



THE UNIVERSITY
of EDINBURGH

Insights and Learning from 2020-21

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Executive Summary

“Relationships, dialogues and personal exchanges between students and staff build understanding in a way that is not possible via transmissive forms of teaching”¹p15

This briefing paper aims to synthesise insights and lessons learned from the adaptations to teaching and learning that took place during academic year 2020-21 in response to the global Covid-19 pandemic. During March 2021, the authors reviewed a range of University literature including quality assurance documents, College reports to Adaptation and Renewal Team meetings and the Senate Education Committee, as well as reflections and learning from colleagues across the University that were captured in Teaching Matters blogs and podcasts and on the Edinburgh Hybrid Teaching Exchange. An early draft of the paper was shared with colleagues from across the University and their extensive and constructive feedback informed enhancements to document.

The paper provides some contextual background to hybrid teaching and outlines how colleagues responded in a range of ways to suit the many different contexts across the University. There has been a combination of in person and digital teaching in different forms at different times, and the uncertainty of the pandemic and multiple changes to government requirements have been challenging for all. However, many of the adaptations and new approaches have been valued and have offered flexibility and student choice, whilst colleagues have been mindful of trying to maintain student wellbeing and prevent students feeling overwhelmed with work. Many staff and students have valued the use of smaller blocks of recorded content and activities which students engage with asynchronously, paired with synchronous digital opportunities for students and staff to meet, for students to ask questions and have discussion. The synchronous elements seem to be particularly highly valued for community building, and there seems to be a good deal of agreement that interaction and community building are crucial elements of teaching in all formats. The shift to digital teaching has resulted in a great deal of creativity and has also led to substantial shifts in thinking about contact time, changing perceptions of online teaching, and rethinking teaching spaces and places. Many changes were made to assessment approaches, including widespread use of open-book exams, a switch to more coursework, use of more authentic assessments, and greater online submission of assessments – in the main these changes were considered



to have gone well and many colleagues would like to see these practices extended in future.

Adaptions to working practices have resulted in opportunities to embed inclusive and accessible practices in online environments, and there have also been many positive examples of collaboration and co-creation between staff and students. However, significant concerns have been reported around staff workload, and a fear that excessive workload is becoming normalised. Challenges have also arisen in relation to communication and information overload. Some colleagues are calling for a strategic review of online teaching platforms as well as work to ensure all students have adequate access to appropriate learning spaces and can meet minimum technology requirements. The significant support offered by a range of colleagues to provide central and local training opportunities related to digital education, as well as informal networking opportunities to enable sharing of practices, has all been incredibly helpful.

1. Introduction to hybrid teaching at the University of Edinburgh

The University of Edinburgh adopted hybrid teaching in response to challenging restrictions imposed due to the Covid-19 health crisis. Hybrid teaching offered a flexible approach to teaching when access to the University campus and physical teaching spaces was uncertain. Hybrid teaching is not new², but was new to many of our staff and students. The hybrid model adopted by the University does not assume students are on campus, rather that online and on-campus students can work together as a single cohort with transition between modes³. In April 2020, the paper ‘Hybrid teaching for academic year 2020-21’ was circulated, providing an overview of Hybrid Teaching for the University of Edinburgh context⁴. It made a distinction between on-campus teaching, online teaching, blended and flipped teaching, and hybrid teaching.

The paper focussed on hybrid teaching approaches and acknowledged the existing expertise within the University, which included the portfolio of PGT distance programmes and digital education expertise, citing the example of the Near Future Teaching project¹. It was noted that the current response to hybrid, if done well, could *“begin to build new approaches which not only mitigate the immediate COVID-19 crisis, but which build our capacity for creative, resilient and future-facing pedagogy longer term”*⁴p.2.

The model of hybrid teaching proposed drew on existing work within the University including ongoing planning for the Edinburgh Futures Institute (EFI)⁵. It also drew upon work of the Learn Foundations programme⁶ which focuses on the importance of consistency and quality of online teaching using the Blackboard Learn platform. The paper made a distinction between hybrid teaching and the work of EFI, where the EFI is planning for advanced hybrid teaching. This was in recognition that the proposal was a response to a crisis situation and would require a focus on efficient and high quality teaching across three distinct groups and that students may shift between these groups:

- On-campus students, co-present in time and space (same time, same space)
- Online students in the same time zone (same time, different space)
- Online students in different time zones (different time, different space)⁴.

The adoption of hybrid teaching has developed in different ways across the University, recognising the vast diversity across disciplines. Some have opted to offer a combination of in person and digital teaching, whilst others have opted for a digital first approach⁷. It is worth highlighting the University provided guidance about terminology to distinguish between the existing portfolio of online programmes which had been designed to be delivered fully online as standard, and *digital* which was defined as “teaching that takes place via digital platforms that can be accessed globally”⁸. This distinction recognises the existing expertise of University colleagues in designing and teaching online and distance education programmes, many of whom actively supported their peers as we prepared for hybrid teaching.

