good' (3.3a), as articulated in qualitative data:

'I have found it hard learning online; it's hard to concentrate when staring at a computer for two hours per lecture with sometimes three lectures a day.'

Male, health student, resident in university accommodation

'When content is delivered online, I find it hard to motivate myself as I feel detached from the learning experience.'

Male, science student, resident in university accommodation

Insert Table 3

Student agreement with item 3.3a was, nonetheless, significantly lower than staff. Moreover, relative to counterparts, agreement was significantly lower still amongst commuter students. For this subgroup, a picture emerges of students who *simultaneously* recognise advantages and disadvantages of online learning. Dogma surrounding merits of online *or* campus-based learning may not recognise the balance some learners strike between learning and other commitments (e.g. caring duties, employment), as these quotations from female commuter students on health programmes describe:

'Makes attending university more affordable with less travel and accommodation costs.'

'A total godsend when you have children. Reducing childcare costs massively and still being able to do school runs.'

The leading concern, amongst staff and students, was that online learning 'doesn't offer the same social experience' (3.1a). Taking both groups together, 3.1a attracted the highest raw agreement rates in the survey. One student commented:

'Online teaching can be very isolating and makes it hard to make course friends, it's not worth the toll on your mental health.'

Female Health student residing in university accommodation.

Similar concerns, about wider university experiences being impaired, were raised by students during national lockdowns (Montacute & Holt-White, 2021; Neves & Hewitt, 2020).

Responses to 3.1a infer that staff and students feel more social interaction occurs during traditional campus-based teaching. Lectures provide a focal point, helping students develop a sense of belonging and community (French & Kennedy, 2017). However, caution is required in how one attributes the social advantages of campus-based delivery. Benefits may stem in part from coincidental opportunities for student interaction (e.g. going for coffee after class), rather than inherent superiority of in-person sessions to achieve social engagement *during class*. Staff described limited engagement in online classes:

> *'Students log in to appear to be present but don't engage. This gives the impression of attending but they are not learning, which can lead to difficulties down the line.'* Health lecturer

> *'This pseudo attendance (logged in on zoom but non-responsive) we cannot distinguish from real attendance on Zoom in any way shape or form given most cannot have their cameras on without the other 50+ students' videos on their screen crashing their flimsy Chromebooks!'* Science lecturer

These quotations allude to passive online experience, with lecturers relying on visual cues to determine engagement. Online sessions provide scope to increase and monitor engagement of participants via, for instance, responseware and breakout discussions (JISC, 2022). Such approaches do, however, break with didactic lecturing, which remains a signature pedagogy in some disciplines (French & Kennedy, 2017). Video capture, which was relatively rare pre-pandemic, has been widely retained, given the recognised benefits of revisiting material flexibly (Nordman et al., 2019; 2022). Thus, even where didactic approaches are valued, the availability of recordings raises legitimate questions about students' need to attend in-person. The pandemic appears to have reinvigorated debates about the purpose of lectures and merits of active versus passive learning. Following the pandemic, with stakeholders aware of online

possibilities this is not abstract discourse. In a competitive market, the rationale for how programmes are delivered must be robust, pragmatically, and pedagogically.

Conclusion

This paper reports the outcomes of a cross institutional survey targeted at staff and first year students to examine the on-going use of online learning, and its perceived value. The student data were analysed to explore potential impacts of demographic variables and their residential status on their use, and perceptions towards, online provision. These data indicates that learning continued to be accessed online; however, qualitative responses suggest discourse has moved from the question of whether individuals can and will access online environments, to how these can be refined to optimise engagement and social interaction.

These data indicate that students are expressing agency in how and when they access learning which, historically, has been driven by lecturers (Lee et al., 2022; Symonds, 2021). Enhanced choice may represent the dismantling of established power structures, so democratising access and inclusivity (Stentiford & Koutdsouris, 2021). Conversely, staff responses infer they make *selective* use of online experiences. Based on these findings we propose it is important to calibrate staff and student expectations regarding the role of online learning.

