

Lessons from the pandemic: making the most of technologies in teaching

Universities across the country have been welcoming students back in person. While campuses are busy with students again, many universities are exploring how they can complement and enhance students' experience by drawing on the lessons we learned during the pandemic.

The pandemic sped up work happening across the sector for several years. Universities have been expanding online and digital provision because students want greater flexibility. It can also improve access and improve the quality of teaching and learning. Historically, higher education has been notoriously slow moving and March 2020's national lockdown forced all institutions to shift their delivery, immediately.

Returning to a pre-pandemic world, without any reflection or change, isn't realistic or desirable. Universities are committed to learning from this period and embracing change where it has the potential to enhance quality and the student experience. We wanted to find out and record what universities hoped to keep as we move to a post-Covid future.

Who did we ask?

Thirteen of our member universities came together in March and April 2021 for a series of discussions. They shared their experiences on the benefits of online learning, plans to permanently change teaching, and the online student experience. This briefing draws on the evidence from these discussions and from nationally available data and research into student experience.

What do students think?

In-person experiences are still a priority for many students. If there were no pandemic restrictions, the Advance HE/HEPI Student Academic Experience Survey 2021 found that 57% of students would prefer to learn 'mostly in-person' (Advance HE/HEPI, 2021). However, there is still appetite to keep some digital provision.

The Student Futures Commission found that:

- **66% of students want a blend of in-person and online teaching.**
- 45% of students want an in-person experience supplemented by online activities at least once or twice a week.
- A further 21% want to study mostly online, with in person activities once or twice a week.

We need to make the most of the benefits and capitalise on investment in the digital transformation that higher education has undergone while at the same time bringing back the advantages of in-person experiences, as the pandemic allows. Significant activity is already underway, and institutions are working with their staff and students to explore new ways of doing things.

An unexpected silver lining

The rapid shift to digital teaching and learning during the pandemic provided a lot of opportunity for innovation and creativity. This isn't to underplay experiences of disruption and hardship, but it has brought about positive change. Significant progress has been made in several priority areas by universities through embracing a digital-led approach.

Access and attainment gaps

The move to digital teaching and learning has coincided with a narrowing of attainment gaps. HESA data showed that between 2018–19 and 2019–20:

- The female to male gap in achieving upper awards reduced from 4 percentage points (pp) in 2018–19 to 2.7pp in 2019–20.
- The gap in upper awards between students with a disability and those without reduced from 2.8pp in 2018–19 to 1.4pp.
- The attainment gap between white and Black students has reduced from 23.5pp in 2018–19 to 20.1pp in 2019–20.

Reducing attainment gaps has been a priority for many years, alongside making higher education more accessible and increasing diversity in the student population. Being able to access content online when it suits them has reduced barriers for some students. Whether it's commuter students, disabled students, or students with caring duties, the move to digital has given people flexibility, allowed them to learn at their own pace, to revisit materials, and to fit their education around their responsibilities or requirements.

Meaningful and inclusive assessment

In-person exams were not possible under lockdown conditions or within social distancing guidelines. This led to different types of assessments being developed, including open-book exams, quizzes, and digital portfolios.

Staff have reported being able to focus more on supporting students' learning, designing assessments with real-world and workplace scenarios and tasks, instead of exercises in memory as traditional exams often have been.

Echoing existing research, reports from universities also suggest the forced move away from traditional exams has had mental health benefits. Students have reported less assessment anxiety and there has been a greater recognition of different strengths and approaches to learning. All the institutions we talked to reported planning a permanent move away from traditional exams and using online assessments more.

In January 2021, 92% of respondents to a Birkbeck student survey indicated that they would prefer online or a combination of online and in-person examinations in the future. The College is currently reviewing its assessment approaches in light of its positive experience of online and remote examinations in the 2020–21 year.

Birkbeck, University of London

Student engagement

The restrictions of the pandemic forced the sector to redesign curricula and rethink course delivery and structure. Initial feedback received by departments showed that students appreciated being able to divide material into blocks of learning. It meant they could learn at their own pace and in their own time.

All the institutions reported that students have been able to participate in lectures that used to be one-sided by using chat box functions or discussion boards, making it easier to ask questions, get clarification, and share views with other students.

Laboratory demonstrations were found to be vastly improved by all institutions. They can now be video streamed giving all students a space 'at the front of the class' so they no longer face a restricted view during an in-person experience.

