Written evidence submitted by JISC

Jisc's Education Committee inquiry response – The impact of COVID-19 on education and children's services

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About Jisc

Jisc's vision is for the UK to be the most digitally advanced education and research nation in the world. At its heart is the super-fast national research and education network, Janet, with built-in cyber security protection. Jisc also provides technology solutions for its members (colleges, universities and research centres) and customers (public sector bodies), helps members save time and money by negotiating sector-wide deals and provides advice and practical assistance on digital technology. Jisc is funded by the UK higher and further education and research funding bodies and member institutions. Our vision is for the UK to be a world leader in technology for education and research.

Overview of Jisc response to support higher and further education services:

As the not-for-profit, digital body for further and higher education, Jisc has provided direct support to universities and colleges in response to the Covid-19 crisis around the following key areas:

- Providing free access to a wide range of **Vocational learning resources**; via our negotiations with publishers. 120 UK universities are now being set up to enable access to critical textbook content for upwards of 1.4 million students.
- Making a larger range of free e-books available (a further 66 titles) to **FE students** during the coronavirus lockdown period until end July 2020: A number of our vocational learning resources are also being offered for free until the end of July.
- Providing free cloud consultancy advice to help upgrade critical digital infrastructure.
- A wide range of professional advice, guidance and training to support specific COVID-19 related issues including the digital wellbeing of staff and students: **https://www.jisc.ac.uk/coronavirus**
- Providing FE and HE institutions with **practical tips** to maintain teaching, learning and business operations for the staff or learners are unable to physically spend time on campus.
- Establishing a **Coronavirus Community of Practice for university and college staff which** provides support specifically related to issues around the pandemic. Of the circa 1,000 members of this new community, **Planning for coronavirus community group** on Microsoft Teams, approximately 30% (or 300) are from Further Education.

International students:

The impact of the COVID-19 pandemic on overseas students, staff and researchers has been significant. Many have stayed in the UK to study, but a significant number have returned home to continue working through online, distance education.

At Jisc, we have focused our efforts on helping institutions support those based in China, given that students from China represent a significant cohort of our international students and that China has some unique, challenging technological attributes.

Supporting enhanced access to online education – pilot projects with Alibaba Cloud Enterprise Network

We have established two pilot projects with **Alibaba Cloud** to explore a potential service to improve the quality and performance of connectivity and accessibility of services for global distance learning between the UK and China. The Projects aim to enable offshore students in China who are not campus-based to have reliable access to course materials and VLE systems hosted on the **Janet Network** or other cloud providers' networks (such as Blackboard, Moodle and Canvas).

The University of Southampton, Queen Mary University of London, King's College London and the University of York are all participating in the initial, small scale pilot project. The second pilot project, running in parallel, explores the scalability of the initial solution. You can read more about the project **here.**

While our initial focus is on China, we expect to broaden this approach to the rest of the world. In addition to the services, we are also producing both general and country-specific advice and guidance, with the priority being China. This has been, to date, a collaborative activity between UK and global institutions and sector bodies.

All in all, a cross sector approach to delivering UK education overseas is needed.

Existing activity includes:

1. Teaching and Learning reimagined (UUK/Jisc /Advance HE/Emerge Education) – we anticipate that an international approached to this will emerge – we need to look at the synergies and differences between delivering education in the UK and overseas.

2. UUKI Task & Finish Group on Transnational Online HE

In terms of future international activities, it would be extremely beneficial if we were to have more data on international students. The HESA AOR needs refining and extending as well as much more data on international students to be able to treat them in the same way as their UK counterparts. When students went back to their home country many universities didn't know where they were around the world. It's vital, therefore, for us to get data on access to devices and connectivity provision. More work ought to be done to help to enhance digital skills and capabilities and, ultimately, focus on delivering a world beating experience for international students.