Secondly our data indicate students are more positively disposed to online approaches particularly in relation to learning outcomes and skill development, though students' perceptions are nuanced. They *simultaneously* recognised limitations alongside benefits indicating a willingness to accept trade-offs i.e. whilst a course may not deliver perfectly in certain areas, individuals may enrol nonetheless, if it fulfils other requirements (Keane, 2012). Widening participation students often have competing responsibilities - online access may

mitigate potential conflicts (Mackey et al., 2021). It is important for universities to recognise the pragmatic perspective students may have towards online learning, and to avoid a fundamentalist stance that learning must occur exclusively in one way.

These data, showing ongoing use of online approaches, may also indicate the important role of 'blended' learning in preparing students for the employment market. Fifty of the UK's largest employers indicated they had no plans to return all staff to the office *full-time* in the near future (Read, 2021). Meanwhile, 85% of employees currently working from home would like a 'hybrid' approach in future (ONS, 2021). Finally, we highlighted a relationship between residential status and perceptions of online learning. For example, commuter students were more positively disposed to online learning than peers who had relocated. The proportion of students who commute has risen in recent years (Donnelly & Gamsum, 2018; Higher Education Statistics Agency, 2023a, 2023b). Hence, there may be imperatives for universities to consider the needs of commuters. Earlier research shows associations with key outcomes, including attainment (Webb & Turner, 2020). The current analyses produced more significant differences related to residential status than any of the other demographic variables (e.g., IMD, POLAR), which feature in statutory documents. One explanation may be that residential status is specific to the individual, whereas other measures pertain to a geographical area and may have 'questionable diagnostic value' (Harrison & McCaig, 2015, p. 793). Indicating residential status has the potential to be an insightful socio-demographic variable that should be considered routinely in higher education research. Consensus has yet to be reached on how to define residential status (Maguire & Morris, 2018; Stalmirska & Mellon, 2022). We welcome efforts to formalise how this variable is captured. In applied terms, course leaders should consider the profile of students selecting their course; where commuter students are present online provision may be valued. Where the cohort has pronounced interest in socialisation and extracurricular engagement, a more campus-centric approach is justified.

In terms of future research, it would be insightful to examine if perceptions of online teaching and learning differ between staff and students drawn from different disciplines. As with previous studies (e.g. JISC 2020b; NUS, 2020), there was no sub analysis based on discipline in the current study, as the sample size was not sufficient. It is worth noting that, preceding the pandemic, there was very little experience of online delivery anywhere within the undergraduate portfolio. Hence, it would be unwise to assume heightened confidence or interest amongst staff from particular disciplinary areas. Guppy et al. (2022) benefitted from a data set of over 4,500 respondents, supporting comparisons between Science and Arts disciplines. Interestingly, whilst staff from Science areas appeared more receptive to the idea of more online participation than their Arts counterparts, amongst students differences were minimal. These findings counsel against making assumptions regarding how online delivery will be perceived in different disciplinary communities. There are likely to be individual disciplines where the 'hands on' nature of learning may present particular challenges for online delivery (e.g. Nursing, Mechanical Engineering, Dance). Consequently, we welcome future studies with sufficient statistical power focussed on these disciplines.

We acknowledge the data presented here were collected when respondents were still likely to feel vivid effects of the pandemic, with implications for their perceptions. Waiting longer after the pandemic may have been advisable, however as we have witnessed with the emergence of the cost-of-living-crisis, other contextual factors come into play. The current findings are best viewed as a snapshot with the caveat that *ongoing* evaluation is required regarding the evolution of online learning.

One can conceptualise students as having 'freedom to choose' in two spheres. First, they can choose which institution and course to join, drawing on information about its structure, flexibility and opportunities for online learning. Second, once enrolled, students have agency in how they engage with sessions, learning materials, instructors, and peers. The current study

confirms that students value and exercise choice in how they access learning, with the option for online participation particularly appealing to widening participation groups (i.e. disabled and commuter students). Whilst student perceptions may be complex and challenging to accommodate, it looks increasingly unsustainable for universities to expect that their courses are accessed in homogeneous fashion by all students.

