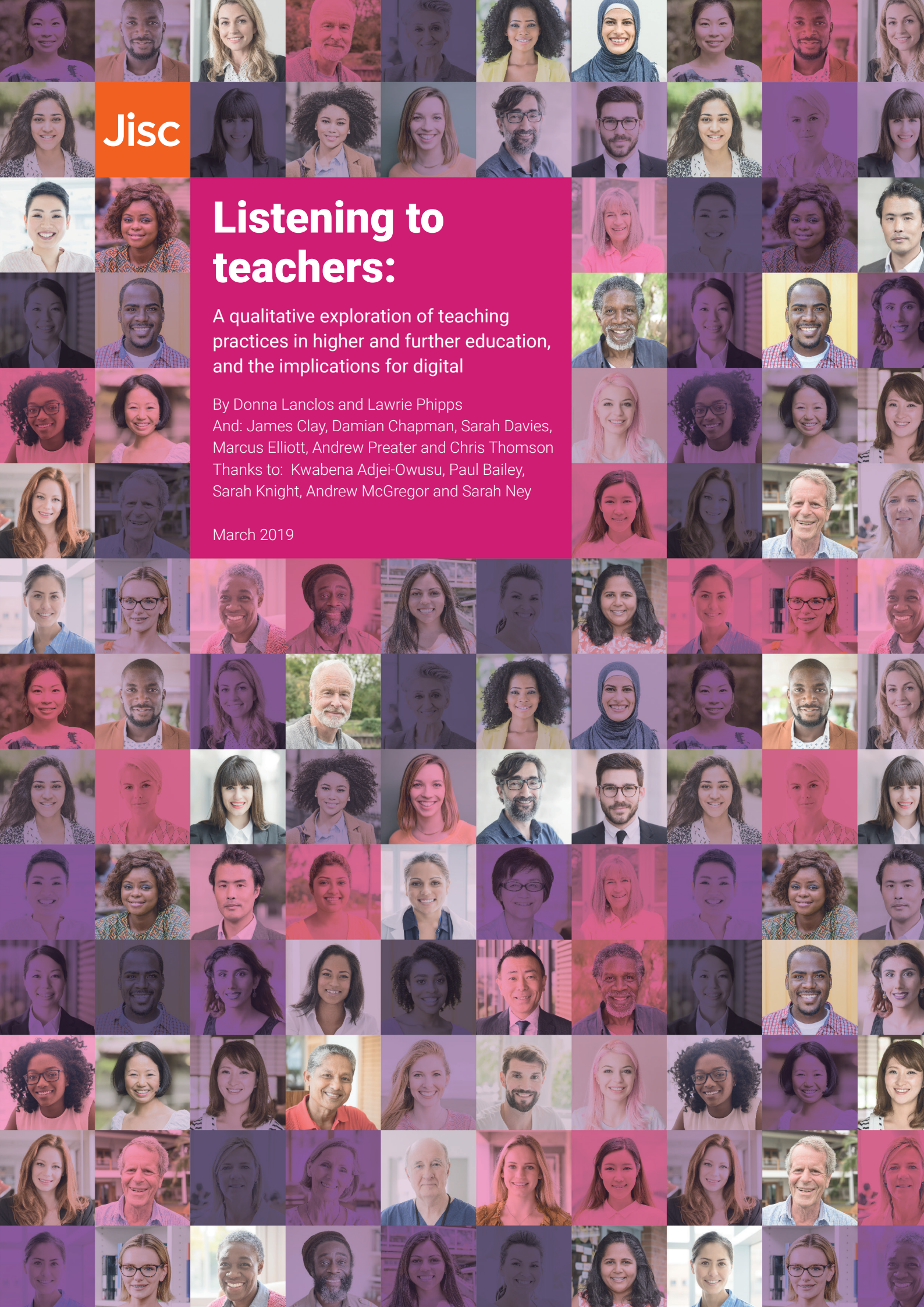

Jisc

Listening to teachers:

A qualitative exploration of teaching practices in higher and further education, and the implications for digital

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Executive summary

In 2016 Jisc led a consultation designed to uncover what next generation digital learning environments might look like. In the course of that work, teaching staff in universities and colleges talked about how teaching practices have changed since the '90s, when virtual learning environments (VLEs) and other educational technologies began to be deployed widely.

As it's our mission to provide solutions, advice and guidance on the use of technology we must remain focused on what people working in the sector want from their digital learning environments. So we undertook a research project to gain a detailed understanding of current teaching practices in universities and colleges.

Project leads Lawrie Phipps and Donna Lanclos drew on their own professional and personal networks to recruit scholars in a variety of HE and FE institutions who were willing to share their experiences of teaching with us. They asked questions that focused on the potential of technology so that we could discover how they currently teach, what their challenges are and what they would like in future.

This report distils what we've learned and provides insights beyond the technology-led.

Participants in the study talked about topics that related directly to their teaching practice including assessment, accessibility, active learning, employability, student experience, off-campus learning and wellbeing. They also described issues that have an impact on their practice such as bureaucracy, ethics, class sizes, leadership and time constraints.

Five overarching themes emerged:

Teaching places

Students

Change, innovation and risk

Organisational support

Technology

Participants said their efforts to re-evaluate and update their teaching practice are made more difficult by many factors, from the lack of sufficiently flexible learning spaces to a lack of support – both from risk-averse management and from students with overly conservative views about what 'teaching' is.

But they also described how they're forging ahead with adapting and refreshing their teaching practices and about how they're implementing workarounds to overcome some of the barriers they face. They're finding new and less formal spaces to work in, growing rapport and trust with their students so they're happier to go along with experiments, building supportive networks – and using digital technologies to keep them connected with students, search out solutions to their own staff development needs and keep their teaching fresh and relevant. What can Jisc and their institutions do to support and encourage their efforts?

Recommendations

- Digital technologies could enable more effective use of scarce, apparently inflexible teaching spaces. They could also facilitate a broader discussion about what other kinds of physical and virtual spaces might be useful and how to use them to best effect. Jisc's current work on the intelligent campus will help university and college staff to devise solutions, by enhancing timetabling and optimising space design and configuration

- Interviewees are frustrated about having inadequate opportunities to reflect on their teaching and they believe that peer networks are invaluable in enhancing practice. This perceived shortcoming could be overcome by planning more events that create space for staff to think about their teaching, their curricula and how to develop new digital approaches. Two particular areas are ripe for development:

    a. Professional development sessions focused specifically on pedagogy, skills development, new practices and integration of digital

    b. Focused support around management of teaching and teaching spaces – including measures that will support assessment and ensure staff and students can access course materials and content easily

- Centralised support is highly valued but, in some cases, teaching development is happening piecemeal because staff have different ideas about who is responsible for various aspects of teaching and course development. In particular, digital teaching development is challenging if teaching staff and those who develop and maintain the digital systems are not communicating effectively. Institutions need to work on ensuring that teaching staff can develop new practices and then work as part of a clearly defined multi-disciplinary team to develop courses and materials optimally

- Institutions that mandate particular systems risk stifling innovation and turning people off from using digital creatively in their teaching. Many of our interviewees are quietly using alternative technologies, although sometimes they feel exposed and unsupported in doing so. Institutions that value creative approaches should explore ways to support individuals who break the mould

- Teaching staff are concerned to support students' wellbeing and they take a holistic approach to student welfare. Currently, much of this work is done face-to-face. With time and space at a premium, universities and colleges could consider how digital technologies can help to support student wellbeing as well as other, less strictly academic aspects of the student experience

- Effective teaching and learning can't take place in an environment where trust is lacking. Interviewees said they're working hard to develop a relationship of trust with their students. Similarly, teaching staff must trust the institutionally provided systems before they will use them to support innovations in teaching. They must also forge strong bonds of trust with technical and teaching and learning support staff, so that their collective experience can be leveraged to maximum effect. Universities and colleges could usefully explore attitudes and trust relationships within their institutions and take steps to remedy these when trust is lacking

In seeking to understand how people in HE and FE teach now and how they want to do it in future, we've uncovered many of the practices that teachers engage in and the challenges they face. The staff perspectives recorded in this report, and the subsequent discussion, offer a starting point for institutional staff who want to initiate any change to teaching and learning processes.