Apprenticeships and other work-based courses:

All publicly funded colleges and universities that deliver apprenticeships and degree apprenticeships are members of Jisc, and therefore connected to the ultra-fast, secure Janet network. Members have access to a range services from professional advice to cloud technology consultancy to ensure they are supported by a robust and modern digital infrastructure Jisc has provided support as our members transitioned to online teaching and learning during lockdown. While providers may have transitioned, or not, to online delivery, Jisc's challenge has been to help our members do this successfully. Transitioning from face to face to remote learning within a short timeframe has been challenging and we have been on hand to offer tailored advice and guidance to help members transition through this turbulent time.

The challenges that have been faced include: lack of digital capability, issues with senior leadership buy in, near-immediate learner digital exclusion, lack of learner devices, connectivity and space to engage with learning, limited employer digital capability and support for learners especially in the workplace, lack of digital resources for teaching and learning, a lack of infrastructure for teaching and learning platforms.

Through this time, Jisc has supported members, reacting quickly to the evolving situation and providing support and advice where possible. There is no doubt that the challenges colleges currently face are, unprecedented, and adjustments that would normally have taken months to embed were embraced within a matter of weeks. In this

context, making sure guidance and advice is up to date and applicable to each institutions' particular circumstances is of paramount importance,

Opportunities

Covid 19 has given training providers and colleges the opportunity to truly understand the benefits and possibilities technology affords. We believe the rapid adoption of online/blended delivery and remote and technology enabled assessment, will lead to a new hybrid model of apprenticeship provision, with significant benefits. Indeed, the model of assessment in this sphere has completely changed for the better in a few short weeks. Special measures that have led to more than 100 apprenticeship standards gaining permission to carry out end-point assessments remotely during the Covid-19 pandemic. We believe this approach to innovation should be commended and expanded and it will enable more efficient and effective assessments.

In addition, as assessors have not had to make trips to businesses to assess their apprentices, they have been able to spend more time supporting them and assessing their skills remotely.

Recommendations

Jisc has long since provided support to eligible work-based and adult learning providers to **realise the benefits of digital technology in Wales**. Being able to replicate this model in other parts of the UK would enable us to work with colleges to significantly improve the apprenticeship ecosystem with a considered and joined-up approach.

The best way we can ensure apprenticeships play an important role in our economic recovery is by focusing on apprenticeships in sectors where jobs will thrive in decades to come. Sectors are being disrupted by the emerging 4th industrial revolution technologies and roles are being displaced by automation. As artificial intelligence develops apace, soaking up many manual tasks, the type of skills and competencies that will likely be in demand are those demanding creativity, problem-solving, collaboration, cooperation, resilience, communication, complex reasoning, social interaction and emotional intelligence. Therefore, apprenticeships need to focus on these humanistic skills while also incorporating the up to date industry relevant digital vocational skills required in the changing digital workplace.

We agree with the recent Apprenticeships APPG annual report recommendation that:

1) There is now a long-term opportunity for apprenticeship providers to adopt a blended style of online and offline learning. To reflect these changes the Government should take these changes into consideration to support flexible approaches to learning beyond the pandemic.

2) The Government must take additional steps to support flexible approaches to learning and working for apprentices that have been developed through lockdown, examples could include reforming how End Point Assessments are implemented.

Finally, it's important to gather data to navigate the turbulent years we anticipate. Providers should continue to log issues and monitor data to inform future decisions. At this stage, it is still too early to say what the medium- and longer-term impacts of COVID-19 will be on learner recruitment and demand - but mapping policy to accurate data can help to ensure that the apprenticeship space helps deliver the economic recovery for the UK.

What contingency planning can be done to ensure the resilience of the sector in case of any future national emergency?