Disclosure statement

No potential conflicts of interest were reported by the authors.

Notes on contributors

Dr Rebecca Turner is an Associate Professor in Educational Developer and Principal Fellow of the HEA. Rebecca's research addresses themes relating to widening participation, inclusive practice, and student voice.

Dr Oliver Webb Oliver is an Educational Developer and researcher with interests in elements of programme design (e.g. blended learning, immersive scheduling), and factors associated with student transitions (e.g. student demographics, residential status).

Dr Christie Pritchard is the Head of Academic Development at Plymouth, a Senior Fellow of HEA and an Associate Professor of Higher Education. Her expertise and interests lie in promoting student success through creating a sense of belonging, designing inclusive assessment, and developing social learning spaces for transformative learning.

References

Babatunde Adedoyin, A & Soykan, E. (2020). Covid-19 pandemic and online learning: The challenges and opportunities. *Interactive Learning Environments*, *31*(2), 863-875. https://doi.org/10.1080/10494820.2020.1813180

Bangert, K., Bates, J., Beck, S. B. M., Bishop, Z. K., Benedetti, M di., Fullwood, J., Funnell, A. C., Garrad, A., Hayes, S. A., Howard, T., Johnson, C., Jones, M. R., Lazari, P., Mukherjee, J., Omar, C., Taylor, B. P., Thorley, R. M. S., Williams, G. L., & Woolley, R. (2022). Remote practicals in the time of coronavirus, a multidisciplinary approach.

International Journal of Mechanical Engineering Education 50(2), 219-239. https://doi.org/10.1177/0306419020958100

Cann, A. J. (2016). Increasing student engagement with practical classes through online pre-lab quizzes. *Journal of Biological Education*, *50*(1), 101-112. https://doi.org/10.1080/00219266.2014.986182

Clayton, J., Crozier, G., G., & Reay, D. (2009). Home and away: Risk, familiarity and the multiple geographies of the higher education experience. *International Studies in Sociology of Education, 19*(3-4), 157-174. https://doi.org/10.1080/09620210903424469

Cohen J. (1988). *Statistical power and analysis for the behavioral sciences*. 2nd ed. Lawrence Erlbaum Associates.

Crockford, J., Hordosy, R., & Simms, K. S. (2015). I really needed a job, like, for money and stuff': Student finance, part-time work and the student experience at a northern red-brick university. *Widening Participation and Lifelong Learning 17*(3), 89-109. https://doi.org/10.5456/WPLL.17.3.89

Cullinan, J., Flannery, D., Harold, J., Lyons, S., & Palcic, D. (2021). The disconnected: COVID-19 and disparities in access to quality broadband for higher education students. *International Journal of Educational Technology Higher Education 18*(26). https://doi.org/10.1186/s41239-021-00262-1

Darby, F. (2021). *How to engage students when some are in the room and some are on Zoom*. Times Higher Education. https://www.timeshighereducation.com/campus/how-engage-students-when-some-are-room-and-some-are-zoom

Donnelly, M., & Gamsum, S. (2018). *Home and away: Social, ethnic and spatial inequalities instudent mobility.* The Sutton Trust. https://www.suttontrust.com/wp-content/uploads/2019/12/Home_and_away_FINAL.pdf

Essen-Fishman, L. (2023). *The impact of the COVID-19 pandemic on 2021/22 Student data*. HESA. https://www.hesa.ac.uk/insight/19-01-2023/impact-covid-19-2022-student-data

Freeman, S., Eddy, S. L., McDonough, M., Smith, M. K., Okoroafor, N., Jordt, H., & Wenderoth, M. P. (2014). Active learning increases student performance in science, engineering, and mathematics. *PNAS, 111*(23), 8410-8415. https://www.pnas.org/doi/epdf/10.1073/pnas.1319030111

French, S., & Kennedy, G. (2017). Reassessing the value of university lectures. *Teaching Higher Education 22*(6), 639–654. https://doi.org/10.1080/13562517.2016.1273213