Introduction

To bring about lasting changes around the use of technology to support teaching and learning in colleges and universities, we need to understand the practices that teaching staff undertake and the challenges they face. Effective, sustained change comes from a place of working in service to pedagogies. This report captures the findings of our recent work to develop a thorough understanding of the practices of teaching in colleges and universities.

Our starting point

A Jisc co-design project in 2016 was the starting point for a consultation to gain a richer understanding of what next generation digital learning environments might look like. In a wide-ranging and in-depth consultation we asked questions that focused on the potential of technology, the range of activities that staff currently undertake and what activities they would like in the future. The resulting report, *Next generation [digital] learning environments: present and future* focused on many of these areas, providing a baseline of current and emerging technology-based practices.

During that consultation many contributors raised questions about how behaviours of staff working in learning and teaching have changed since the first widespread deployment of virtual learning environments (VLEs) and other educational technologies in the 1990s. As it's our mission to continue to provide solutions, advice and guidance on the use of technology to support learning and teaching we must remain focused on what the sector needs and wants from digital learning environments.

This imperative is the driver for the current report. We wanted to develop deeper understanding about practice around learning and teaching with the aim of gaining insights beyond the technology-led.

We've captured the voices and experiences of teachers in higher and further education, drawing on senior and junior teaching scholars across a broad range of academic disciplines[1].

From more than 22 hours of interviews and several workshops we've distilled a series of themes and ideas for future development. The authors have provided indicative quotes from interviewees in the text rather than a comprehensive catalogue.

We used a contextual inquiry approach. This is a process whereby individuals are interviewed about their practices in an open-ended format and within a particular frame designed to find out what they do, what their motivations are, what personal history contributes to these practices and how they are impacted by current macro- and micro-contexts. This is standard practice in user experience research, especially at the beginning of design processes, and it is valued in particular for being distinct from 'lab' investigations of behaviour that are distanced from the context in which people habitually do their work[2].

In what follows, we describe the motivations for the contextual inquiry project and the themes that have emerged, and then explore the implications of some of those themes for Jisc's next generation digital learning work[3]. The research methods are described in an appendix.

[1] See also other ethnographic work on academic practice for additional context: Blake, Michelle and Gallimore, Vanya (2018) Understanding academics: a UX ethnographic research project at the University of York. New Review of Academic Librarianship https://doi.org/10.1080/13614533.2018.1466716

[2] See for example Dekker, S. W., Nyce, J. M., & Hoffman, R. R. (2003). From contextual inquiry to designable futures: what do we need to get there? *IEEE Intelligent Systems, 18(2), 74-77*

[3] jisc.ac.uk/rd/projects/next-generation-digital-learning

Emerging themes

The themes that emerged from the interviews are results in themselves, providing evidence of the kinds of topics that emerge when people are asked open-ended questions about teaching. Over the course of the 22 hours of interviews, participants touched on all of the following topics:

Tasks
- Assessment
- Bureaucracy/ administration
- Curriculum design
- Continuing professional development (CPD)
- Evaluation of practice
- Learning to teach
- Mentoring
- Pastoral care
- Research/practice
- Student feedback
- Teaching about teaching
- Writing
- Content (delivery)

Concerns
- Accessibility
- Bad teaching
- Barriers
- Expectations
- Employability
- Good teaching
- Control
- Ethics
- Labour
- Mental health
- Pedagogy
- Student success
- Safety/security
- Trust
- Change

Context
- Class sizes
- Flexible spaces
- Funding
- Kinds of students
- Learning spaces
- Library
- Leadership
- Motivations
- Scholarship of teaching and learning
- Schools
- Social media
- Time
- VLE
- Technology

People
- Network
- Peers
- Student

Mode
- Active learning
- Collaboration
- Communicating/ connecting
- Demonstration
- Flipped learning
- Field trips/Off-campus learning
- Face-to-face
- Group work
- Learning
- Lecture
- Labs
- Refusal
- Seminars
- Tutorials
- Workshops
- Textbooks/print materials

We have coded each piece of interview data with one or more of these themes. During data analysis the interview spreadsheets were full of cells that looked like this:

Quote	ID	Theme	Theme	Theme	Theme
In the case of the optional residential for second year students she thought that money would be more of a factor in student decisions once they decided to do the course that requires travel. But she wonders if finances affect whether they do the residential at all. Students make their decision at the beginning of level four for the trip that will take place at the end of level five, so they have 18 months to make the finances happen (her programme doesn't have any financial aid to help with students going on the residentials)	CITa57	Students	Field trips/ off-campus learning	Funding	Barriers

We have organised the following discussion around several overarching themes that emerge from the clusters opposite:

Teaching places

Students

Change, innovation and risk

Organisational support

Technology

Of course these themes overlap and the links among them will be made clear in the discussion, even as we use the separate themes as headings. As this report is intended to complement our understanding of sector conversations around next generation digital learning and teaching we focus primarily on these themes.

Teaching places

Classrooms and labs

The limits that physical space impose on teaching practices came up repeatedly in our interviews. Concerns about class size, the suitability of rooms in which individuals have to teach (lecture or fixed-seating spaces when they want to use flexible spaces, for instance), the limited availability of non-classroom spaces that meet the needs of staff and students – these were all persistent anxieties. Some practitioners were arranging their classrooms into flexible spaces that facilitated conversation and group work because their pedagogical approach required that arrangement. If they had to teach in traditional fixed-seating environments they had to spend time and energy "hacking" their spaces. The English literature professor found it challenging to continually change the spaces to make them suit the kind of teaching she wants to do, but "once you make the changes it is worth it," she said.

Many were aware they couldn't get into the kinds of spaces they wanted to teach in at their institution. The professor of education noted there was a "hard limit" on non-lecture spaces at her institution and the civil engineering professor didn't always get to teach in the interactive spaces he preferred. Individuals who did have access to flexible teaching spaces were aware that their peers did not always have that same access. This was the case with the applied ecology professor who knew that, while her programme's teaching lab was taught in "constantly," they are at the bottom of the timetabling priority for other spaces precisely because they have access to what is essentially a custom space, designed for the programme within the last five years. Many of her colleagues had to jockey for the flexible teaching spaces on campus.

The persistent sense of scarcity, an awareness that there are spaces they (or others) could be in, but they cannot get into, points to a need for better understanding of the relationship between staffing, timetabling, and available physical environments. We need to ask additional questions about what role the digital estate might play in supporting teaching, both active pedagogies and more traditional approaches. What tools are available now, what advice and guidance might be possible to support the kind of bridge that digital might build from current practices to ones that more fully use the potential of the spaces they have (and want to have)? Many would like to become more engaged in the transition to digital from physical or to a more symbiotic relationship. However, there are as many opportunities as there are issues with digital learning environments, and staff development would surely help facilitate a confident take-up of digital spaces and toolkits. But when staff development is limited to a couple of days a year it is insufficient to really enable innovation and opportunity.

Offices, lounges, and other spaces

Participants said they need non-classroom spaces for themselves and their students, because teaching and learning don't take place exclusively in classrooms. For example, they identified staff offices as important places for teaching and marking – the applied ecology professor talked about doing "all of her marking and admin work" in her office on campus. They're also described as important places for face-to-face meetings, which can be difficult in shared office or hot-desking situations (increasingly common in university contexts these days). Some participants talked about doing marking and other admin work in their office in an attempt to keep their work and home lives separate. While the solution to

"not enough space" institutionally can be "share a space", that solution does not necessarily meet the expressed needs of practitioners. Having confidential meetings, doing work that has private/protected results (such as marking), this is work that requires protected, unshared space. If not offices, then what? We could ask questions about what else might be possible given the potential of digital systems and a broader definition of what a teaching and learning space might be. If work is something you do rather than somewhere you go, what role could academics play in designing digital and physical spaces that meet their needs and those of their students? As we saw in the case of classroom teaching spaces, flexibility, a sense of control and adaptable spaces are a requirement for effective work in non-classroom spaces.