Post-covid recovery strategies across the FE and HE sector:

The move to remote learning and teaching has seen the fast-tracking of digital delivery across the higher and further education sector, with colleges and universities moving to emergency technology enabled learning, teaching and assessment at speed and at scale. The long-term delivering of education is likely to include a hybrid model of face to face and blended online learning, teaching and assessment. Recent findings from **Jisc's Digital Experience Insight Survey** showed that only 43% of HE students and 45% of FE students surveyed were

'comfortable' with using mainstream technologies as part of their learning and with 19% of learners in HE and 10% in FE using at least one of four assistive technologies, its pivotal that any long-term view of a hybrid education sector includes plans to increase skills and confidence of students in an accessible way. It's vital to establish a more flexible system that can quickly adapt to change as colleges and universities increase online teaching and learning of courses at a much greater scale. Underpinning delivery of quality online education is a need to invest in critical digital infrastructure, better and fairer connectivity for learners especially those living in data poverty, and much more high-quality and engaging digital learning content.

Higher Education

Universities across the UK have been propelled to rapidly transform and change how they operate as the Covid-19 pandemic hits the country. For the academic year 2020/2021, universities face the challenges of reduced numbers for both domestic and international students, reductions in funding and the necessity to ensure adequate measures in place for social distancing. In the same timeframe they need to innovate, transform and develop new curriculum models that meet the changing demands and needs of students. They will need to deliver courses either completely online or using a flexible hybrid model, and all the time observing the changing government guidelines on opening and social distancing, in the shadow of a potential second peak and further lockdown measures. Our digital experience insights survey clearly demonstrates areas for investment and improvement as universities continue to adapt a hybrid model – whilst 83% are motivated to use technology as an integral part of their learning, 1/5 of students surveyed didn't feel they had access to reliable Wi-Fi on their campus and only 33% of students felt they were informed about their health and wellbeing as a technology user.

The resilience of the sector so far has demonstrated that with the right support, collaboration, advice and tools, universities will be able to step up to this uncertain future. To enable both the immediate transition to more technology enabled and blended learning models, Jisc has established a ground-breaking partnership 'Teaching and Learning Reimagined' with 16 HE sector bodies including UUK, Advance HE and Emerge Education. From rethinking the role of the lecturer to identifying the best ways of investing in technology, the partnership intends to provide university leaders with practical tools for digital delivery (to tackle immediate strategic challenges); as well as drive collective innovation and a vision for teaching and learning that enables the UK to offer a world leading digital student experience now and in the future. Set up in response to the Covid crisis, the work will engage every part of the HE ecosystem (including students), from now until its conclusion at the end of the year.

Findings from the partnerships' advisory group uncover these emerging themes:

- **Digital inclusion**: ensuring equality for all students, especially those impacted by digital poverty. Having a full understanding of the impact of changing modes of learning and teaching provision on the disadvantaged and the diverse student population.
- **The importance of visible leadership**: greater awareness across the sector is needed to showcase universities with a flexible, inclusive and innovative practise often linked to very clear institutional level priority placed on the importance of the role digital approaches and technologies.
- **Supporting the transition back to campus**: Planning for flexible hybrid delivery (blended learning/face to face), access to digital resources and helping students navigate an on-campus experience.