Frampton, N., & Smithies, D. (2022). *University mental health: Life in a pandemic. listening to higher education communities throughout 2020/2021.* Student Minds.

https://www.studentminds.org.uk/lifeinapandemic.html#:~:text=74%25%20of%20students%20reported%20that,or%20lonely%20since%20March%202020'

Guppy, N. Verpoorten, D., Bound, D. Lin, L., Tai, J., & Bartolic, S. (2022). The post-COVID-19 future of digital learning in higher education: Views from educators, students, and other professionals in six countries. *British Journal of Educational Technology, 53*(6), 1750-1765. https://doi.org/10.1111/bjet.13212

Harrison, N., & McCaig, C. (2015). An ecological fallacy in higher education policy: the use, overuse and misuse of 'low participation neighbourhoods'. *Journal of Further and Higher Education, 39*(6), 793-817. https://doi.org/10.1080/0309877X.2013.858681

HESA. (2023). Where do HE students study? Higher Education Statistics Agency. Hi https://www.hesa.ac.uk/data-and-analysis/students/where-study#accommodation

HESA. (2023). Who's studying in HE? Higher Education Statistics Agency. https://www.hesa.ac.uk/data-and-analysis/students/whos-in-he#characteristics

Hill, J., & Smith, K. (2023). Visions of blended learning: identifying the challenges and opportunities in shaping institutional approaches to blended learning in higher education, *Technology, Pedagogy and Education*, *32*(3), 289-303. https://doi.org/10.1080/1475939X.2023.2176916

Hodges, C., Moore, S., Bockee, B., Trust, T., & Bond, A. (2020). The difference between emergency remote teaching and online learning. *Educase Review* https://er.educause.edu/articles/2020/3/the-difference-between-emergency-remote-teaching-and-online-learning.

House of Commons Petitions Committee (2020). *The impact of Covid-19 on university students Second Report of Session 2020* https://committees.parliament.uk/publications/1851/documents/18140/default/

GOV UK (2021). Prime Minister confirms move to Plan B in England. https://www.gov.uk/government/news/prime-minister-confirms-move-to-plan-b-in-england

JISC (2020a). *Learning and teaching reimagined: A new dawn for higher education?* https://www.jisc.ac.uk/reports/learning-and-teaching-reimagined-a-new-dawn-for-higher-education

JISC (2020b) *Learning and teaching reimagined: synthesis of audience surveys*. learning-and-teaching-reimagined-synthesis-of-audience-surveys.pdf (jisc.ac.uk)

JISC (2022). *Enhancing student engagement using technological solutions.* https://beta.jisc.ac.uk/reports/enhancing-student-engagement-using-technological-solutions

Jones, A., & Lau, A. M. S. (2010) Blending learning: Widening participation in higher education. *Innovations in Education and Teaching International, 47*(4), 405-416. https://doi.org/10.1080/14703297.2010.518424

Keane, E. (2012). Differential prioritising: Orientations to higher education and widening participation. *International Journal of Educational Research*, *53*(1), 150-159 https://doi.org/10.1016/j.ijer.2012.03.005.

Krause, K., & Coates, H. (2008). Students' engagement in first-year university. *Assessment and Evaluation in Higher Education 33*(5), 495–505. https://doi.org/10.1080/02602930701698892

Leadbeater, W., Shuttleworth, T., Couperthwaite, J., & Nightingale, K. P. (2013). Evaluating the use and impact of lecture recording in undergraduates: Evidence for distinct approaches by different groups of students. *Computers & Education 61*(1), 185–92. https://doi.org/10.1016/j.compedu.2012.09.011

Lee, J. (2022). *Hyflex learning, why, why and how.* THE Campus. https://www.timeshighereducation.com/campus/hyflex-learning-what-why-and-how

Lee, K. Fanguy, M., Bligh, B., & Lu, X.S. (2022). Adoption of online teaching during the COVID-19 Pandemic: a systematic analysis of changes in university teaching activity. *Educational Review, 74*(3), 460-483. https://doi.org/10.1080/00131911.2021.1978401