When talking about the work she does in her own office, the applied ecology professor mentioned that people in her department who have shared desks have to manage student traffic and confidentiality carefully – they collaborate to schedule meetings with students on different days, for example. The sense that confidential meetings could and should only happen face-to-face is an interesting one. Clearly there is a concern for privacy and security, but there is also an underlying assumption that difficult meetings should happen in person. It would be interesting to explore the possibilities for safe and effective pastoral care that happens in digital places and contexts, and how that might extend academic staff's capacity to meet and talk with their students.

So it's clear that informal spaces are important settings for teaching and learning, offering opportunities for greater flexibility. The HE lecturer in art and design found it easier to meet students in the flexible learning space set up for her programme; the students were more comfortable there (and she was, too). She meets one-on-one with students in the space "in a quiet corner" at the same time that other students are working in groups – if a student wants to meet in another space she has other places (such as her office) to go, but the large, comfortable, flexible space filled with soft seating, tables, whiteboards and computers along one side of the room was generally preferred. This lecturer spent more of her time in this room, meeting with students, "hanging out" and teaching in there, because her office was shared and she "hates it". She liked working in that space, or in studio spaces, because the students could find her "whenever they are having issues".

In some cases students find their way to non-classroom spaces even if they are not officially allowed to do so, because they need a range of places to do their work, not just lecture halls and tutorial rooms. The civil engineering professor mentioned that students at his institution were "not allowed in the buildings during the weekend" – but they go in anyway to use lounge spaces to study where they were comfortable. He said there was a pattern, particularly at the end of the term, when students need to be in the building to work more and they largely ignored the rules about when they were and were not "supposed" to be in the buildings.

Students

Trust and transparency

In some cases, a much broader desire to engage with students stimulated the need for more than just formal classroom spaces as a part of interviewees' teaching and learning practices. They said building rapport with students, developing trust and offering comfort in informal environments are crucial to set students up for success in the more formal contexts of the university. The civil engineering lecturer simply stated, "in my mind, it's about trust – students do more work for you knowing they have confidence that you'll take them somewhere." The lecturer who was head of the humanities faculty discussed the ways that he builds rapport with students via guest lectures and field trips as well as module leadership, resulting in students being candid with him and not just telling him what they think he wants to hear. The HE lecturer in art and design was careful to have direct conversations in her classes about how to accommodate different needs and she said she sees her students "relax a bit". She found that being relaxed made her students more open to learning. She also pointed out that when "students know you'll do something, they'll ask you. They pick up when people are not genuine," and won't go to those [less trustworthy] staff members for help. The political geography lecturer called trust "a big part of effective teaching. If you trust someone, you can take intellectual risks with them". He remembered studying Marxist feminism as an undergraduate: "I took lots of risks, I trusted [my tutor] and got a stonking good degree".

The English literature professor's strategy for putting students at ease when they came to see her in her office (a setting she says they are not always comfortable in), is to deliberately notice something about what they are wearing or holding – shoes, phone, clothes etc – and talk about it enthusiastically: "because it's very difficult to go into someone's office when you don't know them, and many students coming to my office do not know me yet." She said that students coming to her office for the first time are "very nervous, even though I am not scary at all".

It is worth asking here what else we might be able to learn about the experiences students have, especially the first time they approach an instructor, and the extent to which the student is apprehensive about approaching ' a lecturer' (where the identity is what is scary), or apprehensive about being in a new space (such as an office) for the first time. Could setting up digital environments that are explicitly about welcoming and asking questions (such as happens in library spaces) facilitate trust with engagement – and mitigate the fear that students experience when they approach faculty for the first time? We need to think about how digital tools and environments might facilitate building of trust, and also consider ways that current digital affordances might be perceived as barriers to HE and FE students in trusting their teachers and the institutional context they find themselves in.

The role of trust in teaching and learning emerges strongly from the interviews. Participants said it's crucial for effective engagement, learning and management to establish a context of trust. Modelling what they want students to do has to happen in a context of trust. The relationships that are built in informal spaces support what happens in formal teaching and learning spaces (lecture halls, seminar rooms, offices). A few practitioners pointed to the value of connections built with students around field trips and other off-site learning experiences. 'Informal learning' is not just about what happens on campus – it happens in a much broader landscape.

The art and graphic design lecturer in FE spoke of his positive experiences in getting feedback from students in non-teaching spaces, where he found it easier for students to open up "away from the work they need to do." The lecturer in forensics said that when she sees students regularly, not just in class, it builds trust and so students sometimes feel more comfortable coming to see her to ask questions rather than going back to other lecturers who originally taught the material. The professor of religion found field trips interesting not only in their own right, but also as an opportunity to talk to his undergrad students about what is going on with regard to his teaching – this was part of why he went on field trips with students.

Interviewees were aware that what they do when they teach and why they do it are both important parts of their teaching success. They talked about the need for transparency in terms of assessment, student expectations and approaches to teaching practices generally. The professor of religion said: "whatever you do with students, you need to be able to explain to your students why you are doing it." The PhD student in education, who is also a teaching assistant, taught her students about teaching by "echoing" within the process of teaching what she wanted them to do – she told them repeatedly, "this will be useful, trust me" and also modelled in her own behaviour the things she wanted them to value about teaching. The anatomy lecturer discussed transparency in the process of putting together a curriculum – he takes a holistic approach, framing everything to a problem, especially the student questions around "why" and designing courses as a journey, which he says "gives meaning to what they are learning".

Sometimes such transparency feels risky, and the religious studies lecturer spoke of his privilege in his position as a permanent, long-term lecturer and also a white man, in being able to safely admit that he doesn't know everything and that he's sometimes being experimental in his teaching. He is aware that such "risk-taking" is not always available to white women or people of colour.

Students, once aware of why certain practices were in place, tended to accept it. The civil engineering lecturer didn't find his students pushing back on project-based learning because those practices are a part of their discipline and students knew why they were engaging in them.

Transparency of practice was also framed as an important part of providing a context of trust, so that students would come to members of staff when they needed help. For example, the HE lecturer in art and design had a tutor with dyslexia and so she was taught in very different ways than she was used to. Her experiences with this tutor opened her to the possibility of different approaches to teaching and she talks about various approaches with her first year students. The feedback she gets is that they had been worried they were alone in their concerns or specific needs, and they realised after she talked to them that they were not alone. She thinks these conversations make her students a more cohesive cohort.

Practitioners talked about their philosophy of their professional practices and the relationship of teaching to research/scholarship and wider civic engagement, as part of their conversations around why their teaching and learning environments look the way they do. The anatomy lecturer spoke strongly of the responsibility that university academics have to teach, do research/scholarship and transfer knowledge to the wider sector. This last item contributes to his "why" piece when talking to his students.

Access and equity

It's worth considering how students might be disadvantaged if they don't have access to informal learning contexts (for instance, if off-campus opportunities cost extra money, or if they have work or family obligations that leave them less time for study), given the real benefits that people point to around relationship building, trust and less structured contexts for learning. For example, the applied ecology professor discussed at length the optional residential courses her institution had for ecology students. In the case of the optional residential for second year students, she thought that money would be more of a factor in student decisions once they decided

to do the course that requires travel but she wondered aloud if finances affect whether they do the residential at all. Students make their decision in the beginning of level four for the trip that will take place at the end of level five so, while they have 18 months to figure out the funding, her programme does not provide any financial aid to help with students going on the residentials.

Lack of access to off-campus experiences was even more acute in the resource-poor FE contexts where some of our participants worked; the art and graphic design lecturer we interviewed noted repeatedly the widespread financial barriers to being able to take students to places away from the campus or even to do things outside of the institution for himself.

Access to off-campus experiences for all students is not going to be fixed by digital solutions. If some students have to use digital substitutes because the face-to-face experience is expensive, only designed for people who can walk or otherwise exclusive, this builds in another layer of inequality into an already stratified system. The extent to which students feel welcome in off-campus/ informal learning environments can also have an impact on engagement and success. It is worth thinking about how institutions can make these experiences truly open and accessible to all students, and how to use digital affordances in a way that does not exaggerate and perpetuate existing inequalities.

