How Good Practice in Digital Delivery and Assessment has Affected Student Engagement and Success - an Early Exploration

Focus of this paper

This paper identifies brief case studies illustrating the move to digital and blended delivery and assessment adopted by higher education providers, alongside early indications of the impact these approaches have had on student engagement and achievement. The information gathered here builds on the guidance and other materials published over the past nine months; it also includes publicly-available case studies from providers supporting their staff in continuing to deliver in a digital environment.

QAA intends to explore these and other examples in greater depth to offer an understanding of the pattern of student engagement, progression and achievement across the sector. We intend to publish the outcome of that more detailed study in early March.

Background

The changes to higher education provision necessitated by the COVID-19 pandemic and associated public health measures are widely seen as a catalyst for the rapid adoption of digital approaches to teaching, learning and assessment.

In the earliest stages of the pandemic, QAA produced a range of guidance materials to support the sector in the 'emergency pivot' towards digital teaching, learning and assessment practices. This was followed by a period of planning as institutions prepared for the start of the 2020-21 academic year and considered how provision needed to change in order to accommodate the expected shift to a blended model. During that time, QAA produced a proposal for a taxonomy of digital learning as well as a set of Questions to Inform a Toolkit for Enhancing Quality in a Digital Environment. QAA has also continued to publish examples of how providers have adjusted to digital delivery, for example, within small and specialist institutions. Alongside QAA publications, a cross-sector project led by Jisc - Learning and Teaching Re-Imagined - has supported providers in identifying best practices in digital delivery and initiating a conversation about the broader strategic implications of the pivot.

Now, almost a year on from the initial shift, we are starting to see evidence of the impact of these approaches in student engagement and achievement. This adds to the information we already have about the extent to which providers were able to maintain academic standards and adopt good practice in the transition to digital teaching, learning, and assessment.

Approaches to learning and teaching

One of the challenges that emerged quickly during the first lockdown was the lack of common terms for different aspects of digital teaching, which hindered the extent to which

different approaches might be discussed or compared. The QAA report, Building a Taxonomy for Digital Learning, published in June 2020, proposed a broad classification of five kinds of digital experience or engagement. This paper will use these proposed categories as a lens through which to view a range of good practices in digital learning adopted by teaching staff, both in the 'emergency pivot' of spring 2020 and the first part of 2020-21. The five categories of digital experience are as follows:

- **Passive:** Courses are designed with onsite delivery in mind and digital components are not intended to form any part of the student experience. Even before the lockdown, such courses were rare in UK higher education.

- **Supportive:** Teaching and learning activities are primarily engaged with onsite, but some support materials are available digitally. Students are not required to access the latter but may choose to do so. Broadly speaking, this characterised a significant proportion of courses in the UK pre-Covid.

- **Augmented:** Digital aspects of learning are a core part of the student's experience of the course and are intended to *enhance* their experience of onsite provision. Engaging with digital materials is required, but the extent of that engagement depends on the subject and the type of learning activity.

- **Interactive:** Digital teaching and learning activities are the primary means of engaging with the course and other students. Some teaching or support may be available onsite but engaging with these activities is a matter of student choice, not a requirement. This is similar to the blended learning position adopted by many UK institutions in the first term of 2020-21.

- **Immersive:** Teaching and learning activities are almost exclusively digital. This has become the default position for most courses during Covid-related lockdowns.

Over the course of 2020, there was a shift from the supportive/augmented part of the spectrum towards immersive and interactive approaches. It is worth noting that the specific choice of approach was, and continues to be, determined largely by external circumstances, primarily public health restrictions. Nonetheless, this transition allows us to highlight examples of good digital practice from across the sector. The following brief case studies, based on publicly-available materials, are intended to illustrate some of the imaginative choices made in order to deliver quality teaching and learning, along with their impact on student engagement and achievement.