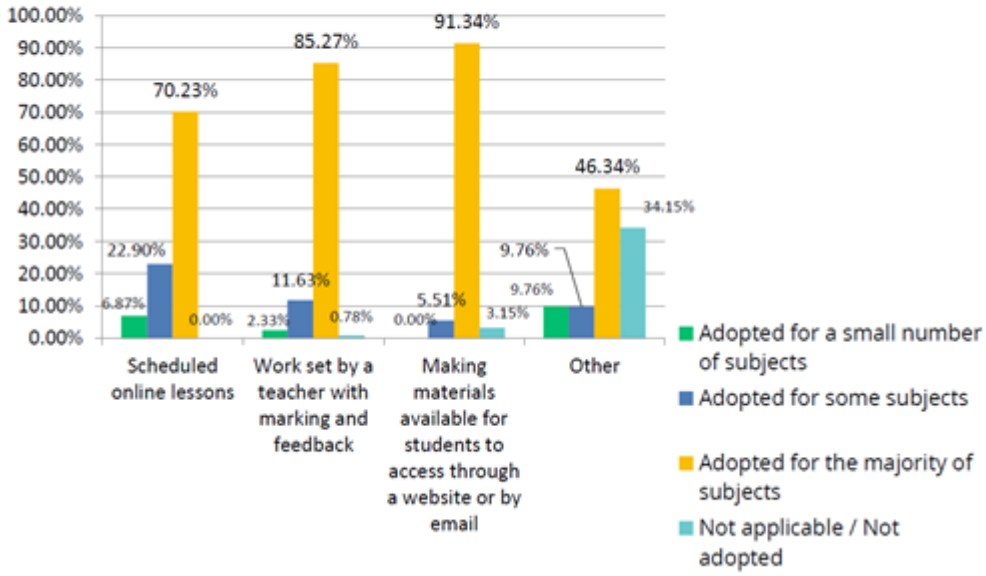
Further education

Colleges have also implemented a major shift to online learning. AoC data, **published** in May 2020, showed that 70% of colleges are reporting they are offering scheduled online lessons for most of their students, with just over 52% of respondents managing to deliver 75% or more of their planned teaching hours online. Similarly to the HE sector whilst 69% are motivated to use technology as an integral part of their learning only 68% of students surveyed felt they had access to reliable Wi-Fi on their campus. So there is ample work to do in ensuring learners in FE are supported to trust a digital learning environment.

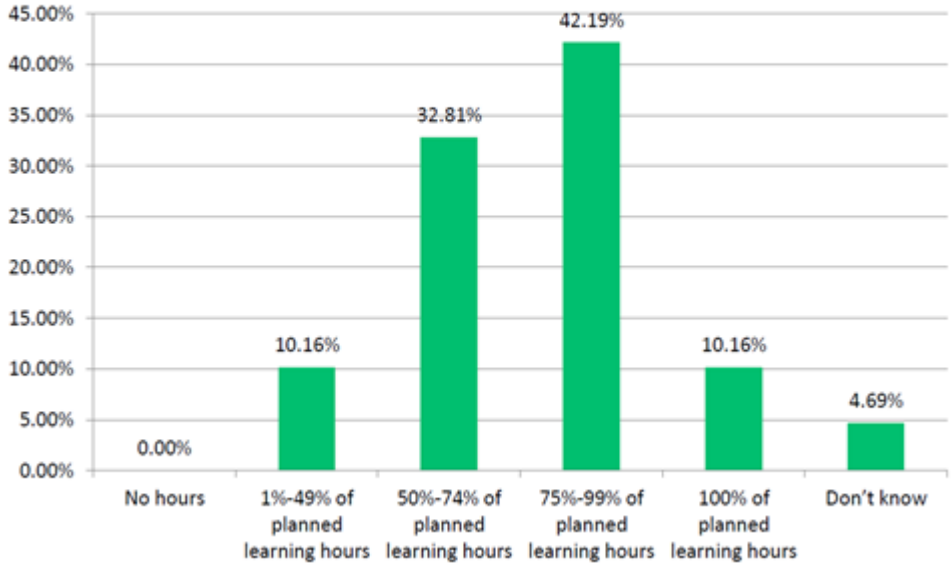
Supporting learners' digital identity and wellbeing will inevitably continue into the future of education in the 'new normal' and ensuring students are *engaged* with the learning process is an important aspect of maintaining wellbeing. Engagement is more than attendance or access and Jisc has been supporting our members on using learning analytics to both enable them to measure engagement through activity and when students are disengaged

to make effective and appropriate interventions. The Association of Colleges (AoC) tables below indicate levels of engagement in online learning at colleges.