Funding concerns were not just for the needs of the practitioners themselves, but also for their students, and whether or not they had access to the resources they needed as learners. For example, the PhD student in education has a staff position at her institution and is in an advising role as well as a teaching one, and she saw the cascade of effects that happen when a student loan doesn't go through. It can mean a student has no access to academic resources to participate in their classes, while also trying to get their loan bureaucracy taken care of. The HE lecturer in art and design spoke at length about encountering students who don't have money for their own digital devices (phones or laptops). She wasn't used to thinking of phones as important devices for learning but then had the experience of asking students what resources they had found in doing research for a project, and being shown the results by students on their phones. She realised that, while the phones themselves might be relatively expensive smartphones, many of her students had inexpensive (and therefore limited) data plans. She tried to encourage them to download things while they are on the campus wireless, on eduroam but also realised that her students having limited data plans for their phones meant that she and her colleagues need to think about how they handle assignments that students will work on outside of class. They need to give time and space, and also make sure students have the equipment they need.

The cost of printing and paper can be a barrier to some practices – for example, the political geography lecturer was asked by his departmental office not to give paper hand-outs to his students. He gave them out to facilitate note taking, but there weren't enough office resources in the department to make the copies. The lecturer in forensics pointed out that the costs to students of printing were a barrier to them going into the VLE to print out articles. Some students find it hard to read on a screen, so just putting the article in the VLE doesn't make sure they are going to read it either. She has experimented with printing the articles out for her students to increase the chances that they will read them, and was struggling with the balance between sustainable (not printing as much) and accessible (making sure students have an easy way to get a copy).

The desire to care for students emerged strongly in the interview data with participants mentioning concern for their mental health, data security and their present and future as networked people in a complicated world of online and offline places. The civil engineering lecturer, for instance, was part of a committee looking at the use of student data and he was concerned about his institution's use of the Maple TA system – he was working with the VLE team, legal affairs, IT, and disability services to try to craft effective policy that would protect students. The art and design lecturer in FE mentioned that his institution has safeguarding policies for social media for the students.

Some of the staff concerns with student wellbeing online are also a part of their reflections on their own practices. The head of a humanities faculty saw his online presence as an important part of his entire identity, talking about his Twitter, Instagram and other social media platform presences as ways that he is not just a "high formal" academic.

Participants also saw how scarce time could be for their students. They were keenly aware that students needed to spend time doing things other than going to class and had to make occasionally difficult decisions about whether or not to attend. The religion lecturer was present online not just on social media, but used technology to give himself time and make time to stay connected with students. He never cancelled classes while travelling, either delivering them virtually or doubling-up on teaching time the following week.

Participants' awareness of the broader contexts of their students' lives meant that concerns about time were about far more than simply timetabling for lectures, seminars and labs. The head of a humanities faculty noted that students need to balance their lives beyond the university and he tries to provide a "predictable temporal envelope" so they can plan, but then he wants to be surprising within that predictability. The lecturer in forensics, in planning a student conference, made sure that she gave lots of notice so people could make arrangements more easily (at her institution there was a particular concern over childcare arrangements).

The wider world that students participate in, and will continue to be a part of, informed some of the concerns our participants had about student success. The lecturer in forensics was concerned about the uncertainty generated by Brexit, saying it meant her students need to be "ahead of the game" and ready to deal with not-knowing all the time. On the whole, while there was some concern about the delivery of discipline-specific content, there was a greater emphasis on giving students practice with the processes of problem solving, or providing opportunities for them to build confidence in their skills, rather than "acquiring skill sets". The anatomy lecturer didn't see himself as training people to be "pure" [subject specialists], but to "be able to solve problems".

Assessment

Interviewees expressed concern about the ways that assessment might over-determine what students think is valuable in their education, especially given their view that some of the most valuable work students do in HE and FE isn't necessarily assessed in conventional ways. The anatomy lecturer said that "assessment drives learning" and that assessment means something to students. The civil engineering lecturer said there's a risk of students "over-valuing the stuff that they get marked for, because they use that criterion to make decisions about what they can do". He has also had conversations with his students where they admit that some things they don't get marks for are really useful. He had further concerns that the centring of assessment in HE teaching and learning meant that most of the innovation in the sector was around managing assessment rather than the actual practices of teaching and learning.

If assessment does indeed drive learning, or at least, signal to students what the institution thinks is important, then changes to assessment seem necessary if we want to change what happens with student learning. These participants are speaking to a desire for more authentic assessment in their teaching contexts. For instance, the civil engineering lecturer thought that, with group assessment, there could usefully be three models, each with a rationale, so that students can get a sense of what the assessment criteria are (and fulfil their desire for consistency and clarity). He wondered how technology could support group assessment, which can be technically (as well as pedagogically) tricky.

When thinking about the relationship between individual teaching practice and education technology it's important to remember that this is mediated by institutional structures and cultures, which are not consistent across the sector. Some tech-centred practices are driven, for example, by areas identified as problematic in the National Student Survey (NSS), such as student assessment and feedback.

Change, innovation and risk

The relationship between innovation and risk needs to be explored further – some individuals did not feel they had institutional support to try different things, so if they did something new they tried not to draw attention to it for fear that they would be told to stop, or that it was wrong.

It is worth asking, what does innovative teaching look like? It's not just about 'use of technology' because the following involves technology and is wholly familiar:

> *"[The professor of education] puts her materials online, uses the slides she has posted online in class, and she gets her students to do activities while in face to face class (all of the activities are on paper)."*

Student expectations can also have a dampening effect on whether teaching staff try new approaches. Participants recognise that they have to confront the occasionally quite conservative ways that students frame what teaching and learning looks like before they can safely try unconventional approaches. They are also aware that more innovative and unconventional approaches do not always correlate to simple measures of satisfaction in course evaluations. If innovation is defined as trying something unusual or new, change can be simply trying something different. Each thing can feel risky in educational institutional contexts. The religious studies lecturer noted that "students have been programmed to think that studying a topic looks a particular way (a limited way) so anything else seems a waste of time," and he wanted to move them away from that perspective. He told the story of one professor at his institution (since retired) who got good reviews from students because "they said they could easily take notes from his lectures, they were structured so it was clear what they needed to write down". It was not, however, clear that this person was a good teacher. Just that his students felt comfortable taking notes in his class.

Practitioners were concerned that classes and courses should consistently go well. As a result they had concerns not just about how to recognise and incorporate good teaching practices, but also about how to communicate the reasons for engaging with those practices to their students. The applied ecology professor talked about reviewing things that don't work in classes and making time to reconfigure or rethink things, but also about reusing what does work: "if it ain't broke, don't fix it". Participants were keenly aware of what was at stake if they failed to innovate, to try and succeed with new things (and discard the things that did not work). The English literature professor stated that inclusive teaching and teaching that doesn't change are mutually exclusive: "you and your practices have to be malleable".

Being transparent with students about why they are doing what they are doing emerged as an important way to manage student anxiety (and a sense of risk) about the impact of unfamiliar approaches. Transparency was thus a way for academic staff to build trust such that students could be more engaged and successful, and also a primary strategy for helping to manage the risks in trying new or different approaches to teaching.

The PhD student in education said she found that "how to be a student" was an ongoing conversation, not something that could be delivered just once in an orientation session or foundation course. The political geography lecturer engaged in theatre while teaching some of his history courses, and he would talk to students about what he was going to try. For example, he dressed in costume and acted as historical figures (eg Aristotle) which he said is "a little on the edge". In his experience, students remember better when he does that – he has got enough contact with students later in their degree so that they can tell him what they remember from courses earlier in their degree (and they definitely remember him in costume).

Participants emphasised the need to tell students why they are doing things in a particular way to help them be more successful and this circles back round to the importance of building and maintaining trust. Their measure of success, again, was much more about process than content. The applied ecology professor said "undergraduate success is about breadth, flexibility and being able to create depth where they want, and making sure they can develop that [ability to go deep where they want to]".

Organisational support

As we've seen, practitioners' experience with teaching places, and their connections with their students, deeply informed their approaches to teaching and their desires for more or different support for their teaching practices.

