

'It is the easiest thing to do': university students' perspectives on the role of lecture recording in promoting inclusive education in the UK

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ABSTRACT

The implementation of lecture recording (LR) technology is becoming common practice in higher education (HE). While it is often promoted as a technological solution to inclusion, there is a need for more in-depth research to examine such assumptions. This study was conducted in a research-intensive elite university in the UK, employing semi-structured interviews with 15 students and 10 teaching staff and focusing on students' voices as an under-represented dimension of LR research. The student participants recognised the usefulness of LR for improving access to learning activities and its limitations in addressing important pedagogical aspects such as student-staff relationships. LR was perceived to be aligned with a reductionist and tokenistic approach to educational provision – a compromise where the desired changes to HE's exclusionary structure could not happen. The study concludes by highlighting the necessity of respecting students as agents of change to stimulate the critically informed use of technology for inclusive education.

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Introduction

During the Covid-19 pandemic, as an emergency response to substitute face-to-face teaching with online provision, the increased use of synchronous online lecture recording and pre-recorded lectures in higher education (HE) worldwide is unprecedented. Whilst being novel to some, the application of lecture recording (LR) technology (often used interchangeably with 'lecture capture') has in fact been present for a long time prior to the pandemic, considered by some to be developing into standard practice in HE (Draper, Gibbon, and Thomas 2018). For instance, in 2018 in the UK, 75% of HE institutions reported using LR (UCISA 2018). Adopted as a digital strategy to enhance learning outcomes by allowing students to access recordings of live lectures, the implementation of this seemingly less 'disruptive' technology, however, has not been without debates over its efficacy. There has been abundant but non-conclusive research evidence with respect to its impact on specific indicators of learning engagement such as

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attendance and attainments (e.g. Edwards and Clinton 2019; Johnston, Massa, and Burne 2013). Meanwhile, a broader range of issues relating to LR's impact has been raised around the spatial reconfigurations of the university (Lamb and Ross 2021), pedagogical compromises (Morris, Swinnerton, and Coop 2019), intellectual property (Brittain et al. 2006) and precarious work conditions in HE (University and College Union 2021).

While the impact of LR remains highly contestable, a number of studies consistently suggest that certain groups of students tend to use LR more frequently compared to others and the technology is recognised as particularly helpful for the learning of those who would have traditionally been marginalised or denied access to HE, such as students with Specific Learning Difficulties, Deaf students, English as Additional Language students, students with further work and life commitments (e.g. Chang 2007; Cooke et al. 2012; Debevč and Peljhan 2004; Leadbeater et al. 2013; MacKay et al. 2021; Nightingale et al. 2019). Although such evidence indicates a potential role for LR in facilitating inclusive education, which reflects a current strategic agenda and commitment for HE institutions to respond to increased student diversity, there is a very little critical examination of underlying solutionist assumptions (see Watters 2013) about the extent to which the technology can straightforwardly solve challenges in HE teaching and learning.

The project discussed in this paper was conducted prior to the pandemic at a Russell Group research-intensive university in the UK, at a time when the institution was undertaking an ambitious plan to upgrade its technology infrastructure and universalise LR. The issues in this kind of university may differ from less selective institutions where students from low socio-economic disadvantaged background face increasing financial barriers such as commuting costs (Campbell, Macmillan, and Wyness 2019; Donnelly and Gamsu 2018). However, as the findings below will show, these challenges are also shared by some students attending this elite university.

This paper aims to further our understanding of the relationships between LR and inclusive education in the context of HE by developing critical perspectives around technology and educational practice. It seeks to move beyond straightforward assumptions of 'technology-enhanced learning' (Bayne 2015) that have tended to underpin previous studies of LR and engage some of the complexity of social, technological and educational change. Additionally, the paper particularly highlights the perspectives of students, who, beyond simply being the sources of learning data, have been much less represented in the implementation of and research about LR.