Q14: For each element of online learning listed below, please indicate how much it has been adopted by your college: (131)



Q17: For learners aged under 19, what proportion of planned learning hours do you estimate are being undertaken remotely? (128)



Jisc, and the Aoc, led a research initiative in partnership with the AoC, college leaders, teachers, students, sector bodies and educational technology experts to provide insights into how to best shape the sector for a digital future. Launched midway through lockdown and concluding in August, the initiative engaged college leaders, teaching staff and leading sector bodies, and concluded with several urgent recommendations that are needed to secure the success of the FE sector.

These include:

1. Accessibility

Ensuring all learners have access to learning (Wi-Fi, device and learning space) and understand when they can participate. Our digital experience insights findings showed hat the digital divide in learner experience is an area worthy of rapid improvement for the FE sector – with 82% using smart phones as their primary device for learning and 3% of learners with no access to any device appropriate for study, there is a notable section of FE students using sub-optimal devices for their study and a small but important percentage for whom online learning is a real challenge.

2. Digital capability of staff

Staff need guidance and support but also opportunities to apply and try newfound skills, organisations should provide comprehensive CPD programme for staff at all levels of digital capability. Additional support for staff who feel digital is not for them and may be at risk of leaving FE. The Jisc/AoC's *Shaping the Digital Future of FE and Skills* report identified a notable deficit in staff digital capabilities with an even greater deficit in staff digital pedagogy skills. If resourced fully and promptly at a national scale, Jisc can quickly support colleges to improve their staff digital capabilities through its digital capability service. Digital Capabilities provided £6.1 million in the value to the sector by the end of its first year including actual savings of £2,500 per institution using the discovery tool will accrue each year thereafter. 27 colleges are currently subscribed, and we propose rapidly rolling out the service providing annual licences for 240 colleges at a cost of £0.6m.

3. Quality learning content and digital resources

Access to interactive third-party teaching content that is accessible to all learners which can teach, feedback and assess to maximise the learning outcomes for students. We have proposed a capital start-up and recurrent national skills repository of digital content for Levels 3, 4 and 5 (T-Levels, higher apprenticeships) which includes search and discovery functionality through Jisc, for colleges to utilise and accelerate skills development across FE and skills provider regions. This would meet the National Skills Fund priorities, provide students with new digital skills to keep pace with technological change and a successful lifelong learning journey. Dynamic and engaging 'digital first' content for sectors such as construction, STEM, healthcare, logistics and other key skill shortage areas would optimise the efficiency of delivery and ensure consistency of quality across the sector, helping address post-Covid unemployment challenges as well as deliver efficiencies for the FE sector.

To deliver the above Jisc has recommended to Government to consider commitments to the £1.5bn capital spend for Further Education Colleges and the £3bn Skills Fund to deliver a wider range of learning content across levels 2-5. Jisc's established role in procuring and licensing content as well as providing e-books for FE, could act as a national creator and aggregator with other partners.

4. Robust digital infrastructure

Maintaining investment in a high quality, secure and powerful digital infrastructure is vital to the future resilience of delivering education services online in the event of any future emergency and in the 'new normal' for further and higher education provision.

Both the HE and FE sector benefits from Jisc's ultrafast, secured digital infrastructure, Janet. This bespoke National Research and Education Network is one of the most powerful in the world and provides the digital backbone of UK lifelong learning and research. At more than 200,000 times faster than the average home broadband, it is a national asset that allows for the secure, scalable, cost-effective and unrestricted transport of petabytes of data. Jisc also provides critical cyber protection for the college and university members, working with other national security agencies. Cyber security remains a persistent threat to the HE and FE sector and can cause significant disruption and financial harm to colleges and universities for example through Distributed Denial of Service (DDoS) attacks. Between January 1st 2020 and July 31st 2020, Jisc's Security Operations Centre dealt with 481 cyber security incidents that affected FE colleges across the UK, comprising of 256 separate attacks targeting 75 individual institutions. For HE, there were 1601 incidents, comprising of 92 separate attacks targeting 43 institutions. We have seen an increase in ransomware incident affecting colleges recently, which is a resource intensive type of incident to resolve. The availability of dedicated cyber protection for education institutions enables the UK's education ecosystem to remain resilient to current and future threats in any future emergency scenario.