They perceived a lack of organisational/ institutional support because they felt there were few people they could talk to (and work with) in developing teaching practices, limited access to effective or interesting CPD around teaching and also poor fit between the institutional culture and the ways that individuals wanted to approach curriculum design, teaching and learning. The anatomy lecturer, for instance, was trying to do team-based learning with his third year students but finding module updating very slow. While the lecturer in forensics was at an institution that was starting to get larger rooms with workshop-style setups, she found it hard to check that students were keeping on task in a group bigger than about 40 and was unclear about where to get help with that, even though there was a teaching and learning centre on her campus.

The HE lecturer in art and design said she was concerned that her institution didn't celebrate good and authentic teaching enough. She gave the example of emailing one of her colleagues when they became a fellow of the Higher Education Academy (FHEA), and she was the only one who did so. At a different institution the head of a humanities faculty, from his position as someone supposed to support effective teaching, suggested that part of the reason that institutions are "not great at supporting innovation" was because it was hard to "struggle against the everyday" – ie the operational tasks of running classes, which get in the way of big-picture thinking about how and why we teach. The professor of education had set up research groups for teaching and learning in an attempt to create a suitable supportive space, but was no longer supported in that work and felt frustrated.

Time

Discussions about time and how much of it they felt they had available to work on, talk about and engage with teaching practices are closely related to discussions of organisational support for teaching. Across the project, people talked about time as a scarce resource. The final question of each interview was: "what else do we need to know about?" and the desire to have the time and space to discuss teaching came up repeatedly. The issue of time also arose when we asked what barriers there might be to teaching the way people want to. The religious studies lecturer, who is also his institution's head of academic development, said he didn't think there was enough time spent talking about teaching and learning and, when there were such conversations, they didn't "have institutional weight," because not enough people (and in particular not enough senior people) were participating. The lecturer in forensics pointed out that undergraduate teaching is time-intensive, in part because there is a lot that undergraduate students are trying to figure out and there's a lot more support needed from lecturers. The lecturer in political geography echoed this point that teaching takes time and added that he would like more time with his tutees, but that would require fewer [staff] meetings and a budget to socialise with them.

Several participants felt that time was scarce to have discussions about teaching within internal or external peer networks. Some institutions within our sample have clearly put together extra-departmental bodies (some across the entire university, some in just one faculty) to foster processes and discussions around teaching, with the exception of one large research university which has put together several. Such internal processes were clearly not available to all participants.

Even when there were institutionally provided spaces to discuss curriculum and teaching they were not necessarily dedicated to new teaching practices or to rethinking current work, but often about compliance and providing credentials. Interviewees talked about having dedicated time to develop new modules, but none to reconfigure or revise those currently on offer. This lack of time for module revision is likely related to the concern about the risks that might be involved in changing teaching practices. The professor of education said, for instance, that the HEA developmental process requires time that she's not convinced will be available in her institution.

Time also affected what kind of choices participants made around getting access to resources. Institutional bureaucracy can be a barrier to getting equipment, licences etc and if people need something on a shorter timescale than organisational red tape allows, they might just purchase something themselves so that they can use it. When we asked the HE lecturer in art and design what she wished she could do in teaching that she can't now, she noted that sometimes she ends up buying her own equipment and licences because "it's better than waiting for a year" to get the things she wants to help her teach. "That's annoying".

Bureaucratic processes could also add to the time that important work such as curriculum development takes, exacerbating the sense that there's not enough time to do important work. If we see time allotted and time spent on work as evidence of priorities, the sense participants had that there is no time to spend on teaching and development of teaching is striking. The professor of education saw "course design by committee" at her institution and didn't like it, because the hours required to do the work via committee made it hard to innovate.

Networks

Participants in the inquiry had a range of support available. For some there was very little institutional support for their teaching practices, while others had access to internal and external networks of support. For the most part people had access to either internal or external networks, but not both.

For instance, the art and graphic design lecturer in FE had a very limited external network with few outside connections in his field. In fact, he was hoping to get a chance to do an MA degree in part to build an external network in his field, as it was very difficult to do from his particular institution. But this same lecturer has good internal support from his line manager and felt he could ask for help. His organisation sets targets and there is access to staff development for curriculum development – for example, they have been working on integrating maths and English within the arts curriculum.

In the course of our interview another participant realised that, when she was talking about the support she got for thinking through pedagogy and teaching practice, she was referring to resources that were available to her because she was doing her PhD. Once she finished her degree she would no longer have the kind of access she currently enjoyed, but which she valued for her work.

Others felt isolated because they had no strong networks outside of their institutions, no sense of easy participation in larger communities of practice, either teaching or disciplinary communities. As mentioned above, the art and design lecturer we interviewed didn't have much outside communication or engagement from within his FE college. But he had a fairly robust social media presence and he saw himself and his peers at their institution using social media as a way of connecting to a network that was hard to find locally. He knew arts lecturers who

didn't have a studio practice of their own, but they engage in other ways with (arts) practice via social media – for instance Instagram and the Adobe online portfolio Behance, which also allows for comments and likes. Based on this experience, he and his colleagues encourage students to use social media to connect, too.

Those who did have access to a network of peers, locally or outside of the institution, recognised it as important to how they approach teaching. The applied ecology professor had opportunities to see her colleagues teaching because co-teaching often happened within her programme's modules, and she and her colleagues discuss what to do, how workshops will be run, and generally "talk about practice" among themselves. The PhD student in education knew that she serves as a resource for her colleagues because they know she is doing her PhD, and she saw the relationships with her colleagues and students as helping to provide the materials and approaches for her to use in teaching, too.

Fragmented internal networks are silos that make it impossible for some to see the good work that might be happening. The civil engineering lecturer was convinced that there were "secret projects" on his campus, innovations that no one can see because of the barriers to their visibility. Others were themselves part of the institutional support system for teaching and learning but encountered academics who did not want any part of that support. The head of the humanities faculty, in trying to effect change within his institution around teaching and learning practices, encountered academics telling him "stop telling us how to do our jobs". He also recognised that he was part of a network that not everyone at his institution had access to – he spends a lot of his time with staff developers talking about teaching, but this is a small team and so it's of limited benefit to the entire (large) university where he works. He thought that lack of access had a negative impact on his institution's support for CPD for teaching.

Some recognised that there were people at their institutions who they could go to for resources, especially around learning technology, but they did not necessarily avail themselves of their services. The applied ecology professor knew about the academic development office at her institution and associated it primarily with the running of Moodle. She didn't much tap into the office and what it had to offer around teaching and learning, in part because she thought of it in terms of technology, in which she felt confident. She didn't think of it as supporting pedagogy, which she actively sought conversations about with colleagues in her own department.

Barriers

In some cases, the organisational barriers were seen to be particular people within the institution, for example, members of the senior management team. The professor of education specifically identified a dean at her institution as "anti-edtech". But change management difficulties could be found at many levels, not just senior management ones and, again, the barrier to change here is not necessarily technological but organisational. In the anatomy lecturer's experience, "sometimes people create barriers." For example, if he wanted to change modules he needed to go through three different committees to do so. "Sometimes people want to pick fault just because they can."

Some CPD offered at institutions does not appear to be a good fit for specific practitioners – what is not clear is if it is actually a bad fit or if the internals offering CPD are not communicating effectively that it is widely applicable. The applied ecology professor noted that her institution's CPD about ethical clearance covers interviewing but not science experiments, so her (science discipline) team was the location where she talked about teaching practice. She said, "we [staff in her field at her institution] are a bit of a misfit" and clearly felt she had few places internally to go to talk about the kind of teaching she needed and wanted to do.

The number of people available to do the work, and what sort of people (and expertise) are in the institution, both have an impact on what is possible with teaching. When thinking about designing a course the religious studies lecturer also had to think about who will be available to do the teaching – he said that available staff and their

capabilities/characteristics can be a restriction to thinking about what is possible to offer to students. The PhD student in education was trying to have class discussions within the VLE but it was working less well this year because they now have online practices that are split between two locations, and one of these is in the last year of the programme so there wasn't much attempt being made to keep the two locations coordinated. Therefore, she said, the platforms were "a bit of a mess" this year. In this case, the difficulties manifest as student confusion within the VLE but their confusion is not a problem of education technology. Rather, it's born of not having enough staffing to communicate and coordinate across multiple teaching and learning sites (digital and physical).