The move from existing teaching practices to hybrid modes has led to a great deal of innovation in learning and teaching⁹ whilst recognising that there have been significant challenges. Colleagues have highlighted that many of the new approaches adopted in the last year will help to inform the University’s Curriculum Transformation Programme¹⁰. Other successes have included some examples of enhanced engagement online, such as the Careers Service Students as Change Agents programme, which attracted more than 3 times the number of applications normally received for face-to-face versions¹¹. Quality assurance reports have also highlighted things that have worked well, whilst recognising that it has also been an incredibly challenging year. The level of engagement from students has generally been high, although there have been reports of very mixed experiences for students, depending on their contexts. It is worth acknowledging that the new ways of learning have helped many students with caring responsibilities or special circumstances¹². This paper attempts to capture some of these lessons to date, and we recognise adaptations and learning will continue.

2. Teaching approaches – experiences of hybrid teaching

Combine on-campus
and digital teaching

An ideal scenario for many students involves a mixture of on-campus (in-person) teaching along with digital teaching^{13 14}. But many colleagues have found **hybrid teaching has been onerous** and of lower quality than either digital teaching or on-campus teaching. Offering both on-campus and digital teaching enables students to benefit from social contact and community building on campus while appreciating the flexibility and accessibility of digital teaching. For some colleagues **in-person contact is considered important** (and indeed, is a requirement in some clinical/practical classes), both between students and staff, and between students^{15 16}, although it seems to be considered less important by some students in fully online programmes. This is in all likelihood related to students’ choice to study online, and their expectations of study prior to learning¹⁷. In-person, whole-class sessions, can help students feel part of a



collective endeavour and also ensure a consistent experience for students¹⁵. **Smaller class sizes for in-person classes can really help with getting to know a cohort**¹². This is not to suggest that fully online programmes are not suited to students who sign up to these programmes, nor that community building cannot take place online, nor that some students will prefer a wholly on-campus experience. **The future of education is likely to include flexible student pathways involving choices for students about how they learn** throughout their degree⁵. This choice is thought to be particularly useful to those with caring responsibilities or specific learning requirements, and we need to be mindful that *“our traditional [model] of physical co-location has never been equitable for all”*¹⁸. Many colleagues and students value the possibilities of hybrid teaching¹² and this approach may help support many students as well as our widening participation agenda. Colleagues in CMVM found that the pandemic highlighted inequity among learners globally, which sparked greater interest in equity-based pedagogies. However, offering student choice when and how to engage with learning, needs students to develop a high level of self-regulation^{19 20}, and this requires staff to be able to help students develop skills of self-regulation, and discuss more explicitly, student and staff expectations for studying.

Combine synchronous and asynchronous activity and record smaller blocks of teaching

In a hybrid or digital environment, **it is important to balance synchronous and asynchronous activity**¹⁶. Synchronous and live interactions between staff and students were valued highly by most students^{12 15}. This synchronous activity might include live lectures, (and of course tutorials and group conversations), although, in most cases recorded lectures were used¹². Some students feel more confident to speak out, ask questions and suggest solutions in digital spaces, compared to in-person sessions²¹, and some colleagues have found anonymous digital whiteboards another way of engaging students. Many colleagues highlighted that **recording smaller blocks of teaching for asynchronous use** and following this with **synchronous discussion, opportunities for questions and reflection, and other well-structured asynchronous activities** worked well in engaging students^{12 15 22 23 24 25 26 27}. Recording videos in bite sized chunks aids students’ engagement with the materials, manages cognitive load, and can support active learning²⁸, they can also add flexibility to structuring teaching, and can make it easier to update videos in the future¹⁵. Time for students to ask clarifying questions as well as to discuss open prompt questions related to the teaching material seemed to work well. And some colleagues found that involving students in making decisions about how to use the time in ‘live’ sessions also worked well²⁷. Pre-recorded videos with subtitles were found to be helpful for students for whom English is not their first language, as they can revisit the videos more than once¹². However, **we need to be mindful of not overloading students with asynchronous activities**¹², and it was also noted by some colleagues that students do not always know how to formulate productive and meaningful questions, and this is a skill we should teach more explicitly in future¹⁵. We could also offer more support to students in how to engage with pre-recorded resources, such as the practical video created by Dr Sarah Ivory²⁹, as well as how to prepare for live engagement sessions.