Without capacity room size restrictions, students have been able to audit go to more classes in addition to to supplement their required modules to and expand their understanding learning. Universities are reporting that attendance and participation has increased across teaching and university-wide events, as well as in assessments.

During the pandemic, University of Aberdeen has put a huge effort into digital accessibility. It has seen a huge effort put into lecture capture videoing and captioning support, content change and many other aspects. I think it shows that despite the pandemic the sector continues to put real effort into inclusion and accessibility.

University of Aberdeen

Responsiveness

Universities have been able to use student feedback to improve how they communicate with students.

The pandemic made it essential to keep students up to date on restrictions and how their learning was being affected. Communicating through print materials, noticeboards, and word-of-mouth couldn't be relied on. This has encouraged more strategic thinking on the best ways and times to reach students, using social media more and working with student unions.

Teaching staff across the universities involved in this review said that they have been able to respond to students on what is working best for them, with online platforms providing ways to give immediate feedback and adjust content and materials.

The University of Westminster's engagement with their more than 600 course representatives provided a crucial two-way communication which has accelerated the ability to quickly respond to feedback or share best practice.

University of Westminster

Student support

Access to academic and student support services has actually expanded through using digital platforms. By providing access online, study skills or wellbeing sessions no longer need to limit numbers because of room capacity.

Hesitancy or stigma attached to going to these types of sessions is also reported to have decreased because students can join anonymously.

Career services have been running online careers fairs where students have been able to engage with a wider range of industries. Employers based internationally or in specific regions can now reach all universities across the UK and not be restricted by travel, broadening the opportunities for students in more rural and less centrally located institutions.

The Birkbeck Careers Service found that offering workshops online resulted in a 46% increase in attendance on its Ability Programme, a bespoke Careers & Employability programme for disabled students, compared to 2019/2020.

Birkbeck, University of London

Global networks and learner communities

Online teaching and meeting platforms have helped to overcome physical distances. Institutions have expanded their reach, connecting with speakers and networks locally, nationally, and internationally.

There have been more opportunities to share good practice with colleagues across the sector, which has helped to develop new resources and approaches. Students have been able to access live lectures from world-leading experts, enhancing their knowledge and understanding.

In the longer-term, this expansion of online lecturing and conferences will also play an important role in reducing the time and costs of frequent travel and bring down the sector's carbon footprint.

At the Royal College of Music we made full use of live streaming, enabling students to perform to a global audience. Engaging with digital technologies in this way is vital to raise our students' artistic profiles, develop their digital performance skills, and improve their employability. Moving forward, our visiting professional staff who tour will have the flexibility to teach using digital platforms which will support greater continuity in teaching and learning for our students.

Royal College of Music

Building on digital investment

With over a year of online teaching there has been significant digital upskilling of both staff and students. For example, De Montfort University created a monograph to share stories of staff resilience and reflections to help build future professional development experiences for staff.

It will be important to maximise this investment in people so that confidence and digital literacy remains high. With the government plan for growth, Build Back Better highlighting a skills gap in basic digital skills, ensuring students and graduates can use digital services and technology professionally will contribute to growth in this area.

University plans for 2021–22 and beyond

Institutions are considering how to include elements of digital that are so obviously beneficial while offering the much wanted in-person experiences that so many have missed.

Blended learning – what is it?

Blended learning describes a range of delivery models that use both online and in-person engagement. Blended learning is where much of the sector is now looking, aiming to return timetabled in-person components – such as tutorials or laboratory practicals – with complementary online elements for students to engage with in their own time.

What are the benefits of blended learning?

Blended learning helps students to feel part of a campus community, build connections with peers, and access the informal experiences that enhance their formal learning, while also benefitting from having some of their teaching delivered in a way that can be accessed at a time and place of their choosing. It can also help universities to improve efficiencies while maximising quality, thinking more carefully about course design and structure.

Work is being done to consider how blended learning can be used in different subject areas, where in-person elements are most needed, and what is more suited to digital formats. For some institutions, the move of traditional in-person lectures – where the focus is more instruction than interaction – to online lectures is being considered to free up timetables for more in-person tutorials. For others, they are considering a mix of online and in-person lectures, alternating, to suit different learner preferences, or alternatively considering some wholly online modules and some wholly onsite modules for students to choose between. Different approaches will be appropriate for different subjects.