Connectivity and affordability of online provision to all students across the UK is therefore critical to deliver a more flexible and emergency-resilient system. In question three, we set out ideas for supporting students with mobile devices as well as free to access education websites that could be made flexible to future national emergencies as

required but also, to ensure long term cost effectiveness to students in having to study more online. Levelling up the UK's digital infrastructure and providing parity of access to connectivity and kit for all learners becomes even more critical when considering in particular, those students that live in 'data poverty' and maintaining the value of the higher and further education experience that is increasingly delivered online.

The UK's unique capability found in Janet and Jisc will be critical to ensuring the ability of the sector not only to recover, but to have the digital foundations to re-imagine teaching, learning and access to resources that enable a world-class competitive technically advanced education ecosystem.

We were pleased that the Government's budget set aside £1.5 billion for college infrastructure and support the AoC in making certain that this investment is applied to the critical digital infrastructure further education requires to deliver technology enabled teaching and assessment now and in the 'new normal'. Given the pressure on the further education and skills sector to provide effective online delivery from content to connectivity, we would recommend funding for IT infrastructure is accelerated so colleges can access critical investment to continue preparations ahead of the start of the forthcoming academic year.

We refer to our proposal in our response to point one on a content proposal to support content for vocational training and wider skills needs online, to ensure the long-term resilience of the education sector to continue virtual provision to learners, under any future emergency scenario.

5. Understanding and investing in staff skills

There is an identified need for all organisations to support the digital capability of their staff and students in order for them to operate effectively in a digital remote environment. Even teachers have the resources to engage with their students, many have not yet developed the skills to best promote and engage learners. Indeed, there is little merit in having the most up to date technology if teaching staff have not yet developed the best ways to use it.

Developing a new question set for teaching staff in HE and FE to self-assess their digital capabilities in relation to delivering learning and assessment remotely and how to support their students with learning online is of paramount importance.

Jisc envisages that this This would be delivered through the discovery tool and was the free taster version of the discovery tool and would be available for subscribers of the building digital capability service. On completion of the question set, staff would receive a report with suggested next steps and links to relevant CPD resources to develop their practice. This could also be of use to those HEIs delivering international provision.

The effect on disadvantaged groups, including the Department's approach to free school meals and the long-term impact on the most vulnerable groups

Disadvantaged learners in both FE and HE have been negatively impacted by the effect of Covid 19 and the closure of college and university campuses during lockdown. 'Data poverty' affects many students across the UK who are at high risk or having no or incredibly limited access to their education online. With campuses closed, thousands of students are now learning online at home where both broadband access and access to mobile devices is prohibited by availability, connectivity and cost. The FE and HE sector have worked very hard to successfully ensure the continual provision of teaching and learning online but put simply, this is unaffordable and inaccessible for many learners. Not only does this prohibit their education, but it is damaging for their overall wellbeing.

HESA data for 2018/19 shows that 18% of the HE student population England are in the lowest quintile for Index of multiple deprivation (IMD). The AoC identifies 16% (107,040) of 16-18 learners (669,000), are disadvantaged (those who were entitled to free school meals) and are most likely not to have access to a device at home. As their only means of communication during lockdown is often via mobile with staff, fellow students and the learning environment, ensuring a flexible and affordable way to access education to the inevitable increase in online provision of teaching and resources, is vital.