The changing landscape of inclusion and diversity in HE

Historically, HE in the UK could be perceived as an elitist, sexist, racist and ableist arena with significant barriers for many students from diverse backgrounds (Bhopal and Pitkin 2020; Donnelly and Gamsu 2018; Osborne 2019; Perale 2022). Over the years, much progress has been made to challenge this discriminatory tradition through implementing legislations and initiatives, aligned with local and global recognition of the social and political values of diversity and inclusion. Nevertheless, while barriers to being admitted into HE in the UK seem to have been alleviated for many as reflected in the increased diversity in student population (e.g. Higher Education Statistics Agency 2021), struggles for equality and belongingness continue to prevail – on one hand, groups of students' experiences

of marginalisation and unfairness suggest gaps between the rhetoric and practice (e.g. Kendall 2016; Phipps and Young 2015; Wong et al. 2020); On the other hand, while institutions tend to make available quick-fix practical guidelines on EDI issues, a recent systematic scoping review indicates that internationally among researchers still there seems to be a lack of consistency in how inclusive pedagogy is constructed in HE (Stentiford and Koutsouris 2021). Moreover, the tensions between the values of social justice and neoliberal marketisation often produce troubling outcomes and counterproductive practice that reinforce inequality (Liasidou 2015; Slee 2014). Without effectively addressing barriers to learning and participation, the agenda of inclusion in HE risks being tokenistic, serving a marketing strategy of profiting from the financial incentives of expansion in admissions and exposing students to difficulties without sufficient adjustments in educational provision.

The implementation of LR to support inclusive education

Technology is often promoted and perceived by many as a ‘solution’ to challenges in education (Watters 2013), in the same way, that it is often advanced as a ‘solution’ for wider social ‘problems’ (Morozov 2013). The early rationale of introducing LR into HE teaching spaces in the UK is less clear, however, the promotion of the technology as a kind of straightforward step to enhance and assist learning is noticeably reflected in the intense research interest in tracking its impact on learning performance. Much of the discourse around LR appears to assume that dynamic, fluid and interpersonal moments of teaching and learning, once captured by the recording technology, would become fixed products that can be made continuously available to and repeatedly used by students. As such, benefits for learning have been suggested by much of the research of LR for students who miss synchronous teaching activities or need to revisit parts of a lecture for revision (e.g. Brooks et al. 2014; Elliott and Neal 2016). LR also tends to be presented as one of a range of technological solutions to inclusion (Jisc 2018). For example, it is stated on the website of one university that ‘Lecture recordings are of benefit to all students not just students with special dispensation. The University values diversity and equality where all students can benefit from technological advances’ (University of Aberdeen, n.d.). Underpinning the main discourses of LR tends to be an assumption that LR can rather uncomplicatedly ‘enhance’ student learning opportunities, acting as a tool that students can use to adapt their approaches to engaging in learning. However, such assumption risks aligning with a narrow ‘instrumentalist’ view of technology, or as Hamilton and Friesen (2013, 3) suggest, a view in which: ‘technologies are seen as neutral means employed for ends determined independently by their users’. In other words, beyond the obvious intentions of individual learners as they access recorded videos, LR is too often portrayed as having little association with the broader functioning of education. Such instrumentalist assumptions may limit research to solely ascertaining whether a technology works as intended, or not, substantially overlooking the more in-depth relationships through which humans and technologies are co-constituted (Hamilton and Friesen 2013). While it is beyond the scope of this paper to interrogate the full range of such relationships in the case of LR, it argues that student perspectives are a significant and often under researched social dimension of the deployment of this technology in HE.

Students can provide rich insight into the ways such technologies are perceived and used in relation to supporting the agenda of inclusive education.

Surfacing student voice in understanding the role of LR

The meaningful engagement of student voice in HE research promotes the presence, agency and perspectives of students, positioning them distinctively as crucial partners in co-creating education (Cook-Sather 2014; Sutherland, Lenihan-Ikin, and Rushforth 2019). McLeod (2011) argued that as a contested practice, voice tends to be associated with discourses of strategy, participation, right and difference, however, to enable student equity, it should be about listening and recognition beyond the sole concerns of expression and representation. Increasing research has elicited the voices of diverse groups of HE students to inform change (e.g. Meuleman et al. 2015; Vickerman and Blundell 2010), nonetheless, with limited focus on the application of technologies in HE and specifically its role in supporting inclusive education.

