



**Digital Development Programme for Adult
Community Education Providers (Digital ACE)**

Underpinning Technology Guidance Materials

**Guidance on how to set up an effective technology infrastructure
and the areas which should be considered.**

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1. Introduction

This document is one of six guidance documents produced for the Digital ACE (Adult and Community Education) programme, as it is recognised that many providers will need to develop new policies that are specific to digital learning. The six guidance areas for digital development include Policy, Safeguarding & Prevent, Developing Materials & Resources, Quality Assurance, Supporting Low Skilled Learners and Underpinning Technology. See the References and Links section of this document for [additional strand information](#).

When ACL providers were starting a new year of learning programmes in September 2019, no-one knew the significant disruption that would hit these plans seven months later. An online survey by HOLEX in May 2020 (See [Link 1](#)) identified that many providers recognised the benefits from the forced move to online learning. It is highly likely that the pandemic will transform some elements of ACL provision. Although the face-to-face element of adult learning will never be completely replaced, online or blended learning will most definitely be more widely used going forwards.

The survey demonstrated that there has been a clear need to invest in IT infrastructure and equipment, to make sure that technical issues can be minimised and avoided.

Although there were clear technical favourites (G-suite, Zoom and Microsoft Teams) there were some issues - for example, Zoom and WhatsApp are commonly blocked by Local Authority systems. It is notable however that several services had overcome these barriers.

It was noted that a quick turnaround to online provision necessitated tutors to use what they knew and what learners could most easily engage with. It is positive that there has been so much flexibility, as this has been needed to engage with a diverse range of learners. However, this has tended to result in a wide range of online tools and a large degree of inconsistency. Providers stated they would welcome a best practice guide that demonstrates how to maximise delivery.

These guidance materials for Digital ACE Underpinning Technology build on the experience and expertise of peers in the sector, and they provide links to tried and tested resources. They include useful examples, good practice and tips for providers to use to ensure that their digital provision is underpinned by a robust and secure infrastructure.

Important note –

It is important to note that there is not necessarily a one-size-fits-all solution in this area. Some solutions will suit certain staff, learners or subjects better than others and some organisations will need to work around existing constraints.

Link 1: [Ufi/HOLEX Digital ACE survey report May 2020](#)

2. The scope and aims of the strand

The aims of this strand of work are to supply providers with enough information to get started on developing a digital offer and to support those who have already started in creating a more sustainable technological base. The guidance also provides links to more in-depth technical critiques of systems and signposts to good systems.

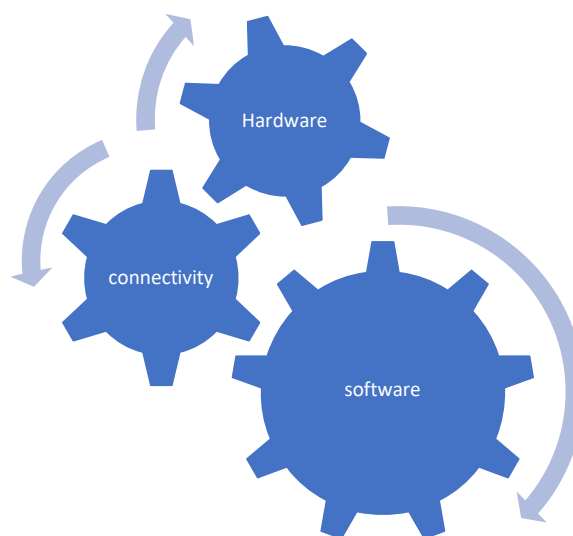
3. How to use these guidance materials

These materials have been produced for providers to use within their service and, where appropriate, with their subcontractors or partner providers. Providers should use the elements of the report that are relevant to them.

Each Digital ACE guidance document is supplemented with a webinar, originally broadcast live and now available to watch online (see **Link 2**).

Link 2: [Recording of Digital ACE Underpinning Technology webinar](#)

Always remember that the main elements of any system are interlinked and interdependent and underpinned by trained competent staff.