MacKay, J. R. D., Nordmann, E., Murray, L., Browitt, A., Anderson, M., & Hutchison, J. (2021). The cost of asking: 'Say that again?': A social capital theory view into how lecture recording supports widening participation. *Frontiers in Education, 6*(734755), https://doi.org/10.3389/feduc.2021.734755

Maguire, D., & Morris, D. (2018). *Homeward bound: Defining, understanding and aiding 'commuter students' (Vol. 114).* Higher Education Policy Institute Report.https://www.hepi.ac.uk/wp-content/uploads/2018/12/HEPI-Homeward-Bound-Defining-understanding-and-aiding-%E2%80%98commuterstudents%E2%80%99-Report-11429_11_18Web.pdf.

Molyneux, D., & Yetton, L. (2021). *Exploring widening participation student perceptions of the barriers faced in considering, sourcing, and applying for an Undergraduate placement year.* HECSU Funded Research Report, University of Warwick. https://graduatemarkettrends.cdn.prismic.io/graduatemarkettrends/0fbf90cf-3b49-4cf1-ad0e-fb891b291f3b_hecsu-research-exploring-widening-participation-student-perceptions-of-the-barriers-faced+%281%29.pdf accessed 16th June 2023.

Montacute, R., & Holt-White, E. (2021). *Covid-19 and the university experience.* Sutton Trust research brief. https://www.suttontrust.com/wp-content/uploads/2021/02/Covid-19-and-the-University-Experience.pdf 6th June 2023

Neaves, J., & Hewitt, R. (2021). *Student academic experience survey 2021.* https://www.hepi.ac.uk/2021/06/24/the-student-academic-experience-survey-2021/

Nordmann, E., Clark, A., Spaeth, E., & MacKay, J. R. D. (2022). Lights, camera, active! appreciation of active learning predicts positive attitudes towards lecture capture. *Higher Education 83*(3), 481–502 (2022). https://doi.org/10.1007/s10734-020-00674-4

Nordmann, E., Calder, C., Bishop, P., Irwin, A., & Comber, D. (2019). Turn up, tune in, don't drop out: the relationship between lecture attendance, use of lecture recordings, and achievement at different levels of study. *Higher Education, 77*(6), 1065–1084. https://doi.org/10.1007/s10734-018-0320-8

NUS (2020). *Cornavirus and students survey.* NUS Insights. https://www.nusconnect.org.uk/resources/covid-19-and-students-survey-report

OfS (2023). *Insight Brief 17: studying during rises in the cost of living.* https://www.officeforstudents.org.uk/media/6981/insight-brief-17-studying-during-rises-in-the-cost-of-living.pdf

Oliveira, G., Grenha Teixeira, J., Torres, A., & Morais, C. (2021). An exploratory study on the emergency remote education experience of higher education students and teachers during the COVID-19 pandemic. *British Journal of Educational Technology, 52*(4), 1357–1376. https://doi.org/10.1111/bjet.13112

ONS. (2021). Business and individual attitudes towards the future of homeworking, UK: April to May 2021. https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/employmentandemployeetypes/articles/businessandindividualattitudestowardsthefutureofhomeworkinguk/apriltomay2021

ONS (2020). *Census 2021 paper questions.* https://www.ons.gov.uk/census/censustransformationprogramme/questiondevelopment/census2021paperquestionnaires accessed 16th June 2023

Park, K., Park, N., Heo, W., & Gustafson, K. (2019). What prompts college students to participate in online surveys? *International Education Studies, 12*(1), 69-79. https://doi.org/10.5539/ies.v12n1p69

Paudel, P. (2021). Online education: Benefits, challenges and strategies during and after COVID-19 in higher education. *International Journal on Studies in Education*, *3*(2), 70-85. https://doi.org/10.46328/ijonse.32

QAA. (2020). *Building a taxonomy for digital learning.* The Quality Assurance Agency.