Students tend to be less heard about their views as it is often assumed with little questioning that educational technology suits the needs and interests of a new ‘tech-savvy’ generation (see Helsper and Eynon 2009). One key example here is the ramped-up use of analytic data to understand and evaluate learning activity and educational outcomes. Not only is this being promoted in the UK at the level of HE governance through the Higher Education Statistics Agency, but also such data analytics are also increasingly appearing as strategic priorities within individual institutions, as a supposed means to gain more objective, accurate and efficient insights about how students learn (e.g. University of Leeds 2019). However, such approaches seem to be oriented towards replacing student voice with the data traces left behind in software platforms, including those used to provide LR services (e.g. tracking how many times a recorded lecture has been viewed). These processes of data collection and analysis are much less visible to students, and very much incomprehensible to those lacking specific expertise. Students can be left with little opportunities to fully understand how their behaviours and actions are being recorded, interpreted and categorised, being the silent producers of analytic data while the complexity of their experiences of education is marginalised and their educational futures are shaped without sufficient opportunities for them to speak back to the technologies that increasingly make authoritative decisions.

There is a pressing need to foreground student voice in relation to LR beyond statistical data analysis. A few recent studies have helped shed light on their views and use of LR. For instance, Skead et al. (2020) investigated students’ views and motivations of attending face-to-face lectures. The study found that students tended to value LR for its flexibility and concluded that LR was helpful for mediating the demands for students to juggle commitments. Nordmann and McGeorge (2018) noted the necessity of learning from students about the implementation of LR – their research focused on practical ways in which students and staff might adjust how they could use LR as an instrument to improve outcomes. In another study (MacKay et al. 2021), by analysing widening access students’ experiences of using LR in Scottish universities, the research highlighted how LR could be a useful tool to supplement students’ social credit. Nevertheless, more research is needed to develop an in-depth and critical understanding of the role of LR in relation to inclusive education.

Methodology

The project ‘Lecture Recording for Inclusive Education’ was among the first to examine LR’s specific role in relation to HE inclusion from the views of students in the UK, particularly adopting a starting point to respect students as agents and essential partners for inclusive education (Wang 2021). The research questions were set out as below:

- (1) How do university students understand the role of LR in supporting inclusive education?
- (2) How do teaching staff perceive LR and utilise it to enable inclusive teaching practice?
- (3) To what extent can LR effectively support inclusive teaching and learning in HE?

Sampling and ethics

Recognising students’ intersectional experiences of barriers to inclusion (Bešić 2020), the project did not limit participants to particular prescribed categories while approaching a balanced representation of varied backgrounds to capture rich, diverse and relevant experiences and views (Mason 2002). Purposive sampling was used considering diversity in aspects such as year of study, gender, dis/ability, race, language, culture and socio-economic status. The publicising of invitations to students was assisted by learning technologists, teaching staff and the student union. As the project progressed, interest in participation continued to be expressed by a larger amount of students that exceeded the intended scale of the study, thus a more emergent theoretical sampling strategy was then adopted to enhance the sample’s heterogeneity (Strauss 1987): interested students were requested to provide a brief description of their experiences with LR and those who offered new insights were recruited till data saturation was reached (Saunders et al. 2018). It should be noted that all interested students found the implementation of LR in the university acceptable, therefore the project did not involve those who might otherwise oppose the use of LR. The project involved 15 undergraduate and post-graduate students with diverse backgrounds and 10 members of staff with teaching responsibilities. Ethical approval was gained from the Moray House School of Education Ethics Committee, University of Edinburgh. The participants were provided with informed consent letters which explained the rationale of the research, the expectations, confidentiality and anonymity, and their rights to withdraw at any time. Students were given book tokens to compensate their time incurred due to participation.

Data collection

A semi-structured interview method was used to elicit responses on specific topics and meanwhile allow spontaneous, flexible and open-ended conversations (Cridland et al. 2015; Kallio et al. 2016). The project engaged various stakeholders across the university including the LR management team, learning technologists, academic staff and staff-facing LR workshop facilitators to gain insights into the process of the implementation, the rationale for key decisions, the available resources for students and staff, and broader opportunities and challenges involved. The interview guidelines were informed by the

rich background knowledge to encourage participants' reflections on issues related to inclusion (of themselves and peers) and accommodate a range of views, such as perceived benefits and drawbacks of the LR service and alternative options to LR in teaching provision to address inclusion. The author conducted all the interviews apart from the first two interviews with staff at which another colleague on the project was present. Being a female and international member of staff in the participating university who has experience of working with disabled students, the author built rapport and trust with the participants by listening with empathy and sharing her similar personal experience of barriers to learning. The interviews with students lasted 30–45 minutes and the interviews with staff lasted about 1 hour. Both groups much welcomed the opportunity to be heard. Some staff participants especially considered the interviewing process to be helpful in making space for reflecting on their use of LR. The interviews were audio recorded and transcribed.