Augmented to immersive to interactive

Prior to the pandemic, the Active Blended Learning model was central not just to the design of courses at the University of Northampton, but to the design of its new campus as well. With only a single lecture theatre onsite, students were already expected to review digital materials and lectures prior to face-to-face small group sessions. As a result, the transition from augmented to immersive digital engagement during the first lockdown was relatively smooth. For example, an employability skills module taken by 400 students was taken online. Instructors introduced regular polls in the virtual classroom to monitor attendance, reduced the length of individual activity sessions, and gave students the opportunity to attend final sessions in the evening as well during the day. Attendance rates were higher than for the face-to-face approach and subsequent assessment pass rates increased from 64% to 83% (Learning and teaching reimagined, pp 25-26). For the autumn semester, the University went back to blended learning, with a goal of at least two hours of on-campus contact time for each student. Students had the choice of attending synchronous sessions in

person or online, with some commenting that they found the latter option useful in combination with the use of virtual breakout rooms.

Course redesign for an interactive experience

At University College London, core modules for 2020-21 programmes were made available for full online access so that students would have the choice of attending onsite or studying remotely. In one example, as part of the redesign, lecture content for the compulsory module - Theories and Models of Behaviour Change on the MSc Behaviour Change course - was reviewed and separated into shorter standalone sections linked to specific learning objectives for each week. The sections were recorded as audio comments for individual PowerPoint slides, making it easy to rearrange sections as the module structure was refined over the summer.

Students combined the mini-lectures with essential reading and contributed to online discussion boards ahead of synchronous two-hour seminar sessions in breakout groups. The comments from discussion boards allowed the lecturer to proactively tailor each session, ensuring the learning objectives were met by every student. The 'mini-lecture' content also made it easy for the instructor to signpost students to the components of greatest relevance to them, which helped address the challenge of a mixed student audience from a variety of disciplinary backgrounds. Academic staff commented on high levels of online engagement from students.

Parallel interactive sessions for in-person and remote students

The University of Bath has developed a set of guidelines known as the 'Bath Blend' intended to inform the design of courses combining asynchronous independent learning, live online interactive sessions, and in-person time. In one implementation, the independent learning component included a game relevant to the course and short, five-minute videos tied to learning outcomes. The in-person sessions were used as opportunities to encourage social interaction between learners, with in-depth activities focused on practical skills (including soft skills such as communication). Interestingly, the lecturer found it difficult to create a good experience for hybrid (mixed remote and in-person) teams and set up a separate session for those unable to attend physically, which was timetabled at the same time and supported by a dedicated facilitator. The weekly live, online, interactive sessions, which included the full cohort, followed the flipped learning model with a focus on assignments, with a ratio of 15 minutes of recorded content to one hour of contact time, including facilitated team work on summative assessments. For these sessions, the course saw 100% attendance at the end of term, which had never happened for 'traditional' onsite delivery.

Examples of student feedback:

'In-Person Time sessions were interactive and fun, we loved meeting everyone and socialising. Best parts of the week.'

'Breakout Rooms: Allows you to mix with others and gives an opportunity for people to get comfortable working together.'

Replacing fieldwork with immersive engagement

Adapting courses with significant practical components, such as lab or fieldwork, presented significant challenges in terms of good digital practice. Providers have shown great creativity and agility in designing alternative ways to help students achieve the same and, in some cases, additional learning outcomes.

At the University of York, the Department of Environment and Geography replaced a field trip to Tenerife with an online module exploring pollution in York, delivered through the virtual learning environment (VLE). The new module focused on a similar set of learning objectives around experimental design and data collection and analysis, supplementing them with an understanding of pollution pressures at a systems level and a clear presentation of results in a conference-type context. Pre-recorded talks were combined with a live Q&A session, a workshop with breakouts, individual project support sessions and a one-day conference at the end of the module.

A number of providers used 'dry labs' (for example, virtual simulations), in many cases building on prior experience of pre-lab work. Open University saw an additional 10,000 users access its OpenSTEM laboratory resources, which include both virtual experiments and the ability to control remotely a set of instruments physically located on the Open University's campus.

The same approach of using digital resources to replace hands-on experiences was taken by University College London's (UCL) School of Architecture. The MA in Architecture and Historic Urban Environments course at UCL includes a Survey of London module where students go on walking tours of the city that introduce them to new research methods and techniques. Module conveners received funding from UCL to hire a team of student interns to safely create video footage of different sites in London during the summer, to be combined with city sounds, archive materials, and narration by staff. The teaching materials were of high quality and will also be used by other staff in the school, for example, on the 'Making Cities' BSc module.