Preventing student overload

Signposting, clear structure and prioritisation of tasks are important factors that can prevent students becoming overwhelmed^{30 31}. Many colleagues recognised the value of the Learn Foundations Project⁶, in **clearly setting out the structure of the learning journey for students in Learn**¹⁴. The greater clarity in Learn courses has also enabled ISG colleagues to more easily offer support to students and staff. Others offered a weekly plan detailing exactly what students should do, in what order with optional extension tasks³². Another idea was to offer a summary each week of what was covered in the previous week and what students would be doing in the current week³³. Other colleagues have created **tutorial summaries** so students can check they have understood key content and concepts³⁴. Some Schools have **reduced the number of student tasks** associated with each course to reduce the burden on students^{12 14}, although there is acknowledgement that some degrees have content or time allocation requirements specified by professional bodies. There was agreement that simplifying things/not overcomplicating requirements from students was really important³⁵. We also need to be mindful that students from different years of study may need different types of support, with first years likely to need the most guidance, as they are not used to university study.

Ensure teaching is interactive

Some colleagues found interaction and community building more difficult in digital or hybrid modes^{15 36}, although experienced colleagues who teach online masters programmes at the University have been employing interaction and community building approaches online for many years. However, there is wide agreement that **interaction and community building are absolutely critical** to maintain engagement, and to foster relationships, belonging and wellbeing, and that this interaction and relationship building should start from the point of student applications and be considered across programmes. Creating a sense of hospitality, friendliness, creating space to build relationships and trust, getting to know your students and letting them get to know you, are all important for successful teaching in any form^{21 37 38 39 40 41 42}. As one colleague put it **“making sure ‘how are you doing’ comes before ‘what are you doing’”** in emails, MS Teams or Collaborate⁴³. Interaction through **peer instruction remains valuable** in hybrid teaching¹⁵. There have been mixed experiences of digital workshops and use of breakout groups but with most agreeing **small group work and breakout groups are important for building community**. Some have found digital workshops difficult, while others have found digital groups have actually made interaction easier than on-campus group work¹⁵. Many School Learning Technologists and Information Services colleagues have offered workshops that helped support staff to be better prepared for running online workshops. Many excellent examples are available of community building initiatives from around the university^{12 36 34 44 45 46}.

Creating opportunities for student reflection

The importance of reflective practice is well evidenced in the literature⁴⁷. **Opportunities for reflection were valued by students** with many finding reflective activities not only useful to their learning but also supportive in the stressful circumstances of the last year. Many teachers highlighted the quality of students' reflective work, that reflective activities worked well in digital spaces, and noted the pleasure of reading student reflections and insights^{13 48}.



Use of cameras and chat functions

In synchronous large and small group teaching, some staff and students were keen to **have cameras on**, reporting a greater sense of connection with one another⁴⁹. Staff also highlighted benefits in terms of being able to read body language and gestures in gauging reactions to teaching (reducing the sense of teaching to a laptop or 'wall'), and helping build community^{12 50}. Students with hearing impairments may also be able to lip read if cameras are on. However, it is important to be aware of counter-arguments based on right to privacy and data security concerns, as well as benefits to letting students choose to **have cameras off**, for example: reducing on-screen fatigue, conserving bandwidth, or social concerns such as how your study space looks, dealing with difficulties multi-tasking, family commitments, and anxiety^{51 52}. University backgrounds have been provided to staff and students for use in Zoom and MS Teams, to help overcome some privacy concerns. These should also be available in Collaborate later in 2021. Some staff found a compromise by starting with cameras on during the welcome and then staff invited students to turn cameras off if they wished, and then back on again during questions or if they wished to speak. Other colleagues have highlighted the value of encouraging students to use the chat function, often by starting with small steps through non-threatening engagement such as asking for use of emojis or 'reactions' functions²¹. Indeed some colleagues in CSE have found that students are more likely to ask and answer questions via chat than in person. Chat functions have also helped with implementing peer instruction online and using electronic voting systems to invite students to think, vote and discuss, re-vote and offer feedback. Student contributions to chat questions and answers can provide staff with useful insights into common problems and misconceptions.

The shift to digital teaching has led to a great deal of creativity

Many colleagues spoke of heightened creativity in their teaching that has come from being forced to rethink their teaching⁵³. For example, use of Minecraft for co-constructing ideas, knowledge and building community⁵⁴, (colleagues on the MSc Digital Education use Mozilla, a free version of similar software); use of online media videos and animations to teach lab practicals¹⁴; use of a Tablet and sharing screens to show live working out in Physics and Astronomy⁵⁰, and in Maths⁵⁵. Many other examples are also available on the Teaching Matters and Edinburgh Hybrid Teaching Exchange sites^{14 16 35 56}.