Data analysis

The students and staff's data were analysed separately using thematic analysis (Braun and Clarke 2006), involving both inductive and deductive processes to build interpretations from the participants' perspectives while observing presumptions about the relationship between LR and inclusive education informed by previous studies (e.g. Fereday and Muir-Cochrane 2006; Pathirage, Amaratunga, and Haigh 2008). For instance, when analysing students' data, the call to prioritise student agency was less expected when the student participants passionately shared their critical reflections on the purpose of HE beyond the use of LR. Consensus on the interpretation of the data was reached between the project's researchers to add trustworthiness (Lincoln and Guba 1985).

Findings

This section reports key findings from the students' data, echoing the call to create more space for student voice in analysing the role of digital technologies (Manca et al. 2017). The participants' views are not expected to be generalised from this small-scale study, recognising the unique social context and process that gave rise to the data. The participants' names are anonymised and potentially identifiable personal information is removed. The presentation of the data follows five analytic themes 'Recognition of HE and traditional lecturing', 'Unmet expectation of inclusive learning', 'LR's usefulness in mitigating challenging circumstances', 'Prioritising education for every student', and 'LR as a compromise solution with limited transformative impact'.

Recognition of HE and traditional lecturing

Many of the student participants emphasised that they deeply cherished the opportunity to embark on HE, considering the experience as 'life-changing', 'a privilege' and 'the key learning point'. The participants consistently perceived attending lectures and being physically present in a classroom as the crucial, embodying, formal and motivating action to engage learning, and some noted the benefits of having a defined learning space with less distractions:

I like going to lectures ... It is very much I am here. I want to learn and be engaged. I enjoy the environment. (Quinn)

I guess also going to university once you are there then you are in a place of learning. You get to know your way. You get a bit more serious ... You feel like you are studying ... So it gives me a chance to ask questions, gets me out of bed. (Zoey)

Because it is different if you sit in a lecture there and you actually listen. You have to concentrate your attention for 1 hour. And there is no way you can just run out, or just go to the bathroom or get a coffee or food and you totally forget what you are watching ... So it is a proce, process, process of learning ... At home I have a child, he needs something every 5 minutes. (Nina)

The participants also commented on how listening to lecturers could help them gain a better understanding of the content:

Some of the stuff [of the subject] is quite complicated. Sometimes, quite like, difficult to understand. If I am listening to someone explaining it to me, so much, it makes so much more sense. (Kai)

The interdependence between teaching and learning was recognised. Neither teaching nor learning was seen as a solo act but rather respect, appreciation and reciprocity were perceived as essential to facilitate a collective, interpersonal and shared educational experience:

I just think that's [skipping lectures] not very respectful to the lecturers, because they take time to teach you. (Maya)

I think I must go to the lecture because of respect. It is not just the lecture. Because you know, there is, if no one attends the lecture, I think the lecturer will be frustrated. So they don't give any passion to err ... deliver the content. (Rui)

These responses show that many students greatly valued the opportunity to study in HE and perceived in-person attendance at lectures as key part of the university experience. This suggests that LR might not easily substitute for students' perception of 'authentic' university participation.

Unmet expectation of inclusive learning

The participants felt impressed by the university's abundant facilities, a very diverse student body, and its widened access for students who traditionally had limited opportunities to study in HE. However, many recalled the very challenging transition into a learning context which was distinctly different from schooling in terms of contact hours with tutors and an expectation for students to be ultimately independent:

... and you are in the university environment, where it is, almost, 100% independent. I mean, I was, I don't think I was expecting that so much. (Quinn)

Because [in the secondary school] most of the studies during the day was sort of what teachers said in the class, while in university most of it you do it in your own time. So there is a lot around figuring out what works for you ... University is about transitioning from a very structured school system to more personal learning. (Isla)