Where the learning outcomes of practical components could not be reasonably replicated, providers have, in many cases, followed QAA guidance in delaying those elements of courses, promising access to the campus in the summer months or suggesting that opportunities will be available to complete these elements in subsequent years or, in the case of one alternative provider, shifting the summer break period to winter in order to extend teaching time expected in later months.

Seamless shift to immersive delivery

The University of Leeds was in a strong position to transition to online learning thanks to a good IT infrastructure that could scale quickly. The University recruited a taskforce of 30 students to support staff and provide live technical support during teaching to minimise disruption. Lectures were replaced with a flipped approach with weekly pre-recorded video snippets of up to 15 minutes in length, with transcripts provided for accessibility, and regular (weekly or fortnightly) live online sessions with quizzes and breakout groups. Workshops, that had previously been face-to-face, were moved to Teams, with individual breakout channels and shared notebooks for each student group.

Examples of student feedback:

'The transfer to on-line learning has been rather smooth for this module. The mix of live and pre-recorded material/sessions seems to have worked well.'

'Online learning was great as lectures were pre-recorded meaning they were concise but the information was clear.'

'The lecturer was very enthusiastic and always happy to answer questions in and after classes. The online classes were also well-prepared and of high quality.'

Alternative assessments

The future of assessment: five principles, five targets for 2025 report published by Jisc shortly before the start of the Covid pandemic, highlighted the continued reliance of many UK providers on paper-based invigilated examinations. The restrictions introduced in spring 2020, and those in place at the time of writing, have made such exams impossible to hold. As a result, we have seen the emergence of a range of alternative assessment methods based on digital technology. This section provides a brief survey of the most common ones. Many providers opted to replicate, as closely as possible under the circumstances, the traditional model. In particular, PSRB requirements meant that for some courses, the conditions under which examinations were sat, were more restrictive and mirrored pre-pandemic practices. In other cases, time restrictions were used to ensure that all students sat the exam in broadly the same time period, guarding against possible academic misconduct, while accommodating individual student needs and the fact that many international students were sitting the exams in different time zones.

Invigilated online exams

In a number of cases, providers used online proctoring tools in order to validate the identity of students sitting exams. This was often linked to professional, statutory and regulatory body (PSRB) requirements, as in the case of Heriot-Watt University which was required by a PSRB to put in place online invigilation for one course but otherwise used assessments which students could undertake away from the campus and submit via the VLE, without invigilation. (Case study available to QAA Members.)

The University of London conducted 25,000 remote digital exams in three months, using a mix of AI and video proctoring, where it assessed there was a need for invigilation based on professional body requirements. Prior to starting the assessment, the University engaged with candidates in a series of tests, gathering feedback and developing a detailed FAQ. QAA is engaged in activity to explore the benefits and challenges of using digital proctoring. While there are examples of successful and secure arrangements being put in place, there are also implications for student privacy and concerns about the experience of sitting such exams. The British Medical Association, for example, has called for a review into the handling of online situational judgement tests for medical students, following reports of unfair treatment and errors in the system.

Timed online exam without proctoring

Where existing exam questions were already foucsed on higher-order thinking skills as opposed to recall, a closed-book timed exam could be converted to a timed digital exam sat within the same time frame but without invigilation.

At Imperial College London, a three-hour exam was converted to a time-restricted assessment on Blackboard. Questions were checked by two additional academics to ensure they could not be tackled without a grasp of the subject matter and students were instructed to address these in the form of a 'closed-book' exam. Questions based on research papers were adjusted to make the source unidentifiable. The resulting grade profile was similar to previous years, with top marks scored by the best performers on the module. The provider confirmed that no misconduct was detected.

In some cases, PSRB requirements meant that a tighter time window needed to be adopted. For example, Coventry University reduced the 16-hour window it instituted for most assessments to a four-hour slot within the 16-hour window where professional body requirements called for it.