Rayment, S. J., Evans, J., Moss, K., Coffey, M., Kirk, S. H., & Sivasubramaniam, S. D. (2022). Using lessons from a comparative study of chemistry & bioscience pre-lab activities to design effective pre-lab interventions: A case study. *Journal of Biological Education,* 57(5): 1092-111. https://doi.org/10.1080/00219266.2021.2011771

Read, D. (2021). *No full-time return to the office for over a million.* https://www.bbc.co.uk/news/business-56972207 accessed 16th June 2023

Riley, K., & Solic, K. (2017). "Change happens beyond the comfort zone": Bringing undergraduate teacher candidates into activist teacher communities. *Journal of Teacher Education, 68*(2), 179–192. https://doi.org/10.1177/0022487116687738

Rixon, T., Brumpton, A., & O'Neill, C. (2021). Reimagining production pedagogy inresponse to COVID-19: A new pedagogical model for creating virtual online performance. *Critical Stages/Scènes critiques The IATC journal/Revue de l'AICT*, June/Juin 2021 (23). https://www.critical-stages.org/23/reimagining-production-pedagogy-in-response-to-covid-19-a-new-pedagogical-model-for-creating-virtual-online-performance/

Stalmirska, A. M., & Mellon, V. (2022). "It feels like a job …" Understanding commuter students: Motivations, engagement, and learning experiences, *Journal of Hospitality, Leisure, Sport & Tourism Education, 30*. https://doi.org/10.1016/j.jhlste.2021.100368

Stentiford, L., & Koutsouris, G. (2021). What are inclusive pedagogies in higher education? A systematic scoping review. *Studies in Higher Education, 46*(11), 2245-2261. https://doi.org/10.1080/03075079.2020.1716322

Symonds, E. (2021). Reframing power relationships between undergraduates and academics in the current university climate. *British Journal of Sociology of Education*, *42*(1), 127-142. https://doi.org/10.1080/01425692.2020.1861929

Thomas, L., & Jones, R. (2017). *Student engagement in the context of commuter students.* TSEP.

Tilak, J. B. G., & Kumar, A.G. (2022). Policy changes in global higher education: What lessons do we learn from the COVID-19 Pandemic*? Higher Education Policy 35*(3), 610–628. https://doi.org/10.1057/s41307-022-00266-0

Twogood, R., Hares, E., Wyatt, M., & Cuff, A. (2020). Rapid implementation and improvement of a virtual student placement model in response to the COVID-19 pandemic*. BMJ Open Quality 9*(e001107). http://dx.doi.org/10.1136/bmjoq-2020-001107

UN (2020). Policy Brief: Education during COVID-19 and beyond. https://www.un.org/development/desa/dspd/wp-content/uploads/sites/22/2020/08/sg_policy_brief_covid-19_and_education_august_2020.pdf

UUK (2022). *Lessons from the pandemic: making the most of technologies in teaching.* https://www.universitiesuk.ac.uk/what-we-do/policy-and-research/publications/lessons-pandemic-making-most#:~:text=Universities%20have%20been%20able%20to,couldn't%20be%20relied%20on.

Watermeyer, R., Crick, T., Knight, C., & Goodall, J. (2021). COVID-19 and digital disruption in UK universities: Afflictions and affordances of emergency online migration. *Higher Education 81*(3), 623–641. https://doi.org/10.1007/s10734-020-00561-y

Webb, O. J., & Turner, R. (2019). The association between residential arrangements and academic performance in UK university students. *Journal of Further and Higher Education*, *44*(10), 1320-1344.

Yang, B., & Huang, C. (2021). Turn crisis into opportunity in response to COVID-19: experience from a Chinese University and future prospects. *Studies in Higher Education, 46*(1), 121-132. https://doi.org/10.1080/03075079.2020.1859687

Younis, H., & Elbanna, S. (2022). Teaching in times of crisis: The impact of the COVID-19 pandemic on higher education. *Innovations in Education and Teaching International.* https://doi.org/10.1080/14703297.2022.2060850