Although the above expectations seem to imply an individualised pedagogical and support approach that caters to students' learning differences, the participants'

experiences differed, in particular around the ways in which teaching tended to be de-personalised and exclusionary:

There are very acute problems which can happen when you widen access, when you try to cater to people, mature students, single parents, people with ... you know, and that tends to, which will flash out or come out today, it gets missed. And there is a lot that gets missed there because, being philosophical, in kind of utilitarian sense, the university caters for the 90% and sometimes forgets about this real issue, sometimes, people over here. (Quinn)

[In schools] The teacher had more time for individual students. So if we had any question, because it was also a closer community, I was not afraid to ask. We would help each other out. And our teacher would know of course any adjustments to be made ... But like in university, the class, is like a hundred something people. So you don't know them. And you are kind of embarrassed, not embarrassed but kind of ashamed to ask a question. So you don't interrupt a class. The professor is not really teaching you, but just giving a lecture. It feels a bit less personal, it does. (Cecilia)

These findings indicate that students experienced HE teaching as exclusionary, despite a widening access agenda that has clearly improved learning opportunities for diverse groups of students. In this sense, LR sometimes appeared to serve as a useful additional support for students who encountered challenges with in-person lectures.

LR's usefulness in mitigating challenging circumstances

All student participants emphasised that the continuity of learning could be at times interrupted due to a wide range of circumstances, especially by factors such as health and disabling conditions, and socio-economic backgrounds, which were perceived as sources of distinct disadvantage. [Table 1](#) summarises the particular issues noted by the participants.

The participants explained how these challenges gave rise to a distinctive need for LR. For example, the student participants with Specific Learning Difficulties welcomed the technology, which enabled them to pause a lecture to refocus and process information:

But I think that [no recording] is a bit dangerous because then some students will not benefit. Because part of my dyslexia is that I am very very slow at processing speech so I like often in my notes, it will be like half written, or I have forgotten something that till the end of it I have got more written at the beginning. It is very confusing so in *a social science subject*, I just need, shouldn't I almost just can't listen to them because I need to write, so it is very difficult to know that that's the only notes that I am going to get. (Aria)

To the participants, LR seemed to be a helpful and accessible tool to enable inclusive opportunities to engage learning:

Table 1. Summary of identified difficult circumstances.

Unable to attend lectures in person	Illness and mental health issues; clash of course timetables; part-time job; family commitments (e.g. high childcare costs); train delay/cancelled due to bad weather; a broken boiler; live far away from the campus for cheaper rents
Unable to fully understand lectures	English as a student's additional language; Specific Learning Difficulties; complicated theories and specialised terminologies; teaching staff's fast speed of speech or limited language skills; insufficient skills of note-taking (e.g. a lack of targeted training in less privileged schools)

I had this super talented [teaching staff], you know, he is very eloquent. But when you are dealing with the kind of diction of philosophical language, very complex issues ... and I am trying to understand exactly what this man is saying at the same time. And I am reading the notes ... There is technology now to resolve these issues. (Quinn)

I really love the fact that lecture recordings are available. They are available for everyone, so they don't exclude anyone. (Cecilia)

The participants further considered LR as extending some possibilities for a more flexible and personalised approach to learning because they could decide when and how to engage learning:

But I am certain, I am certain that there are, whether people might learn better visually or reading texts or writing to memorise things than hearing audio. I think it really depends on the individual. (Jude)

So lecture recordings are giving students the choice to learn how they want to learn. And more options is a good thing, because university is about doing something that works for you and motivating yourself. (Isla)

Prioritising education for every student

The participants shared their views on staff's resistance to LR related to concerns such as the risk of exposure, surveillance, censorship and welfare. They primarily recognised and respected staff's rights to refuse to be recorded. However, they also articulated a view that staff should not avoid dealing with the everyday possibility of publicity in an era of pervasive digital technologies and social media. They considered the university to be a place for students to learn how to engage in these complex issues of publicity, as well as to develop democratic and critical thinking skills, and to do so explicitly from teaching staff's demonstration:

For staff, I am sure for their academic career, they had very challenging conversations that they were brave enough to deal with, and dealing with the most ... I mean as a university we should be tackling the most difficult questions. (Quinn)