Open book assessments within a larger time window

A significant proportion of providers have settled for open-book, take-home assessments sat within 24 or 48 hours. The longer time frame has been allowed to account for reasonable adjustments as well as time zone differences for international students. In at least one case, the window was as long as seven days.

University College of Estates Management (UCEM) set the deadline for submissions at 10.00 on the day that the summative assessment would normally be sat, and released the papers a week before the deadline. The reasoning behind this was to ensure that its students - online learners - could complete the assessment around other pressures they might be facing due to competing commitments or the pandemic. UCEM staff also developed clear marking templates to ensure consistent feedback. VLE data showed an increase in the number of submissions relative to previous years.

Student feedback indicated that learners saw advantages and disadvantages to the take-home exams, as surveys carried out at Heriot-Watt University indicated. There was a strong need for very clear instructions and communication about how these would be marked, and how long students were supposed to spend on them; appreciation of the more authentic nature of questions; a small number of concerns around the potential for misconduct; and reflections on the reduced stress of a longer time window, counterbalanced with the usual difficulties of digital teaching, learning and assessment provision at home.

Assignments and coursework

In many cases, providers opted for assessment through assignments or coursework linked to the course learning outcomes. These could take a range of forms, and occasionally required providers to be more flexible about the kinds of submissions they could expect. For example, Arts University Bournemouth recognised that final submissions for some courses may suffer from lack of access to industry-standard equipment - such as, printers on campus - and encouraged instead the submission of digital print-ready images (Assessment rebooted report, p 13). Other adjustments for technology needed to be made, such as extra time added to STEM take-home exams where photos of handwritten notes needed to be photographed and uploaded to the system (Assessment rebooted report, p 18).

At Derby, the Centre for Excellence in Learning and Teaching has been encouraging the use of video submissions as an assessment tool, with positive student feedback (see examples below).

Examples of student feedback

'I like the fact I was challenged to be creative. This is something I thought I would hate, but it was actually fun.'

'Enabling me to expand on my skills and develop my confidence when working in groups.'

Conclusion

As would be expected, a variety of approaches have been adopted in the move to digital learning, teaching and assessment provision within UK higher education over the course of the past year.

It is worth noting that even outside the practical or lab-based courses, there are challenges that can negatively affect the student experience, including: digital poverty and lack of access to study spaces; the growing mental health toll that the pandemic exerts on students and staff; and the lack of digital skills or shortage of the specific support needed for effective translation of pedagogy to the new model.

In spite of these challenges, there is an abundance of examples of the transition being made effectively with positive impacts on student engagement and achievement. Some common themes emerge:

- When using pre-recorded video content, shorter pieces (up to 15-20 minutes) linked directly to learning outcomes and scaffolding knowledge for students are effective tools. A consistent and clear structure, communicated to students in advance, helped maintain engagement and received positive feedback.

- Students appreciate the use of breakout rooms, quizzes, engagement through chat and other interactive elements made possible with online learning; qualitative evidence indicates some students, who might otherwise remain quiet, are more comfortable participating in these activities.

- Where practical elements could not be delivered, redesigning modules to focus on the same or very similar learning outcomes helped maintain academic standards (for example, by providing students with the data they would collect during a field trip to help develop data analysis skills).

- The pandemic period saw increased engagement with student unions and student representatives, as well direct collaboration with students on the transformation and digital delivery of courses, helping to create study materials or provide digital skills support and training for teaching staff.

From an assessment perspective, while 'no detriment' (or similar) policies were used in the 2019-20 academic year by many (though not all) providers, the evidence gathered indicates that the approach to assessment was rigorous and there was a focus on maintaining academic standards, as well as communicating proactively with PSRBs where appropriate. It is possible that an increased use of authentic assessment and take-home exams focusing on higher-order skills, as opposed to recall, was a contributing factor in the improved grade profiles of the 2019-20 cohort.

The examples in this paper provide a quick introduction to the changes that have taken place. Over the next month, QAA will continue to gather evidence to inform a more extensive review of the ways in which digital teaching, learning and assessment can provide a high-quality student experience and support student success while continuing to secure academic standards.

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