3. Teaching approaches – substantial shifts in thinking

The significant disruption of 2020-21 has led some colleagues to raise fundamental questions about the ways we teach, which are likely to be informative to our future thinking about curriculum. We recognise across the University, people will be at different stages in their teaching, so not everyone will experience these as new or big ideas. The increased intentionality in colleagues' teaching decisions, and additional planning for teaching, has been incredibly time consuming and overwhelming for many colleagues, but the shift of attention to teaching has also been viewed positively by many colleagues⁵⁷.



What is contact time for?

Dr Sabine Rolle asks some searching questions about the purpose of contact time¹³, arguing *“I want to use these precious moments of face to face individual contact with students to...motivate them to report a bit on their thinking process and then discuss that with them.”* She suggests contact time could involve asking students to produce work and then we interrogate it collaboratively and constructively to enable further learning. She also highlights that **contact hours are such a small percentage of the total hours calculated for each course. We should spend more time thinking about how we guide students to use these notional learning hours.** Another way of thinking about this is to consider ‘presence’ rather than contact hours⁵⁸. It may also be timely to question whether we are asking students to do too many hours of work in some subjects. Interestingly, changing the concept of contact time to reflect contemporary practices was also one of the objectives of the Near Future Teaching Project¹.

Changing perceptions about online teaching, technology and pedagogy

Some colleagues had limited experience of teaching online prior to March 2020, but over the last year **have come to recognise positive elements of online and hybrid teaching, wishing to continue these beneficial approaches** and changing their attitudes to online teaching¹³. Other colleagues had been teaching online for years. Dr Tim Fawns adopts a postdigital perspective to his online teaching and he highlights that **pedagogy and technology cannot be separated and cannot be thought of in isolation from the context in which they are embedded**⁵⁹. He argues *“...perhaps context and purpose should be the primary considerations when thinking about how technology is used in your teaching as an integrated part of a pedagogical approach”*⁵⁹.

Connecting to the City of Edinburgh and rethinking teaching spaces and places

Many colleagues have been faced with rethinking fieldtrips over the last year. Dr Dan Swanton and colleagues from the School of Geosciences had discussed their **desire to connect students more with the City of Edinburgh.** Through the use of guided walks through Edinburgh supported by recorded materials Swanton says *“we’re introducing our students to new stories about Edinburgh and encouraging them to develop new ways of seeing a place they may feel they know well...”*. These materials provide students with *“opportunities to experience, become attentive to, and to respond to the world”*⁶⁰. **The power of using a diverse range of spaces and places for experiential learning has powerful possibilities for teaching many different subjects.** Prof Robbie Nicol and Dr Heidi Smith in Moray House have been conducting similar work to *“explore the power of place-based experiential learning as an encouragement to identify inequalities in the world, and to do something about them”*⁶¹. Other colleagues have suggested that planning for **continued use of the local area can help reduce the carbon footprint of unsustainable travel**¹⁵. New uses of digital technology are also helping us to rethink spaces, such as sharing live web-cams or body-cams via Collaborate, which has enabled colleagues to demonstrate technical equipment without the need for students needing to be physically present in a room. It is also worth noting coherence with the objectives of the Near Future Teaching Project, which included *“rethinking what it means to be ‘here’ at Edinburgh”*^{p21}, and *“connecting to the city and region”*^{p29}.

4. Assessment approaches

Many changes were made to assessment over 2020-21, and many of these changes have been deemed successful by colleagues. **Open-book exams worked well for students and staff**^{9 15 57 62}, although the 24 hour model may not be optimal. This form of assessment tests students' understanding. Students are engaging more deeply with their learning and are studying in order to understand the material rather than 'for the test'. Students also appreciated the reduced pressure for revision. Many colleagues would like to consider continuing the use of open book exams^{15 31}. There was **less support for the continued mainstream use of online take-home exams**, at least in their current format. This is related in part to ensuring academic integrity of this exam format, although the number of academic misconduct referrals in Semester 1 2020-21 was broadly similar to previous years¹⁵. Senior colleagues recommend that we need to pay attention to the following: clearly communicating the justification for the exam model being used; ensuring students receive enhanced guidance on how to prepare for open/online exams; offering greater clarity about expectations for collaboration; and paying careful attention to scheduling of exams across time zones⁶³. Online proctoring is a controversial subject due to concerns about surveillance and its tendency to indicate a lack of trust in students⁶⁴. Some Schools may feel pressure to introduce online proctoring to stay in line with expectations from similar Schools at other universities and professional bodies. But colleagues consider it to be resource-intensive, and it *"should be reserved for a few high-stakes examinations where there is no satisfactory alternative"*. The Online Remote Examinations and Assessment (OREA) group recommend: *"the use of **online proctoring should not be mainstreamed**. However, the option of online proctoring should be retained for use where there is clearly a defined need"*^{65 66}.