But if a lecturer has created, like if a lecturer has created a lecture and that's part of a course, and that's a subject that they do need to talk about because it is part of the course crucial to the learning, then why shouldn't it be recorded. (Aria)

They chose to not to record the lectures because they were worried that some of the contents or the other readings or the lectures themselves, out of context, can be construed as sensitive or offensive. But I thought that was just a little bit ... It is almost like denying it ... I think that's even like worse ... I think that is, that's part of education especially in university settings. Having your ideas challenged in a way you haven't before ... Censoring it, ignoring it, pretending that it is not a thing, it is not just pointless, but it is actually more harmful, because it doesn't teach people how to deal with those situations when they arise. (Luca)

When expressing their doubts over to what extent curriculum and pedagogy had to be compromised due to LR, some felt that LR might be a useful tool to promote high quality teaching which was perceived as not necessarily guaranteed through the traditional lecture format. The participants reiterated the importance of ensuring high quality teaching regardless of whether LR is implemented:

If the lectures were recorded, then, it could, I guess, give staff strong incentive to, like hmm, increase the quality of like, like if they need to be recorded, I am pretty sure they would make, you know ... Also it helps the university to monitor the quality of teaching better ... (Leon)

Political sensitivity, copyright, and there are all of these things that ... I think, for me, remove essentially what a university is doing, which is to educate this person here ... (Quinn)

They learn more, they are better, so that's the main goal. (Nina)

Some participants emphasised that the university is obligated to meet their expectation of high quality teaching, based on a consumer-oriented reflective view:

So I feel that it has become more of a case that the university, hmm, like, taking as many students as they can, like, it has become more like a financial incentive for them ... I mean it is really a controversial thing to say but as opposed to like hmm making sure all the students who come are actually like, giving them the education that they value, and deserve. (Leon)

And the way I see it is like, as students, we pay money, you know, to get this education. I feel that we are allowed to look at what we pay for, you know like, we pay for the class, so I think it is reasonable to say that being able to look back on them ... (Kai)

These findings show that the students were attuned to key issues around HE teaching and didn't perceive LR as able to address the quality of teaching on its own.

LR as a compromise solution with limited transformative impact

Interestingly, none of the student participants considered LR as a complete replacement for face-to-face lectures, but more as a 'backstop', a 'safety net' and a 'luxury':

I think you can't just replace the whole education stuff with just some electronic ... Because often I am, when I am, just the chance that beyond the lecture recordings, you can go in, talk to someone, actually talking to someone, you think about new things, and it is hard, it is not easy, and you don't have that type of learning when you are just typing and looking at a screen ... (Zoey)

Most of the student participants also pointed out that recordings could be incompatible with interactive teaching activities such as group tutorials, emphasising the differences between lectures and seminars, and LR's likelihood of impeding participation in interactive sessions:

I am afraid that the students wouldn't talk ... because at tutorials, you get to ask questions, but sometimes we can be really scared if we ask a stupid question. And if it is recorded, it is like a shame on you. And you can listen and someone else can repeat it. And then. No. No. (Nina)

Because they are more frontal lectures. They are not interactive. It is really about explaining the content, while a tutorial is more about problematising it, and having input and different views and try to make them more coherent in the topic to give a deeper view of it. (Jayden)

It is students' right too to not be recorded if they do not want to. (Sean)

Not the tutorials. Because, it is more PhD students interacting with students, whereas me and my tutors there is more closeness, and you can have jokes and you can laugh around while learning ... and it is like an easier way to get to know people, and then not feeling stupid, not feeling pushed you know like everyone is in the same boat asking questions, and others are willing to help you ... When you enjoy something, you are more likely to feel better, to ask questions ... (Maya)

Nonetheless, when asked to suggest any other similar level of support they could access if LR were unavailable, the student participants found it difficult to identify a practical and alternative solution:

I think maybe one alternative is for a lecturer to make, I guess, the notes available to students? But I am pretty sure that's something that lecturers will be even more strongly opposed to than lecture recordings. (Leon)

It would be a bit more beneficial for us to have more like regimented time with our tutors. If I only had one tutorial a week, again, it is like for per course. You know, just one hour, you know, how can you get through everything in just one hour? The tutors are kind of stressed out. They have to grieve. They have to shout anyway then. (Zoey)

Unless they would add on hours of interactions with lecturers and tutors which possibly isn't possible. (Luca)