Funding (or lack of it) also contributes to the sense of what is and isn't possible. The lecturer in forensics, working in a post-92 university, recognised that resources were limited at her institution and so she tried to make the best of it and teach her students well as they come to her. The HE lecturer in art and design didn't always hear "no" directly when talking about what she wanted to do around teaching but wasn't always provided with the necessary equipment or funding to make what she wanted to do possible.

Funding concerns are not, of course, just about internal forces within institutions. They are part of the larger political context in which teaching staff operate. This political context informs organisational concern with metrics such as NSS scores and Teaching Excellence Framework (TEF) awards. This has the potential to become an even larger concern as attention is paid to the metrics associated with the new Office for Students' (OfS's) data-driven approach. The focus on metrics could potentially distract from the work of teaching and learning. The HE lecturer in art and design called the focus on NSS scores "nonsense" that was, in fact, in conflict with research and funding concerns, and said it got in the way of doing "actual work".

But some perceived the extra-organisational metrics as opportunities to focus and align work towards more effective practice. Whether people see metrics as providing opportunities or as a burden getting in the way of teaching might depend on how much autonomy they have within institutional processes that are informed by (or concerned with) responses to metrics and league tables. The civil engineering lecturer, in a previous position in his current institution, was in a context where attention to teaching was regarded as evidence that not enough attention was being paid to research. He suggested that current concerns about NSS scores and the TEF had changed that somewhat.

Technology

During the interview process we did not lead participants with direct questions about digital. This was so that the boundaries of the conversation were not seen as limited to, for example, technology that they already used; this provided a place where they might further understand their existing perceptions of technology.

Note, therefore, that mentions of specific technology and of what did or didn't work emerged from the larger conversation about teaching practices and priorities. The digital aspects become apparent once the conversation has begun and, where they are referenced in positive, enabling ways, it was apparent that use of digital technologies was implemented based on perceived needs. Where technology is mentioned in problematic ways we have tried to further analyse the root in the text.

Organisational culture

Fundamental to any discussion of technology is the underlying organisational context in which people are using it. One thing that emerges from the interviews is that there is no single model of education technology support across the sector and that the landscape of education technology and teaching and learning varies. This means that where people identified institutional barriers to what they wanted or needed to do in their teaching was also not consistent. Sometimes participants located barriers in the core of their institution, for example the professor of education who, as we've already seen, found her institution "very anti-edtech" and she noted that there were no courses on education technology taught there. However, some participants found a great deal of support in their organisations. The HE lecturer in art and design used the digital tech department at her institution to learn from and found them to be "really supportive," with the learning technologists coming to help her when she needed it. The civil engineering professor said he knows that technological innovation costs money as well as time and he felt he had received support for both at his institution.

Some participants were a part of the support network that academics were meant to be accessing but they didn't see the ones whose practices most needed to change. The head of a humanities faculty, whose role was in senior management with responsibilities to manage and develop teaching practices in his institution, saw a need to do work with people who "don't want to see me" - that is where he saw significant changes could come from.

VLE and other digital teaching contexts

As we might expect, the VLE was a prominent feature of the teaching practice of staff, with interviewees expressing various levels of comfort and capability with it. The applied ecology professor was confident that she already knew what she needed to do with Moodle to get things up and running, especially as a course leader, and so she found the support on offer at the academic development office not quite what she needed to take her beyond what she already knew.

Using tech outside of the VLE was problematic if it did not connect with existing university

policies around assessment, raising questions of how participants might reasonably try new things with technology in the absence of structures that might reward or encourage either themselves or their students. The professor of education used a blog for class once instead of Moodle and, she said, "some students really got it". But because she was not allowed, according to university policy, to assess the work done on the blog students didn't see the point of doing the work in that environment. In this instance the lecturer found that, when the focus of policy was on the specific technology rather than the practice, it stifled innovation and change in her approach to tech in her teaching. There are lessons here about approaches to education technology, about the hazards of letting the tech-tail wag the teaching dog.

The participants had many examples of using institutional technology to manage and enhance their teaching practices. We interviewed individuals who were continually iterating their practices, learning from what worked and what did not. It is unclear to what extent their institutions had mechanisms in place that facilitated learning from these iterative practices so that academic staff more widely might have opportunities to reflect, learn and change. The anatomy lecturer had experiences of flipping classrooms with 250 students and he used previous lecture capture footage, edited it and put it online. He then tried to use the 50 minutes of face-to-face class time to deal with difficult issues. The political geography lecturer said that he found having PowerPoint slides available online was good for students with learning disabilities. He also wanted to use Blackboard to make his lecture slides available in advance so that his students could write their class notes on the printouts of the slides. The lecturer in forensics valued being able to share her PowerPoint slides with her students, not because she adhered to them strictly in her lectures but because she saw them as a help to students who wanted them to read after the lecture had been delivered. The PhD student and teaching assistant in education used her institution's Moodle discussion boards for her post-graduate students and had also set up two different areas for discussion in Moodle, one where staff were present and another that no staff had access to, "so students will use it".

There were also examples of the technology acting as a barrier to the work they wanted to do with their students. For instance, the PhD student in education showed us her institutional Moodle setup and talked about its problems, such as when students are added late to a class. Those students don't have access to the content of the class because the permissions are so hard to wrangle.

'Innovative' was not necessarily the appropriate word to describe many of the uses of education technology. It is important to distinguish 'digital' from 'innovation' – they are not synonymous. For example, the professor of education described Moodle simply as a repository for materials for her classes. The art and design lecturer in FE spoke of "documenting learning" within the Moodle environment, especially in group-work contexts, where students participated in forums and also submitted the outcomes of their work. Some staff noted that the VLE was seen as the single source of consistency about their course, relying on it as the repository for course materials even if students did not always access it as much as perhaps would be useful in the minds of their instructors. The lecturer in forensics thought that her students should be using the VLE more than they do and noted that all her students seemed to want from the VLE was to "know where the lecture notes are". She took a lot of time to find and put extra resources into the VLE, but also knew they were not used fully as part of her students' learning journey and wasn't sure about how to change that. The concern about whether students are likely to engage with 'extra' content in the VLE mirrors more traditional concerns about students reading the 'optional' items on a course reading list. The problem here is not about the technology, then, but about perceptions of what is required to do well in the class and a larger question of what 'engagement' might look like – and indeed if it has to look the same for each student.

The fact is, the ways our participants talked about themselves engaging with the VLE, or other learning technology, were quite varied. For the most part, their teaching approaches were what informed their needs from the technology, rather than the other way around. The PhD student in education said that how she uses

Moodle depends on how she is teaching – if the teaching is "instrumental, then it doesn't matter what the (VLE) system is, you want it to be fast and effective". She also noted that at her institution there was is a lot of flexibility in the VLE practices, negotiated schedule and resources, because of the devolved responsibilities for content. She thought that, because instructors of modules didn't always get together to make decisions as a team, it made things harder for the students, especially "if you're working part time [as her students are] you want things to be clear".

Participants' anxiety about the role that technology might play in replacing themselves underlies some of the refusal around using the VLE. This concern was significant when we were conducting the interviews, as the University and College Union (UCU) and Universities Superannuation Scheme (USS) strike was active and very much on the minds of practitioners, whether they were on strike or not. For example, at least one institution used previously captured lectures to replace the content (and labour) of striking lecturers[4]. The professor of education noted her colleagues assume that if the "stuff" from class is available online students will not come to class; the work of the lecturer, if it's reduced to content delivery, is perceived to be unnecessary face-to-face once it is captured online. The impact of online content and lecture capture inspires anxiety among increasingly precarious academic staff members.

And some described bad experiences with their institutional VLEs that were barriers to student engagement far beyond just the classroom experience. The HE lecturer in art and design's experience with Blackboard was that all of the assessment had to be done via rubrics within the VLE. Her students found it difficult to access the rubric, so her work-around was to take a screenshot of it and email it to the students. She said that once her students go into Blackboard, "it's a disaster, and they don't ever go back".

Interviewees said that the learning environments provided by technology (not just the VLE) are a place as well as a tool[5]. Participants saw technology as providing places for them to discuss CPD issues, for example, the English literature professor valued the HEA virtual learning environment she had at her institution, where she learned theory and practice around teaching.