4. Software

4.1. Description of area – why it is important

Software is probably the most important element of any system and it is important that you select the most appropriate software for your needs. **In an ideal situation you will determine your software needs before you identify your hardware requirements.**

4.2. Points to consider

Making decisions about which main software and apps to use is important. As well as the functionality of the systems, covered later in the report, managers need to determine:

- whether there will be one main standardised system for all staff and learners or a range for them to select from (for example, a platform that is useful for one group of learners may not work for another. An e-portfolio that is designed for apprenticeships may not work as well for other provision.)
- the process which should be followed to approve a system for use
- how different systems might be integrated together to form a whole learning system

- how the system(s) will be deployed to staff and learners
- whether the proposed system is in line with the corporate and service policies for online learning
- whether the system(s) will require any installation on the device(s) to be used or if access is fully web-based
- whether the system is appropriately secure, protecting the data of staff and learners.

4.3. GDPR requirements and keeping safe online

4.3.1. Description of area – why it is important

You are responsible for making sure that the personal data of learners and staff is protected and that you are not responsible for any data breach. You should make sure that you are fully aware of the requirements (see [Link 3](#) and [Link 4](#)).

If you are asking learners to register for and log onto a system, you need to be confident that their personal data are safe and that it cannot be compromised by your actions.

4.3.2. Points to consider

- Many, if not all, local authorities will have a data security specialist who can advise and support you.
- Local authorities and their IT staff may have differing attitudes to risk and therefore it is difficult to give definitive advice about approaches that will be acceptable to all local authority providers.

4.3.3. A case study and links

Case study: GDPR – learners asked to set up a separate email account

One approach in one local authority where learners were not issued with a service email account, was to ask learners to set up a separate email account to use for learning. This way, any compromise (such as hacking of the site or system), would not leave other accounts and personal data held by them vulnerable to attack. This approach was agreed by a data security team that is normally very cautious.

Link 3: [GDPR - government site](#)

Link 4: [The Information Commissioner's Office guide to GDPR](#)

Link 5: [Article - 6 most common ways in which data breaches occur](#)

For further links on GDPR, see:

- [JISC guide to GDPR](#)
- [SWGFL Guide to safer blended learning](#)

4.4. Firewalls and safeguarding

4.4.1. Description of area – why it is important

Firewalls protect networks and systems from unauthorised access. This might be from hackers or people wishing to infect your device with viruses or malware.

The desktop computers and laptops in many local authority services are protected by their corporate system and this is likely to be adequate and fit for purpose. However, **it is essential that they are kept up to date and are configured correctly**. According to the IT governance blog (see [Link 5](#)), 22% of data breaches are down to human error, including misconfiguration of systems. Local authorities are often subject to regular attempts to attack them to gain access to information, and they must therefore ensure that their systems are fully protected. Some Adult and Community Education providers may have direct control of their IT systems and must ensure that they are fully protected and secured (see [Link 6](#)).

According to the IT governance blog (see [Link 5](#)) 45% of data breaches are the result of criminal hacking and a further 17% through malware installed on equipment.

There are several firewall systems that might be deployed on a network for example Smoothwall and Sophos.

For stand-alone computers that are Windows based, Windows Defender comes with newer laptops and desktops and is likely to be adequate to protect your personal computer. Apple based equipment also has built in protection and therefore, provided updates are done regularly, it should be protected adequately.

If you are planning to use tablets for some or all of the access to resources and learning for staff and/or learners, you should ensure that they are adequately protected. Both Apple and Google vet their stores continuously to make sure that apps available from them are safe to download and use. Generally, viruses are less common on tablets, but devices can be infected if unauthorised apps are downloaded. It is possible to change the settings on an Android tablet to allow this, but it will leave tablets vulnerable. You can actively manage the apps on a tablet using device management software (see [section 4.5](#) for more information).

Some Adult and Community Education providers have free access to the internet through the JISC JANET network. In this situation you can take advantage of the protections provided by Eduroam (see [Link 7](#) below). These will generate a security profile, managed by JISC and will track undesirable activity. It is the responsibility of providers to ensure that this is sufficient to meet their needs.

Supplementary systems such as Smoothwall monitor digital safeguarding on your connected equipment. If laptops loaned to learners are set up to connect to your teaching network, then you can benefit from this facility for those learners. However, this facility is not available for learners using their own equipment. The Smoothwall system monitors keyboard entry into a browser as well as into documents. For example, if a user of a device linked to this system inputs some text for concern, such as how to commit a crime or how to make a bomb, this will send an immediate alert to managers to monitor and investigate further.