The participants were also frustrated at the university's slow adaptation to the changing landscape of HE:

They have been doing the same lectures for 30 years. Nothing quite new has been done ... But the way that people learn and want to learn does change. And it seems a bit strange that hasn't quite ... but anyway. (Quinn)

I can imagine that maybe older lecturers may be opposed to it [LR] because it is really modern, and it is kind of going against like the traditional ideas. We are like a different generation. We like to have everything online like. (Kai)

I think it [LR] is the way, it seems to be a natural progression for the way lectures are conducted. Obviously 40 years ago that would not have been an option. Now it seems to be quite normal. I think it is about adapting to that change. (Luca)

While acknowledging the limitations of LR in fundamentally transforming the learning experience, student participants noted the need to address the unpreparedness of teaching staff. Only one student participant recalled being informed specifically by a tutor about how to use LR more effectively. Often students were not aware that they were being video/audio recorded or informed as to why certain lectures were not recorded. They called for a more transparent and participatory decision-making process regarding the use of LR:

Because you know what, I think it is important what the students think. Maybe like, the class should have polls, like maybe students can vote if they like it to be recorded or not to be recorded. (Kai)

There has to be some interacting between the student body and the staff where some sorts of decisions are reached. (Luca)

Discussion

It was heartening to hear the students' aspirations for HE – without the progressive change towards inclusion and social justice, many of whom would have been excluded from such an opportunity because of who they are. Although there was a recognition of the value of the traditional form of lecturing, the students also found the expectations of independence and a much less personalised and connected pedagogy challenging, coinciding with findings from previous studies on student experience (e.g. Maunder et al. 2013; Pacheco, Yoong, and Miriam 2021; Symonds 2020). Social barriers to learning faced by the participants, as also reported by other studies (e.g. Leadbeater et al. 2013), conflict with a traditional rigid temporal and spatial structure of teaching in the university, giving rise to the acceptance of LR as a supplementary service to support their continuing engagement in learning. While the project sought to examine students' views of the role of LR in supporting inclusive education in the university, rather surprisingly, the student participants extensively articulated some of the complexities and nuances in their relationships with education technologies. The student participants' views of LR were intertwined with their expectations towards and experiences of the purpose, organisation and environment of teaching and learning in the university, suggesting an understanding of the technology as deeply enmeshed and practically indistinguishable from the context in which it is employed.

While acknowledging how LR practically helped with some challenging circumstances, rather than assuming LR to be a simple 'tool' for the enhancement of their learning, many of the responses above reveal a more subtle view of the technology as a catalyst to reflect on the broader impact of on-going contextual and structural issues relating to teaching practice in HE. The views shared by the student participants represent a sense of resistance against technological instrumentalism – a 'default' presumption that the implementation of technology would necessitate 'improvement' (Bigum, Bulfin, and Johnson 2015). In the context of inclusive education, it is often assumed that technology contributes to the inclusion agenda by enabling more personalised and flexible approaches to learning (Jones and McLean 2018), and, at least on the surface, LR would appear to align with such claims, seeming to offer 'access' to lectures by extending the time and space of learning to accommodate diverse student circumstances and preferred methods of engaging learning. Nevertheless, we should be very cautious about drawing the kind of conclusion that LR is itself a solution to the many challenges associated with realising inclusive education, as similarly warned by Manolev, Sullivan, and Slee (2019) through their critical analysis of the ClassDojo app. For instance, although the flexibility offered by LR seems to present itself as a way to improve students' access to the content, its implementation is also part of HE's shifting of students' temporal practice towards the idea that 'anytime could be study time' (1411) – such a move indeed masks the structures of inequality and students' different social positionings to time (Bunn, Bennett, and Burke 2019).