The HE lecturer in art and design noted that she interacts in constructive ways with her students online (despite their reluctance to engage with the VLE), much as in the informal face-to-face learning environments discussed above, only in digital form. "I like it," she said of being on Facebook with her students. "I can keep a better eye on what they're asking about." She also liked getting feedback on what colleagues are doing, and what's working (or not).

This same lecturer found that online platforms can provide students with opportunities to experiment and explore independently, beyond the usual locations (and formats) provided in institutional contexts. She used to suggest to her students that they use a particular blogging platform, but she doesn't anymore. She initially assumed that WordPress would suit best, but she had students who wanted to use Tumblr or other platforms. She has since switched to showing examples to get students to see the variety of what's possible and then lets them choose what works for them.

The applied ecology professor pointed to the potential for technology to enable student work to become more visible and accessible, and for it having a research impact as well as a teaching and learning one. When she was an undergraduate it bothered her to have made a large effort for an assignment or a project and then just to have it marked, and "that was it". "There are so many unanswered questions, why not put [the work] out there [as publications]? If it's good and novel and important, let's get it out there."

[4] Edwards, Lilian and Martin, Laura and Henderson, Tristan, Employee surveillance: the road to surveillance is paved with good intentions (August 18, 2018).
Available at SSRN: https://ssrn.com/abstract=3234382

[5] White, D. S., & Le Cornu, A. (2011). Visitors and residents: a new typology for online engagement. First Monday, 16(9).
http://firstmonday.org/article/view/3171/3049

Discussion and implications

"Teaching is not about me or my performance. It's about my students and their experience; and what they want and need from their education."
Religious studies lecturer

One of the themes that emerges from this report is the shifting approaches and opportunities for enhancing engagement in learning through online learning communities and online or blended learning courses, and for transforming the desk or laptop learner experience. Mobile devices have become a regular tool for many learners engaging with content through new interaction and collaborative interaction tools. The teaching experience can be that of digital learning environments where occupants can join you and share ideas from anywhere in the world. There are rich opportunities for learning through improved and innovative online environments and the array of contemporary digital communication tools is enormous.

Now, a fruitful transition period has dawned in education and highly creative examples of innovation in digital interaction show there's an appetite for change. The sector is experiencing new apps, modernised virtual learning tools and a dynamic shift in knowledge exchange across educational platforms. There is a growing number (and richness) of communication channels for the mobile user, integrated into a heightened interactive user-experience (UX). However, the HE sector still requires major shifts in investment and tools as it appears to lag behind both with UX design and with the implementation of improved online learning environments that can enable a growing population to co-exist and grow.

Are we, in HE and FE, working hard enough to enable and nurture online learning opportunities or are we witnessing much greater investment and growth in online games? We are certainly seeing new and remarkable immersive experiences being published in new games titles, fully realised story worlds, live feedback, spatialised design interaction and remarkable shifts in communication tools for users. But are the leaps in UX for games informing design opportunities we might hope to see in the online platforms and places we find in the education sector? This report suggests the answer to that question is "no", that much of the online experience that teachers (and learners) experience is bound by traditional notions of content-delivery as education, as well as highly concerned with management and administration.

New user interface design in digital spaces and connectivity are still relatively new territory for teaching and learning departments in universities, and academics are concerned because they see a greater need for communication opportunities to be prioritised in the education sector. Many would like the university experience to reflect the leaps in UX in mobile browser and social media tools, as these tools are central to students' networks and communication…. and actually central to many people's networks and communication.

A more engaged transition to digital from physical learning environments or a more symbiotic relationship will be key for a growing engagement in cultures of learning. However, there are as many opportunities as there are issues with digital learning environments, in particular with academic colleagues requiring more time and space to develop the confident use of the digital environments and toolkits available, alongside all of their other work. Now is the time when digital learning environments can liberate opportunities for communication and facilitate learning across greater social diversity.

Concluding remarks

The course of this contextual inquiry project has led us to the following conclusions, with implications for Jisc and our work around the impact of digital places, platforms, and tools within teaching practices in HE and FE:

- Practitioners are struggling with the disconnect between what they need to do in the spaces their institution provides and what is possible. Staff have to work harder to deliver the kind of teaching they want to in spaces that are not always appropriately configured. Some of this difficulty is a result of limits on space as a resource, however, there is also an element of staff not always knowing what is possible in the spaces available. Jisc's work on the intelligent campus may be able to mitigate some of this disconnect by enhancing timetabling, improving space design and providing exemplars of how space can be used more flexibly

- Interviewees identified a lack of opportunity to reflect on and analyse their teaching practice. While there are forums and staff development opportunities, limited time is officially allocated to formatively evaluating how a course was delivered and received, beyond the metrics used for more formal summative evaluation. Interviewees saw peer networks (internal or external) to discuss what works, what doesn't, and what they would like to do as key to enhancing their practice. They said that events that create space for staff to think about their curricula and reflect on how to develop digital approaches (such as the Jisc experts meetings and Jisc digital capability events) could have a profound impact on teaching practice in the sector

  The two key areas of potential development they identified were:

  - Professional development around teaching including pedagogy, skills development, new practices and integration of digital

  - Support around the administration and management of teaching and teaching places (physical and digital) – for example, processes that support assessment and that ensure access to course materials and content etc

- Centralised support featured strongly in the research interviews, identified mostly as being a force for good in staff practices. However, there was also a sense that staff were struggling with who had responsibility for some aspects of teaching, and this had had a negative impact on the adoption of institutional teaching initiatives. This was illustrated, for example, in online learning, where participants felt that some departments and individuals abdicate responsibility for online practices to centralised e-learning or learning technology teams. Some teaching staff also felt that whoever was responsible for the VLE was also responsible for the quality and accessibility of the content and practice within it, which makes digital teaching development challenging if staff do not communicate well with the team(s) responsible for the configuration and maintenance of the VLE and related systems. Ideally, staff

would develop new practices and work alongside centralised teams to develop courses. Well-theorised interdisciplinary and multi-professional understandings of the pedagogies at play in the institution are required to better inform the design and development of both teaching and courses on offer

- The organisational distance between instructional designers, education technologists and the people teaching in HE and FE is clearly present in our interview data. The patterns of socialisation that lead to academics assuming they need to do everything on their own have created a gap between groups of people who can and should be talking to each other. How might institutions acquire support for integrating education technology and teaching and learning centre staff more fully into the teaching workflows of academic staff? How can the silos be broken down so that the work of teaching and learning is treated more holistically?

- Institutionally provided systems are not single-stop places for practitioners, who use open web and commercially provided platforms as teaching and learning places. This is not new[6], but it continues to have implications for the ways that institutions support and recognise teaching practices that leverage digital places and platforms. We see that mandating particular approaches in the name of control or 'consistency' stifles innovation and turns people away from the creative use of digital around teaching. How can institutions support individuals without mandating specific digital approaches or tools?

- Concern for the wellbeing of students, not just their satisfaction or their performance in class, is shot through these conversations with academic staff. Much of the work they do around wellbeing is in physical, face-to-face contexts. As with physical environments, the digital life of a university is more than formal learning environments and much more than assessed outcomes. A lot of the focus of education technology is in managing these formally assessed and structured contexts. What are some ways the less structured but no less important student experiences can be digitally facilitated and enhanced?

- In discussing students, trust emerged as an important part of effective teaching and learning environments. It is worth thinking about the extent to which academic staff trust institutionally-provided technology beyond its traditional role as a repository for materials. If they do not trust the systems to work, if they do not trust that those systems will not be used against them (as was the case in the USS/UCU strike in early 2018) there is little chance that teaching and learning innovations will be happening with the help of these systems. Likewise, if academic staff do not have trusted relationships with the teaching and learning support staff there is little chance that their collective expertise will be leveraged to the benefit of their students

To achieve sustained, effective change in how technology is applied to teaching and all associated practices it's vital to understand how people currently teach, and how they want to teach. Our research highlights many of the practices and challenges that teachers engage with in both higher and further education. The staff perspectives represented here, and the discussion and conclusion, should be the starting point for institutional staff who want to initiate change to any teaching and learning process.