The Office for Students (OfS) have recently launched a wide-ranging review into digital teaching and learning, following an OfS Survey showing that 52 per cent of students believe their learning was impacted by slow or unreliable internet connection, with 8 per cent 'severely' affected Sir Michael Barber, Chair of the Office for

Students, commented that “Improving equality of opportunity for students from all backgrounds is central to our work ... there remains critical progress to be made in closing persistent gaps in broadband speeds between urban and rural areas”. Of those less-well off students who do have mobile devices, they face a financial barrier in their average data cap which we estimate is between 1 and 10 Gigabytes. This is insufficient to support their access to online learning tools, Virtual Learning Environments (VLE) and other resources without breaching the cap and incurring increased costs. As an example, using an online data calculator and equating particular services with educational services, a student using the Virtual Learning Environment (VLE) and accessing basic educational content (e.g. downloading a PowerPoint or an eBook) would be using in excess of 12Gb per month. If the student was expected to participate in streamed video lectures (i.e. through lecture capture), participate in online video conferencing (Zoom or Teams) then those would increase to a costly 30-50GB per month.

For students living with relatives or friends, their broadband access is congested through increased family/shared use and there are still a number of students who have no home broadband access at all. Connectivity is clearly a challenge for many parts of the country but as it is too hard to put fixed line solutions in quickly at scale, we believe our suggested short term option to make educational sites free to access for students, will be critical to ensuring they don’t fall behind, especially for those in their final year.

We welcome the move made by Telecommunications Industry Ireland, who have put in place a commitment to provide access to healthcare and educational resource websites identified by the Government as zero-rated for all customers where technically feasible, during lockdown. We believe a similar move for UK students, will ensure those digitally excluded will not continue to fall behind now and should remain flexible in the event of any future lockdown. We are therefore calling on Government to work with telecoms providers to make point of entry education websites free to higher and further education students while campuses continue to be closed or while there is limited accessibility to physical estates through staggered provision.

In addition to this, we believe there needs to be greater availability of IT kit for further and higher education students who don’t have access to or own mobile devices to study at home. We welcome AoC’s move to call on the Education Secretary as part of their ‘September Promise’ to bring forward some of the £1.5bn announced in the March 2020 budget for college capital investment so that it can be used to purchase IT equipment and software, as well as making necessary building modifications to embed a mixture of online and in person learning.

Jisc worked with the AoC to make the case for additional funding for mobile devices for disadvantaged college students. We welcome the Department for Education responding to this by topping up post-16 bursary funding so colleges can buy devices for students learning at home. While a positive move, many colleges are still reporting that due to budget pressures, many students are either without any devices or have devices that are out of date to support their online learning. There is an urgent need to assess and address the equipment needs of those in ‘data poverty’ across both HE and FE to ensure the right equipment is available to all staff and learners in the event of any future crisis.

Accessibility

There is a regulatory requirement for all public sector organisations, including colleges and many universities to comply with the EU Web Accessibility Directive, to make all websites fully accessible.

While this is a substantial undertaking, particularly for the FE sector, the regulations also provide a timely incentive to make online provision of learning, teaching and resources fully accessible to as many students as possible by taking account of their learning needs. Improvements to the accessibility of learning materials and platforms will inevitably improve engagement and learning outcomes. Compared to universities, colleges are further behind in their digital accessibility journeys. Jisc has advised that creating accessible content will benefit all learners. Any steps that can practically be taken in this direction and within the circumstances is likely to be useful. Organisations such as Jisc are working hard to raise awareness and provide accessibility training to the sector. City College Norwich, one of the ETF’s National Centres of Excellence, is among the few FE institutions who currently have a compliant accessibility statement. Jisc has advised that creating accessible content will benefit all learners. Any steps that can practically be taken in this direction and within the circumstances is likely to be useful.

Training and development for staff in the use and support of AT (Assistive Technology) is becoming an increasing concern that is raised by our membership. Evidence from Jisc’s 2019 Digital experience insights survey[1] of over

[1] **https://digitalinsights.jisc.ac.uk/documents/221/33013h2_JISC_DEI_TeachingStaffReport19_A4_HR_Web.p**

6,500 teaching staff from 61 organisations found that 17 per cent of FE and 15 per cent of HE teaching staff said they used assistive technologies in their role. Of these staff, nearly a quarter in FE and 40 per cent in HE said they did not have the support they needed to use assistive technology effectively.