There has been a switch to **more coursework** (either increased weighting of coursework against the exam or instead of exams), and this has had some benefits in student engagement and providing regular feedback¹⁵. There has also been a shift in mind-set for many staff from using exams towards **thinking about how to create more authentic assessments**¹³. However, there have also been some unintended, and more problematic, consequences including: **student workload concerns** (better co-ordination of deadlines would help across multiple courses); student time management (better signposting of estimated time necessary, and how to manage time across multiple courses would help); **staff time** (course work takes longer to mark than exam scripts). Colleagues in CSE suggest the impacts of more coursework need to continue to be reviewed¹⁵.

Online submission of course work has worked well. Perhaps we can learn from this to reduce paper submissions of other assessments¹⁵. The **Covid No-Detriment Policy has had a mainly positive or neutral impact for students, but caused substantial and unsustainable workload for many staff**. Some students reported neither positive nor negative impact while others report substantial positive impact. No area reported a negative impact of the policy on student performance³¹.

Fawns & Ross⁶⁷ suggest that “assessment design with the following characteristics can support trusting relationships and care for student wellbeing, while providing challenging and meaningful ways for students to demonstrate their knowledge and understanding:

- *Non-anonymous, open book, over an extended period of time, and potentially-collaborative (students are allowed to use any available resources);*
- *Requires significant intellectual input from every student;*
- *Shows the learning process and provides rich opportunities for feedback (from peers and/or tutors);*
- *Provides opportunities for creativity, personalisation, and contextualisation;*
- *Covers the key aims / knowledge of the assessed course;*
- *Is manageable for staff and students.”*

McCune⁶⁸ also argues that assessment practices that allow students in different cohorts to collaborate or support one another are ideal for community building. This could be through shared projects, a shared blog, peer feedback or many other possibilities – but with the caveat previously mentioned, in being clear about what kinds of collaboration in assessment are welcome. Colleagues from across the University have noted “...the positive impact that diversification of assessment methods has had on the consistency of marking and on staff workload (once adaptations were made)”¹⁰.

5. Organisation systems and ways of working

Ways of working

Adapting to hybrid teaching has necessitated changes to ways of working and this has led to changes in the organisation and timetabling of teaching sessions. Colleagues have suggested that **online lectures can contribute to alleviating timetabling pressure and double-teaching for ‘ultra-large’ classes (~ 700+ students)**¹⁵. Decisions were taken to cap the intake of a few core courses leading to some courses being oversubscribed – suggesting that we need to **consider a range of criteria on which decisions could be made about course number limits**. The aim would be to maximise choice, but ensure quality of compulsory courses¹⁵.

There were examples of changes to how staff were engaging and interacting with students. Some students preferred digital ways of working and an example of this is **virtual office hours which were found to be better attended** than some in-person office hours¹² although this was not necessarily the experience across the University. **Offering students flexibility and choice about being either digital or hybrid/on-campus**, has worked well in some Schools¹². It was noted that it was important to engage with students early to support their transitions whether this was back to campus, staying at home, moving to hybrid learning involving new combinations of on and off campus activity, and offering catch-up courses, peer support and developing community were found to help⁶⁹.

Collaboration across disciplines and co-creation between staff and students

has been widely evident and there are good examples to highlight changes to ways of working. For example students, staff and alumni in the Usher Institute co-created rapid systematic reviews about Covid-19 which were commissioned by key organisations⁷⁰. Also students have worked alongside colleagues in Maths to co-design hybrid teaching⁷¹. There were examples of co-creation in the design of learning, teaching and assessment where staff were collaborating with students to make choices with them rather than for them. This can enable community and belonging and often the process of learning through shared decision-making is richer than the actual learning that is designed⁷². It is disruptive to usual ways of working but motivates and engages⁷³. Colleagues working on the Masters in Public Health have highlighted how Covid 19, as an example of a cross-disciplinary challenge, has sparked interest in a new cross-disciplinary course ‘Innovative approaches to health challenges across disciplines’, jointly offered by Veterinary Medicine and Molecular, Genetics and Population Health Sciences. This work provided a model for collaboration across Deaneries, useful for informing future cross-disciplinary courses. The move to hybrid teaching has offered opportunities to re-think teaching practices: *“We have found that what has worked best **isn’t translating what would have happened in-person to an online space** in a carbon copy but, instead, returning to our values and collaborating with others – including students – has helped us to see with fresh eyes how we can adapt our work while engaging students in inclusive and accessible ways online to meet our core aims.”*⁷⁴.