[6] See the recent next generation digital learning environments report: jisc.ac.uk/rd/projects/next-generation-digital-learning
And also Lanclos, D. M. (2016). Ethnographic approaches to the practices of scholarly communication: tackling the mess of academia. Insights, 29(3), 239–248.
DOI: http://doi.org/10.1629/uksg.316

Appendix: Research methods

Sampling

We (Lawrie Phipps and Donna Lanclos) drew on our professional and personal networks to recruit scholars in FE and HE who were willing to talk to us about their teaching. We told prospective participants it was going to take about two hours of their time. We obtained written consent to interview them and assured them that we would protect their identities as much as possible in record keeping, data coding and analysis and in the writing of reports. We interviewed them in the location of their choosing. We identify our participants in this table in terms of institution type, title, discipline and gender. This is a convenience sample, and at the same time it reflects a wide range of institution types, academic disciplines and academic ranks. Interviews were conducted in institutions across the UK.

Code	Institution type	Discipline	Title
CITa	New university	Applied ecology	Professor
CITb	New university	Religion	Acting head of humanities
CITc	New university	English literature	Associate professor
CITd	New university	Computer science	Professor
CITe	New university	Multimedia studies	Teaching assistant (PhD student)
CITf	New university	Biochemistry	Senior lecturer
CITg	Plate glass	Art and design	Senior lecturer
CITh	FE	Art and graphic design	Lecturer
CITj	Redbrick	Civil engineering	Lecturer
CITk	Redbrick	Anatomy	Lecturer
CITm	Civic	Political geography	Reader

Research methods

Each interview was open-ended and guided by the overall intentions of the inquiry, so as to result in an exploration of teaching practices and the context in which they emerge. Manual note-taking allowed us to capture content without introducing potentially off-putting recording equipment. Each semi-structured interview took approximately two hours. Altogether we interviewed 11 individuals, for a total of about 22 hours of interview data. We used the following prompts to guide our interviews:

1. Tell me about the teaching you do. Where do you teach?
2. How did you learn to teach? Where else have you taught?
3. How do you learn about teaching now?
4. Who do you talk to/communicate with about teaching?
5. What, if anything, do you teach your students about teaching?
6. Do you do any research? How does your teaching relate to the research you do?
7. What is the balance of teaching with the rest of the work you do?
8. What kind of support or development do you get for teaching in your job?
9. What do you wish you could do around teaching? What are you not getting to do that you would like to be able to do?
10. When you have a new course to teach, where do you start? How do you put your courses together?

After the interviews, we gave each participant a £25 gift card to thank them for their time and participation (this incentive was communicated to them at the time of recruitment). We felt it important not to ask people to give us their time for free, as people in the sector are busy and we wanted to make it clear that we valued their input and what we might learn from them.

Post-interview, we re-visited the handwritten notes and incorporated further notes and annotations into the transcribed document. We broke down each set of interview notes into a spreadsheet with each cell of the spreadsheet containing a standalone piece of information, eg a description of a practice, a direct quote or an editorial comment.

For example

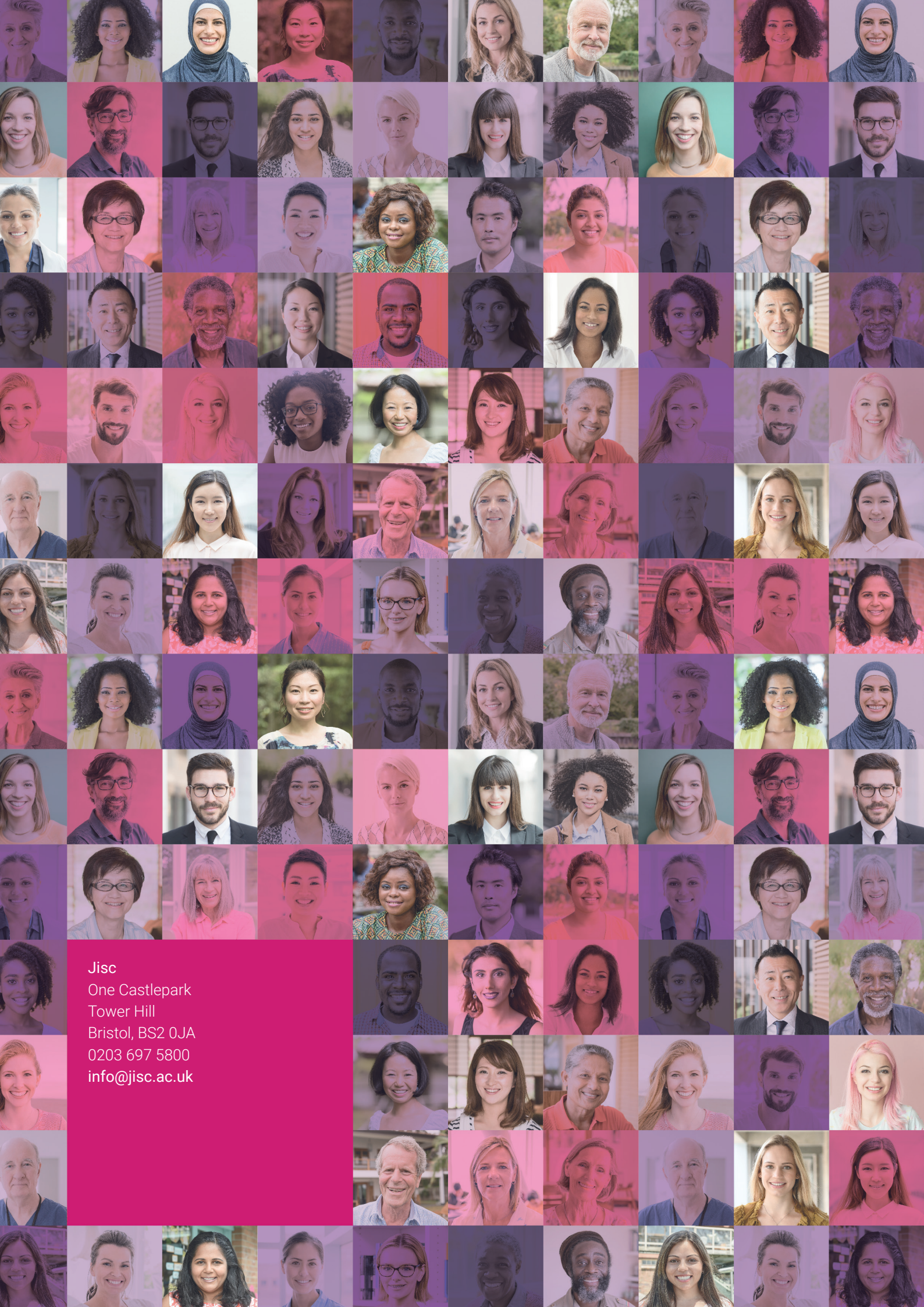
Some of her students have WhatsApp and FB groups, and she's not a part of those, but knows they work together within them	CITe57
Students have a work related Moodle space that they use and she sets up a private area that no one else [staff] can see, so students will use it	CITe58
She teaches her students about teaching by "echoing" within the process of teaching what she wants them to do. She has to tell them "this will be useful, trust me"	CITe59
Her students give push-back against her trying to get them to figure things out for themselves, they tell her "just tell me what you need me to know"	CITe60

Analysis

Once all of these interviews were completed and spreadsheets generated, we printed out all of the spreadsheet cells and cut each sheet of cells into strips of paper. We assigned each piece of information a code that identified which interview the piece came from (CIT[lower case letter]) and which cell number in the spreadsheet contained the information.

Most interviews were about 120 cells long. Altogether we had about 1,500 paper strips with interview snippets printed out. On 11 May 2018 12 people assisted in the initial analytical coding of the interview data over the course of six hours. The people in the coding workshop (in addition to the project leads) included instructional designers, librarians, Jisc members of staff and academic developers.

We emerged from the coding workshop with all of the interview pieces sorted into higher-level themes, as well as sub-themes within each. We entered the themes that emerged from this coding workshop into interview spreadsheets so as to visualise clusters of interview data and to make it easier to dig into the content and meaning of these clusters.



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