Providing teaching staff in Higher Education Institutions (HEIs) with high quality support to deliver AT assessment, provisioning and ongoing support for students could radically improve outcomes for all students, not just those registered disabled. We welcome initiatives such as the work completed at the University of Dundee which has resulted in the development of an **MSc in Educational Assistive Technology** which will train individuals on how to implement and support the use of technology within education to enable students with a broad range of learning difficulties and/or physical disabilities access curriculum. This course is being developed by expert practitioners and will involve substantive input from those active in the field, including Jisc subject specialists.

We would support dedicated funding for staff places on such programmes by the relevant departments in England and the devolved nations via their respective governments. Provision of such funding could remove a substantial barrier to the take-up of such courses and improve AT practice across the sector ensuring no student is left behind due to constraints in accessibility.

Cancellation of exams

Assessment during the Covid-19 crisis has been one of the biggest challenges further and higher education providers have faced. Jisc has been advising on how to transform existing assessment processes into online assessment, as well as how innovative digital solutions can be used to replace or replicate practice and lab-based assessments. We have also provided thought leadership on some of the issues that arise when technology supports assessment such as virtual invigilation or 'e-proctoring' and will be undertaking a design and validation process for potential solutions to online assessment for tertiary education institutions.

Most universities have some model of online assessment and as a result of the Covid-19 crisis, most, if not all have interim solutions in place. However, there is a mixed picture across different year and subject groups.
One notable challenge is in the area of practical and lab-based assessments, such as creative and performing arts, and the sciences. However, feedback we have received from universities is that they are mitigating the impact through cancellation, deferment or assessing based on work done so far. In some cases, lab-based assessments had already taken place and therefore was less of a concern for this academic year.
There will still be ongoing challenges in the next academic year of course and for those universities who decided to deliver mainly online (for example to the international market) these include:

- Maintaining the academic standard and quality as required by internal and external regulations, as they translate and convert existing practice into online modes.
- Ensuring staff have the necessary digital skills and capabilities to successfully deliver online assessment, across the assessment lifecycle. Each step of the lifecycle will require different skills to deliver.
- Transform multiple modes of assessment to online versions at scale and at pace. Many universities have experience of designing and delivering online assessment, however they will not have done this at scale or transformed at the pace required.
- Maintain student engagement through the next few weeks and through the assessment process, as they continue to socially isolate and study remotely.
- Ensure student wellbeing during a time of crisis remotely and consider the impact of online assessment on wellbeing as an extra pressure and source of stress.

In further education and in skills providers, the shift toward delivering digital assessment has begun and there is positive appetite across the sector for further re-imagining of assessment. Change is underway: On 27 May, City and Guilds announced that 17 Apprenticeships standards have been approved for online assessment as reported in the **TES**.

As more learning and assessment is potentially delivered and managed online, technologies such as artificial intelligence and machine learning could enable the build-up of a comprehensive picture of a learners' knowledge,

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skills and behaviours beyond that of traditional qualifications. Through micro-credentialing of bite-size knowledge, skills and behaviours the 'system' will be able to identify when a learner has displayed competence in different aspects of their learning and add these to a lifelong learning record. As the expectations of employers change these micro credentials will be able to map a learners' knowledge and skills to these new requirements. Given the current rate of change and what is expected to change in the near to medium term a change to current assessment processes, including remote proctoring offering secure and flexible assessment opportunities could be the key to qualification remaining relevant.

As part of Jisc's vision for Education 4.0 we see digital playing a positive role in making assessment smarter, faster, fairer and more effective. When online assessment is carried out properly, it drives improvement, shapes learner behaviour and provides accountability to employers and others. Crucially, harnessing advanced to deliver exams in both vocational and academic subjects supports a more flexible system that moves away from high-stakes, end of year assessment. We have set out a 10-year look-ahead into the opportunity technology offers in our recently published **Future of Assessment report.**

ENDS

September 2020