Hybrid learning

Hybrid learning, where programmes are designed to be delivered simultaneously in-person and online, is also being considered by universities. This approach allows students to engage even more flexibly. For example, a lecture can be attended in person or viewed via a live stream. A student can decide on the day which option will work best for them without missing out on attending at the same time as their peers.

Re-thinking teaching and learning

University communities are re-thinking what is meant by terms such as 'lecture', 'teaching', and 'assessment'. It's challenging established thinking that has become dominant sometimes only through habit. Assessment does not have to happen in an exam hall and a lecture doesn't need to be restricted to a one-hour one-way presentation.

Institutions are entering into conversations with students to understand their expectations and to work through the different ways in which learning outcomes can be connected to course content and assessment. This aims at ensuring standards are upheld while allowing the natural break created by the pandemic to ask more fundamental questions about teaching and learning.

Digital student services

Many institutions will continue to offer student services online because of the benefits they have seen. This includes:

- Expanding digital internships with students accessing work placements remotely to fit around their studies.
- Online careers fairs increasing the range of employers students can meet with.
- Virtual open days to cut the expense faced by prospective students to visit campuses and make them more accessible.

Universities are also building on the increased engagement with students who, before the pandemic, would historically be less engaged in university life, to understand what services or support could help them and similar students as the sector moves to more blended and in-person provision.

Staying connected

Many students and staff have missed the connection of meeting with their peers in person and universities are looking for ways to re-integrate a sense of connection while still building on the many positives digital has to offer. This includes:

- Keeping online pre-arrival activities, to help students connect with the people on their course or the people they will be living with.
- Online induction week activities will also continue, to support students who may not be able to attend every session on campus at the timetabled hour.
- Online forums and course networks, so students can talk through issues and challenges with peers during study leave and reading weeks, and outside of class.

University of St Andrews launched a 'Countdown to St Andrews' to help new and returning students feel part of a virtual community in the run up to the semester. Over 2000 students joined a virtual MS Teams site where they could access a whole range of content on a number of aspects of the student experience, and attend over 150 live events to develop their skills, find friends, and establish interest groups.

University of St Andrews

Strategy

Universities are now building these considerations into long-term strategic plans and leadership-level discussions. This was highlighted by the Office for Students 'Gravity Assist' review of digital teaching and learning, as centrally important to the success of any digital transformation.

This includes:

- Ensuring there is sufficient and redirected funding to invest in digital infrastructure and spaces where it can be accessed.
- Making sure staff and students are confident in their digital literacy and continue to be upskilled as digital technology advances.

- Curriculum design, assessment methods, quality assurance, and portfolio reviews consider the potential in digital capabilities to enhance the offer to students.

Digital learning is a key principle in the University of Brighton's refreshed Curriculum Design Framework. Informed by insights gained through our response to Covid-19, our future approach to digital learning will place a particular focus on inclusivity, support for student transitions, wellbeing, and the embedding of professional, practice-based learning opportunities in curricula, facilitating the development of essential technical and social online skills.

University of Brighton

Redesigning spaces

Digital and blended models provide opportunities for universities to consider their built environment and how they are using their campuses. Moving some teaching and learning online opens up spaces to be used in different and more flexible ways. It can allow more inclusive spaces and means educators can think about how to include small group conversations and demonstrations into their teaching alongside a whole-group presentation or discussion.

Lessons from the pandemic on what students have missed, including the informal before- and after-class conversations with peers to cement their learning, have also made institutions think about redesigning their buildings to include more open study and meeting space.

Universities are also considering how this benefits staff. Flexible working options for professional services and academic staff will enable office spaces to be redesigned to better suit working requirements.

Is it that easy?

There are lots of opportunities in increased digital provision and blended approaches, but the sector is facing and will face challenges that need to be addressed.

Digital poverty

Digital poverty has been a challenge historically but has come to light much more clearly during the pandemic. Any move towards more digital teaching and learning will only be as successful as the equipment and the technology is accessible to all.

During lockdown the OfS found that 52% of students' learning was impacted by slow or unreliable internet connection and 18% of students lacked access to a computer, laptop or tablet device. We cannot presume students will have the equipment they need and that current facilities on campus will always be sufficient or available.

Similarly, staff will need access to appropriate IT and stable internet connections if they are to deliver more of their teaching and student support remotely.

Digital hardship funds have gone some way to plugging this gap, while universities have provided laptops and broadband access for students to use at home. However, the challenge should not be underestimated. A sustainable funding model to support students experiencing digital poverty needs to be developed. Where content or assessment is expected to be completed online, options to access this on campus – for example, private bookable computer facilities – should be made available.