It is important to note that the student participants frequently addressed the already existing gaps in the university's provision that were hindering their sense of participation beyond missing lectures, such as reduced contact hours with tutors, ambivalence about the quality of teaching, and the lack of explicit change in curriculum that builds students' understanding of critical and current real-world challenges relating to technology and

diversity. The student participants' views of LR were correctly situated into much wider educational and societal issues of inclusion. The salient issues in HE noted by the participants, certainly not exclusive to the UK, are known to have been exacerbated by a neo-liberal agenda that promotes efficiency, standardisation and value-neutral and technical curricular, while overlooking the pedagogical and interpersonal relations that are key to inclusive practice (Olssen and Peters 2005; Semper and Blasco 2018; Zajda and Rust 2016). While the policy rhetoric of diversity continues to remain popular among educational institutions, less questioned is the structural and cultural shift influenced by neo-liberalism which inevitably reproduces inequality and marginalises non-normative learners (Liasidou 2015; Slee 2014). From this perspective, the use of LR technology to promote inclusion appears to align with a reductionist, tokenistic and technical approach by assimilating students into forcibly maintained exclusionary structures (Bacon and Pomponio 2020; Wrigley 2019). With little change towards a more inclusive pedagogy, students, as shown in this research, were still subjected to limited agency and choices reinforced by the existing exclusionary structure of HE, and compelled to compromise and adapt for their lost opportunities in learning. In other words, when students are expected to 'fix' the problems through personal adjustment, problems of inclusion continue to be located within students' behaviours instead of the wider contexts of learning, hindering the progress of a radical change towards inclusive education (Greenstein 2016; Slee 2014).

The majority of previous studies on the implementation of LR have tended to either overlook students' views or only examine narrowed measurements of students' learning. Being a service that requires massive financial investment as well as surfacing many broader complicated issues around privacy, surveillance and staff's work conditions, as shown in this study, the student participants have been rarely consulted or well informed about the rationale, the role and the implementation of LR. The absence of students' voices has been increasingly highlighted in critical perspectives of education technology (Witzenberger and Gulson 2021), and this study has affirmed the need to enable students' participation so that they can shape their own futures (Hillman, Martins, and Ogu 2021). This research has surfaced students' critical reflections on the role of LR technology in relation to inclusive education with an extended consideration of the wider structure of HE into which such technical services might be better situated. The participants used LR as an important example to share their invaluable insights into prevailing barriers to an inclusive and quality education in the university. Although to some extent a students-as-consumers discourse was still observed (Tomlinson 2016), the participants' comments meanwhile demonstrated a resistance to marginalisation and exclusion and showed their positioning as critical and active agents for change (Jacoby 2017; Naylor et al. 2021). They questioned practices shaped by neoliberalism, demanded the principles of inclusion to be truly embedded in pedagogy and viewed HE as a key arena for social transformation (Santos 2006), where the learning of inclusive values and democratic practice should be expected to happen. Their call for prioritising 'education' is a powerful reminder that resonates with the critique that conceptualising inclusive education is fundamentally about rethinking the meaning of education (Slee 2014). The study therefore has highlighted the convergence of needs for promoting student voice across research into inclusive education and educational technology to stimulate critically informed approaches for transformative change.

Conclusion

This study has offered a critical examination of the role of LR in supporting inclusive education in the context of HE in the UK. The title of the paper deliberately includes a quote from a student participant – ‘It’s the easiest thing to do’ – because students viewed alternative changes such as improving pedagogical relationships to be less possible. In other words, the acceptance of LR was more of a compromise than a choice. The rich insights shared by students reaffirm a necessity to move beyond a simplistic view of the technology as an easy ‘solution’, towards critical questioning of the purpose and the structure of HE to remove barriers to learning in the first place. The study highlights the importance of working in partnership with students for inclusive education (UNESCO 2019) and involve them in decision-making processes through constructive, open and empathetic dialogues. Future research may consider engaging a larger group of participants from various institutions to understand more comprehensively the impact of LR on students’ experiences of inclusion in HE. The ethical implications of education technology in relation to equality also must continue to be critically scrutinised (Macgilchrist 2021), and case examples of creative and innovative use of LR as part of an inclusive pedagogy could be shared more widely to build teaching capacity (e.g. Coyne, Lee, and Petrova 2017). The Covid-19 pandemic makes us more aware of how the exclusionary structure of HE aggravates experiences of marginalisation (Samuels and Freeman 2021). At a time when discussions of post-pandemic reconfiguration are evolving (e.g. Nordmann, Hutchison, and MacKay 2021), the views shared by the students in this study remain highly relevant. Instead of being positioned as passive receivers of education, students must be respected as agents of change and empowered to co-create conditions for an inclusive and socially just education as we reimagine the future of HE.

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