4.4.2. Points to consider

- Can the device be protected by the corporate or provider firewall?
- Is there adequate firewall protection?
- How can protection be provided most effectively?
- What are the arrangements for regular and timely updating?
- Do you need additional monitoring of software to raise alerts?
- Are there local solutions available for you to access?

4.4.3. Links and references

Link 6: [Government publication - minimum cyber security standard](#)

Link 7: <https://www.jisc.ac.uk/eduroam>

For further resources for firewalls and safeguarding, see:

- [Smoothwall](#)
- [Smoothwall monitor](#)
- [Sophos](#)
- [CISCO firewalls](#)
- [Esafeglobal - digital safeguarding](#)
- [Impero digital safeguarding](#)
- [Which article on data security on tablets](#)

4.5. Device management software

4.5.1. Description of area – why it is important

If staff and/or learners are loaned mobile equipment that is not managed centrally by the service, corporate, teaching or other network, it is worth considering a mobile device management system such as Meraki (see **Link 8** below) or Lightspeed (see **Link 9** below).

With these you are likely to be able to:

- manage the content on devices remotely and en masse
- manage updates of apps
- grant self-access to approved apps
- geo-locate lost or stolen devices and disable them
- reset your device policies
- configure devices remotely

- report on device usage
- view battery indicators
- monitor the status of your devices
- view a dashboard of your devices.

4.5.2. Points to consider

- Do you need a device management system?
- Cost of purchasing or subscribing to the system and of administering it
- Who will run and administer the system?
- Which features would you prioritise in selecting a system?

4.5.3. Case study and links

Case study: iPads for staff and learners – using Lightspeed

In 2017, one service purchased iPads for all contracted teaching staff and managers to be allocated personally. In each main learning centre, a pool of iPads was available for hourly paid tutors and learners to use on site. The iPads could not be managed through the council's main network or the separate teaching networks.

The Lightspeed device management system was deployed on all of the iPads but with different protocols for staff and learners. The system allows automatic deployment of apps in a controlled manner. It also allows the deployment of links, for example to learner surveys.

The system allows for the tracking and resetting of devices so that if they are stolen, they cannot be successfully reset and used by the person who has stolen them. One staff iPad was taken from a filing cabinet in an office. When the loss was identified, the IT technician was able to track the location of the device and see that the person who had it had tried to set it up for themselves. He was able to send a message to the iPad to display a message on the screen and to screech. This is a very loud noise and indicates that the device is stolen and being tracked. The next morning it was returned to the office.

Link 8: [Lightspeed](#)

Link 9: [Meraki](#)

For further links to resources on mobile device management systems see:

- [Ten best mobile device management systems](#)

4.6. Virtual Learning Environments and Classrooms

4.6.1. Description of area – why it is important

A virtual learning environment or classroom can be used to allocate and submit work and assess a course. There are a number of popular systems that are widely used in education settings including:

- **Moodle**, an open source product which is free and constantly updated and developed with feedback from the user population (see [Link 10](#))
- **Google Classroom**, part of GSuite for Education and integrated with the other products available as part of the package (see [Link 11](#))
- **Microsoft Teams**, designed more for business but can be used integrally with all of the products which form the Office 365 system (see [Link 12](#))
- **Blackboard**, a commercial product which has been used for many years (see additional resources below).

4.6.2. Points to consider

The types of feature that you may find in a virtual learning environment or classroom include:

- Repository for all types of resources and media from documents, spreadsheets, slides, audio, video and others
- Timed availability of resources, activities and materials to learners
- Submission of learner work
- Feedback
- Quizzes and assessments
- Progress tracking
- Forums for synchronous and asynchronous discussions
- Separate classes, organised into a structure to suit the organisation
- Links to calendars
- Ability to control who is allocated to each class or group
- Scanning for plagiarism
- Accessible layouts and presentations
- Customisable
- Scalable
- Secure
- Integration with other systems used by the organisation
- Links to parents, carers and guardians where relevant.

You should also consider what the learners already have access to and may be familiar with.

Tips from the sector:

Although GSuite for Education has many very positive attributes and features it can be challenging to successfully link to some MIS systems. Managing courses, learners and other data can be challenging. There are some additional add-on modules that can be purchased. These may be worth exploring further and you may wish to use a Google partner to help you to do this and to set them up. They can be a cost-effective solution to improving the way in which GSuite for Education works for you.