Universities should also be assessing individual's access needs in a personalised way, having conversations before enrolment to ensure there is no delay in accessing any digital content.

Accessibility

Policy Connect (2020) reported that disabled students still experience access issues despite some of the benefits that have come from more digital options. For example, needing captions on video content and ensuring online content is accessible with readable fonts or compatible with screen readers.

Where in-person components are reintroduced, we need to make sure that students who can't attend in person, or find it more difficult, are not disadvantaged.

Universities are working to make sure inclusivity is at the forefront of delivery by putting mitigations and adjustments in place, but will need to continue working with students and listening to their feedback.

Practical courses

Some programmes of study require more in-person contact than others. This can include courses that need specialist equipment, safe handling of hazardous materials, in-person interactions, immersive experiences, or simply access to large spaces such as studios. The challenge remains how best to support students to have the flexibility of digital components while still ensuring all learning outcomes can be met.

It's also important to ensure students on programmes that can be delivered more easily in a fully online way are not overlooked when managing campus spaces.

Professional, statutory and regulatory bodies (PSRBs)

PSRBs have professional standards and statutory requirements that must be met for a student to be awarded a degree that recognises the core competencies. Many institutions have reported that this could present a barrier to future digital innovation if agreement can't be reached on how courses might be alternatively taught and assessed.

There has been considerable flexibility during the pandemic and good communication between PSRBs and the sector, but this will need to be extended into the post-pandemic world.

Academic integrity

When there is more student activity happening remotely and through online platforms, institutions will need to give fresh thought to academic integrity and standards. Universities in this review have highlighted the increase of essay mill advertising, with students potentially more susceptible when working from home.

We support the Quality Assurance Agency (QAA) Academic Integrity Charter and its members are working hard to ensure every student's qualification is genuine, verifiable and respected.

For example, ensuring students are fully aware of academic misconduct regulations and rules surrounding plagiarism. Student should know that software is up to the task of identifying potential misconduct cases all while not overstepping into a student's right to privacy.

Funding constraints

It is often assumed that the move to digital will drastically cut costs, but this is not necessarily the case. Jisc (2020) estimated that in 2020 universities will have each spent between an extra £1-3 million on digital teaching and learning. This includes building up digital infrastructure, training staff, and course content continuing to be developed and delivered (simply in an alternative format).

For sustained growth, digital teaching and learning will need to be accounted for in future digital strategies. Issues such as software licences, access to educational equipment, and electronic resources will need to be considered at a sector level to ensure all students have fair access to what they need for their studies.

Continued interruptions from the pandemic

The closest challenge is still how teaching and learning will evolve and adapt through the next year with the pandemic not yet over and a lack of clarity on the road ahead.

We're working closely with the sector in scenario planning to mitigate for these many risks and challenges but inevitably short-term approaches to deal with the current restrictions may interrupt longer-term planning. However, this process still provides an opportunity to test ideas and work with students to better understand where digital components have added and could add most value.

Where next?

The pandemic has demonstrated that digital technologies will have an important role to play in the future of higher education.

Just as industry throughout history has responded to and built new technologies into their practices, we must learn from the how we had to adapt during the Covid-19 pandemic, integrate what worked and addressing the issues. It is the only practical and responsible next step for universities to take.

Trust in the quality and value of higher education

The rhetoric surrounding the value of digital learning has been profoundly negative. What this review has found and demonstrates is that while students, and often colleagues, across the sector are all craving the face-to-face interaction that in-person teaching provides, there is also an understanding and appreciation of the huge benefits and flexibility that digital learning gives students.

Delivering higher education in hybrid or blended ways does not deliver a lesser experience for students – studying through a global pandemic under lockdown conditions, as evidenced in the recent National Student Survey results, does.

Blended or hybrid higher education which integrates digital elements to teaching can deliver better outcomes for students and provide more flexibility. It can widen participation and break down barriers for non-traditional learners. As we start to emerge from the pandemic and into a post-Covid future, we have the opportunity to take advantage of this to make higher education more effective and more inclusive than ever before.

To fully support the higher education sector in 2021 and beyond, the UK Government must be reassured of the value of delivering education in this new way and mitigate the potential financial and regulatory obstacles that could limit institutions' ability to innovate.

In return, the sector needs to build trust through robust quality assurance and by developing new digital strategies informed by engaging meaningfully with students and listening to their feedback.