Other changes to working practices have included:

- **Collaboration at programme (or School) level** during the planning stages has clearly been beneficial in many Schools¹²;
- There has been evidence of **flexibility and innovative practice to accommodate industrial placements and fieldwork**, and desk-based research has been undertaken where placements were not available⁶²;
- **Teaching programming online has gone well**. This has led to questions whether in future some early stage programming classes normally using computer labs need to be in person, if not needing specialist software that can’t be downloaded easily¹⁵; and
- **Digital skills workshops were moved online**, with online guidance and toolkits. Longer courses were broken into several sessions, or offered with breaks and interactivity⁷⁵.

However, there have of course been some challenges reported about ways of working:

- **Some PGR activity was more difficult due to lab closures and social distancing** requirements⁶².
- Schools **continue to look at alternative systems for students to sign-up for teaching** (notably when self-isolating, or returning from self-isolating) as current systems (based on the idea that students pick a tutorial once a semester) are too time consuming for staff¹².

- Many students' expectations were thought to have been unrealistic. **A lot of time was spent addressing and managing expectations about what is and is not possible with our estate and the pedagogical needs of digital sessions.** This could be managed better going forward¹².
- **Staff reported they were anxious** about hybrid working and were concerned about being on campus and using public transport to get to campus¹².
- **There were concerns raised about too much screen time and the impact on staff and student wellbeing**⁷⁶. Team teaching was identified as one way of enhancing creativity and sustaining wellbeing⁷⁷.

Staff Workload

Across many of the documents we consulted, there was a strong sense that many colleagues had spent **more time planning and preparing teaching in the last year**⁵³. Although the move to hybrid teaching has resulted in a number of benefits, there are some serious concerns that the pandemic has **exacerbated existing staffing and workload pressures**. There does need to be **acknowledgement that designing digital teaching materials and preparing for new modes of teaching requires substantial academic staff time to do this properly**¹² and that high workloads continue to have a detrimental impact on the quality of teaching and learning¹⁰. There is growing evidence that staff have no space for new tasks or new thinking and no slack to cover absences. Many colleagues are also covering more work due to the jobs freeze. Major worries have been expressed by several Schools at loss of research time for academics¹², particularly if planning for teaching takes substantial time over the summer. Colleagues in CSE noted that it is unsustainable for staff to continue with current workloads, and to continue to prioritise teaching over research. It was noted that there are difficulties to deprioritise tasks when everything seems urgent and important and this has been exacerbated by the government changing policy without much notice⁶². The sense of the unknown, and anxiety around the pandemic has added to staff anxiety.

Academic staff have raised concerns that excessive workload is becoming normalised and report frequently working at weekends and evenings to balance their writing and research with teaching workloads, whilst the workload implications for all staff (academic and professional) are unsustainable¹². There has been little opportunity for respite during the academic year. **Re-thinking the number and type of weekly tasks for students might also help make staff workload more manageable**¹². Others thought workload could be improved by considering the hybrid approach at programme level, and also thinking ahead about practicalities such as students in different time-zones, which can help avoid the need to offer multiple sessions¹².

Communication

In CAHSS all Schools reported **information overload and confusion about where critical information could be found**, some reported too many SharePoint sites and Teams channels¹². **Central communications to students tended to be unclear as to which students they were aimed at** (UG, PGT, PGT online, PGR, visiting) and this lack of clarity led to extra work for staff and increased students' stress. We need to maintain clarity and be wary of using the term 'all students' to refer to UG students only. Consideration also needs to be given to external

messaging to **avoid the implication that hybrid models are inferior to in-person approaches**³¹.

Despite the concerns raised about communication channels there have been other more positive examples of practice. In SPS **one academic colleague was designated ‘online champion’** in each subject area to facilitate flow of information and provide support to colleagues¹². **Chemistry created a very coherent and caring approach to communicating with students** involving:

1. Collating single page documents compiling key messages from various emails circulated from the perspective of chemistry students and host in one place.
2. Managing student support via the personal tutor system, with a strong message that we welcome students getting in touch.
3. Supporting ongoing dialogue – twice weekly Q&A chat for social and academic questions (recorded),
4. Getting students to focus on study – provided short doc for students on what they should be doing and preparing for e.g. open book exams.
5. Making clear what the finish line looks like – through a video and simple practice Learn site for practising uploading assessments to make students less anxious about the exam⁷⁸.