4.6.3. Links and references

Annex 1: [Learning Technology Evaluation TEMPLATE](#)

Annex 2: [How to Guide for learners \(GSuite for Education\)](#)

Annex 3: [How to download a Word document \(Google classroom\)](#)

Annex 4: [Example resources from GSuite for Education](#)

Link 10: [Moodle](#)

Link 11: [GSuite for education](#)

Link 12: [Using Microsoft Teams for education](#)

For further resources for virtual learning environments and classrooms, see:

- [Blackboard](#)
- [Techradar article on best online learning platforms](#)
- [Article on making online classrooms engaging](#)

4.7. Videoconferencing systems

4.7.1. Description of area – why it is important

Videoconferencing systems can be used to run online face-to-face meetings, for one-to-one or larger groups and they can also be used to deliver learning online as a virtual classroom space. They have been available now for many years but in recent times have become much more reliable, feature-rich and accessible.

When selecting a videoconferencing system you need to be mindful that facilities are regularly updated and so any comparison you find online may be out of date. You should check them out for yourself from the most recent information, which you will find on the product website.

The main ones you are likely to find used for teaching are Zoom (see **Link 13**), Google Meet (see **Link 14**), Skype, Big Blue Button (see **Link 15**), Microsoft Teams and WebEx. However, there are many others you could choose from. You may wish to have a mixed economy with some staff using different systems. For example, some tutors may not wish to use breakout rooms and if you are using GSuite, then the free version of Google Meet is likely to be adequate for your needs. However, you may also find that tutors teaching something like a modern foreign language may make excellent use of breakout rooms and need to have a longer session time. In this instance, you may feel that for some staff a

subscription for Zoom is a better way of working. By combining systems, you may be able to ensure a more cost-effective solution.

4.7.2. Points to consider

When choosing which system/s to use you should consider the following:

- Does your LA or college have a preferred system and contract in place?
- Does your LA have a policy not to use certain systems?
- Cost and the differences between free and paid options
- How many participants there can be on a call
- The security of the system and management of who can access sessions, including the default settings of the system and how they can be changed and managed
- Whether breakout rooms are available and how easy they are to set up and use
- Integration with other products and systems you use
- How easy scheduling and sharing sessions is
- Accessibility features
- Ability to use additional cameras, audio etc and whether you might need this
- Whether you can use blurred or personalised backgrounds
- Whether the sessions need to be and can be recorded and made available
- How well the system works on different devices such as laptop, tablet or phone
- Is there a polling facility and how easy is it to use?
- Is there a chat facility?

4.7.3. Links and references

Link 13: [Zoom](#)

Link 14: [Google Meet](#)

Link 15: [Big blue button - open source](#)

For further resources on videoconferencing systems, see:

- [Skype](#)
- [Article on when to use meetings vs webinars](#)
- [Comparison of Google Meet and Zoom](#)

4.8. E-portfolios

4.8.1. Description of area – why it is important

An e-portfolio allows learners to collate and organise all of their learning into a single place. This may be to collect their learning only or it may be to provide evidence of achievement.

When determining which e-portfolio you are going to use, you need to start by determining the exact purpose of the e-portfolio.

An e-portfolio, used well, enables learners to take better ownership of learning. This does often require the tutor to change their mindset from being in total control to sharing responsibility with the learner. (see [Link 18](#)).

An e-portfolio may be used on its own or it might be used in conjunction with paper-based materials or artefacts created as a result. For example, for a jewellery making course, the learner might gather together their ideas, designs, materials relating to techniques and photos of finished products into the e-portfolio. There will also be finished pieces of jewellery to supplement it.

A further benefit of using an e-portfolio is that if there is an unexpected event such as fire or flood or a global pandemic, the work is not lost or in a place where you can no longer access it. You and your learners can pick up the recording, managing and tracking of progress and evidence of learning from where you left off. You are also no longer vulnerable to learners just losing all of their work.