This approach is a good example of how we can try to help combat student isolation and uncertainty, but we must recognise this approach in Chemistry needed investment of significant staff time. Some of the current uncertainty may decrease in future and with it some of the high anxiety levels. However, **if we decide to invest more heavily in digital or hybrid teaching in future, we must recognise the need for appropriate resourcing to do this effectively.**

Platforms, systems
and technologies

The last year has seen more reliance on digital systems and technologies. Overall, there was no clear pattern to increasing on-campus or synchronous digital provision across Colleges (with different Schools favouring more/less of different approaches for specific reasons)¹². The strategic approach of utilising the existing Learn Foundations project, which was outlined in the April 2020 *Hybrid teaching for academic year 2020-2021* paper⁴, to support changes in the last year, has worked well. A number of Schools commented on **the benefits of having a clearly structured Learn template used across all courses**¹². We saw increased exploration of alternative learning, teaching and meeting platforms such as MS Teams, which worked well for some synchronous teaching as well as for its discussion channels/chat function¹². Information Services colleagues have projects underway looking at integration of synchronous teaching platforms into the VLE (MS Teams and Zoom) whilst Collaborate is already integrated. MS Teams is a large business platform and integration is not a simple process. It is also worth highlighting that the Microsoft roadmap includes the development of surveillance tools which have ethical implications that need further consideration. However, there is clearly an increased overhead in supporting multiple systems.

There was a general dissatisfaction with the various digital teaching platforms that the University had in place at the outset of the pandemic and a desire for a



strategic review of digital teaching platforms going forward. The stability of the IT infrastructure and the reliability of suitable learning platforms was highlighted as a concern reported by all Schools in CSE⁶². Although it should be noted that the Blackboard Learn platform remained stable with only a small outage (200 minutes) reported to date during AY 2020-21. The lack of stability that has been reported may be a reflection of local IT infrastructure, nevertheless this still has an impact on the quality of the teaching and learning experience. Some people have raised frustrations with a lack of functionality of some digital tools, such as the inability to pre-determine break-out groups in Collaborate. Other specific issues reported included a need for a centrally supported system to support **ongoing online submission of course work**. 'Gradescope' is being evaluated in CSE, and colleagues should be able to report by the end of Semester two¹⁵, whilst ISG have proposed a plan of work to upgrade the e-exams system 'Questionmark' (QMP). Work is also underway to upgrade the Learn VLE which will be a multi-year project reflecting the complexities and support requirements involved in the move to the Learn Ultra platform. Teaching spaces are being upgraded to support hybrid classrooms⁷⁹, including collaborative work ISG is carrying out with colleagues in the School of Engineering to enable synchronous hybrid teaching for on-campus and digital students.

Many staff were exploring University-supported learning technology platforms (or new functionality of these platforms) during a time of uncertainty and significant pressure, and **a significant range of training and support for colleagues was offered within a short time**⁸⁰. The training was the result of substantial effort from ISG colleagues and the provision of support for learning technology and the sharing of online expertise from central University services and Schools should be acknowledged. Workload pressures highlighted earlier, impact on staff availability to take advantage of training, which in turn influences their understanding of the technology available.

Changes in the scope of accessibility legislation led to a need to provide subtitling for video content, and this has consumed a great deal of staff time. **Many staff have found the required subtitling and corrections needed to be time consuming, and in some cases overwhelming**, suggesting improvements could be made in the workflow for subtitling, including introducing alternative subtitling technologies⁸¹. There is a growing need to revisit support available for this activity. Although correcting 100% of subtitles is not part of the University's position on captioning, some auto-captioning is poor, and the correcting of captioning does take time and effort.

Not all students had adequate access to appropriate learning spaces or the minimum technology needed¹⁹. The University does have support in place such as the availability of laptop borrowing and has made adjustments to infrastructure such as upgrading internet connectivity in University Halls of Residence, **and it is important that the range of support available to students is communicated to them**. There is a lack of physical study spaces on campus with students reporting to their personal tutors being unable to book study spaces because they are consistently at capacity.

6. Supporting teaching and colleagues

The huge shifts in teaching practice and ways of thinking have necessitated further support for staff. Some staff reported being worried about their **lack of confidence with new pedagogies, content and materials** and worried this translates to a compromise in teaching quality¹². The opportunities to share practice through informal or formal networking and continuing professional development (CPD) activities has been evident, and this has helped with the transition to hybrid teaching. There has been a rise in interest and activity of various **School Learning & Teaching Fora**, with benefits for colleagues in Schools which already had active teaching fora or regular conversations about teaching¹³. Indeed many colleagues have coped with the huge shifts in teaching practice within tight timeframes by learning from colleagues³⁸. Although the momentum behind the changes to teaching, as well as attention focused on teaching, has been positive for many colleagues, in order for this to continue there does need to be recognition that this adds to workload¹⁵. Some colleagues have emphasised the importance of ensuring institutional recognition of teaching contributions in annual reviews and promotion processes, whilst others have pointed to the need to invest in recruitment and academic development.

The **value of local digital education and learning technology expertise** has been stressed by many colleagues (as has been the case across the HE sector during the pandemic⁸²), and there has been a call to review the role and availability of digital education units, in order to enhance and expand their role³¹. Learning technologists have supported and collaborated with learning and teaching teams to implement hybrid teaching, and their significant role has been acknowledged³⁶. Despite this **reliance on support from learning technologists there is some concern about availability of this support going forward**, and a critical need for these colleagues who understand and work within local contexts¹². The willingness for colleagues to proactively engage with learning and teaching fora, and to work collaboratively with learning technology colleagues has benefited hybrid teaching by enabling quick communication and escalation of issues⁶².

There have been great examples of institutional-level support for teaching colleagues, including *An Edinburgh Model for Online Teaching* course⁸³. This course supported significant numbers of colleagues to develop their hybrid teaching approaches, through the support from a large team of experienced online educators from across the University. Experienced online teachers have also shared knowledge and expertise through a range of training and support sessions. At the School level, there are many good examples of the ways practices around hybrid teaching have been shared with colleagues^{36 84}.

7. Concluding thoughts

It is almost impossible in a briefing paper such as this to ensure that we represent the wide range of views on all of the issues covered. We are also aware that many of the issues we have raised may not be new to some colleagues who are experienced in teaching online programmes. And although

we have tried to use the University's preferred terminology for different teaching modalities throughout, terminology continues to be used in different ways. We attempt to draw together some of the key messages which came through consistently from the people and documents we have consulted.

- There have been substantial shifts in thinking around teaching approaches including: how we think about the concept of contact time^{1 13}; perceptions about digital teaching; and rethinking teaching spaces and places. Staff have adopted unfamiliar and creative pedagogical approaches and have seen the benefits for many students.
- Staff need sufficient time and support to continue to explore and reflect on changing pedagogical approaches. We need to support staff to continue to develop digital teaching practices. We also need to embed within the curriculum opportunities for students to develop digital learning skills.
- We should be mindful not to try to replicate on-campus teaching in digital spaces, but instead adopt appropriate and successful digital teaching approaches such as shorter blocks of recorded material followed by synchronous opportunities for discussion and questions.
- Teaching approaches in any setting need to be interactive, foster relationships, and build community^{1 37}. We need to structure and signpost student work clearly. These approaches can help to prevent digital fatigue, feeling overwhelmed, and mental health issues.
- Large scale curriculum change will impact on the wellbeing of staff and students and appropriate support and guidance needs to be in place.
- Do not underestimate the staff workload involved in making adaptations to teaching in online, digital and hybrid teaching.
- We need to consider carefully, the workload implications of any changes to teaching approaches, systems, and governance.
- We must establish clearer, nuanced communication channels across the University that recognise the distinction between UG, PGT and PGR students.
- The introduction of hybrid teaching has impacted students in different ways, some have benefited from the additional flexibility whilst others have struggled. We must continue to create flexible and equitable opportunities to meet diverse student needs.
- We need to build upon our learning about assessment. Online open book exams worked well, and there were moves to adopting a broader range of authentic assessments and coursework in place of, or as well as, exams¹.
- Hybrid teaching has highlighted the central role technology has in teaching and learning and emphasised the importance of having specialist support available as digital approaches to teaching continue to evolve¹. But we must ensure technology does not drive pedagogy, whilst recognising that technology is an integral element of digital education.
- Having opportunities and spaces to share teaching practices and ideas with others has helped many colleagues adapt to hybrid teaching. Where Schools have an established culture of supporting regular conversations about teaching there are some accounts that this may have enabled a smoother transition to hybrid teaching. Continuing to build spaces and time for

colleagues to discuss and reflect on teaching, and learning from 2020-21 is likely to be beneficial for the Curriculum Transformation Programme.

- We should ensure that we learn from those programmes and areas of the University where there has been positive student and staff feedback from the last year.

Reflections on 2020-21, and innovations in thinking and practice are continuing. We need to ensure we continue to pay attention to the insights available to us. We finish with the positive words from one student talking about their experience of 2020-21:

“I can do things in my own time. I’ve learned how to manage my time effectively through the online resources. I have more flexibility in my schedule now, which is invaluable with my disability. I no longer have to walk to campus and back home daily, I only have to do it twice a week and I can attend remotely if I need to! I can learn in the way I want and need to, and a lot of other people I’ve talked to agree. They definitely miss talking to their peers and the other great aspects of in-person teaching but remote resources are very, very useful...Although hybrid learning can be very difficult, and it’s new to us all, it’s pushed accessibility in the University in the right direction. It would be really good if it carried on and we could still interact from home. There are ways where this has changed learning for the better and I hope it will have a lasting effect for teaching in the future.”⁸⁵

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