4.8.2. Points to consider

The considerations when choosing an e-portfolio are:

- What types of learner is it suitable for? For example, some are designed to be used by apprentices and may be structured around apprenticeships whereas others may be more flexible and adaptable.
- Can you upload qualification or course specifications to guide the mapping of the qualification or course or do you need to input them yourself?
- Costs: some-portfolios are free, although others have a cost per learner
- Does it allow a two-way dialogue between learner and tutor?
- Does it allow you to track the progress, of individual learners, and overall, by course? What tracking do you want to be able to do? Does it allow the learner and tutor to cross-reference across multiple criteria?
- Can learners work collaboratively?
- Can learners personalise the look and feel of their portfolio?
- How easy and intuitive is the portfolio to use?
- Does it integrate with other systems you use? For example, Moodle (virtual learning environment), Big Blue Button (videoconferencing) and Mahara (e-portfolio) (see [Link 17](#)) are all open source and can be integrated together. Similarly, GSuite is an integrated system from which you can use Sites (see [Link 16](#)) for the portfolio.
- For apprenticeships, does the product of the e-portfolio feed into the end-point assessment process, where appropriate?
- Can you use on multiple types of device such as laptop, tablet or phone?

4.8.3. Links and references

Link 16: [Google article on using sites for an eportfolio](#)

Link 17: [Mahara](#)

Link 18: [What you need for excellent eportfolios - article](#)

For further resources on e-portfolios, see:

- [Article on creating an eportfolio with Google sites](#)
- [Quals Direct](#)
- [Folio spaces](#)
- [One file](#)
- [Smart Assessor for apprenticeships](#)

4.9. On-line assessment tools

4.9.1. Description of area – why it is important

Formal, remote online assessment is in its infancy. Although it is relatively straightforward to set up a simple multiple-choice assessment or some form of quiz to undertake simple formative or summative assessments for a course, it can be more challenging to undertake other forms of assessment online. Too often, multiple-choice assessment on- or off-line is overly simplistic and fails to properly test knowledge.

Videoconferencing can be used to undertake a professional dialogue, often an important element of assessment for apprenticeships and other portfolio-based qualifications and learning aims.

Awarding bodies are offering some online assessment and this is likely to expand. For some time, some awarding bodies have made online assessment available on site with onsite supervision and invigilation. However, one of the key issues for the expansion of formal assessment is the issue of remote invigilation for learners being assessed from home. Invigilation of functional skills tests in the workplace is causing delays for apprentices during the pandemic. It is likely that further progress will need to be made on this issue through awarding bodies and Ofqual. (see **Link 19** and **Link 20**).

4.9.2. Points to consider

- Does the tool allow you to set up your assessment in the form you want?
- Are the learners sufficiently familiar with the tool to use them for a formal assessment?
- Can you ensure fairness and consistency of outcomes from your online assessment?

4.9.3. Links and references

Link 19: [Government update on exams and assessment in 2021](#)

Link 20: [Article on the impact of online assessment - July 2019](#)

For further resources on online assessment, see:

- [Article – 9 ways to assess online learning](#)
- [City and Guilds - end point assessment tests at home](#)
- [FE Week article on delays to functional skills testing](#)
- [FE Week article on Ofqual consideration of online tests for 2021](#)

4.10. Chatbots

4.10.1. Description of area – why it is important

A chatbot is essentially an automated route to an FAQ and can increase the usage of your FAQ's. A chatbot may be a useful tool to support a helpline for staff and learners. It might be used for various helpline facilities, but in particular to provide technical support answers when learners and staff are trying to access their learning.

There are chatbots of varying sophistication and if you are considering implementing one, they can be fairly straightforward to set up.

There are various free chatbots available for you to use so it doesn't have to be expensive to get one up and running.

4.10.2. Points to consider

When considering implementing a chatbot the key questions are:

- What questions do I want to answer?
- Can the answers generally be easily documented so that the bot can answer the question?
- How will the information for the chatbot be provided and kept up to date?
- How will you manage queries that the bot is unable to?
- Are there any restrictions on your network that might stop you being able to run one?

4.10.3. Links and references

Link 21: [Blog on creating a chatbot - Nov 2019](#)

For further resources on creating a chatbot, see:

- [Tutorial to build a chat bot](#)

5. Connectivity

5.1. Description of area – why it is important

Learners can only access online learning if they have internet access. This might be via broadband or using mobile data. The quality of the internet access is also very important to the quality of the experience for video-based learning. It may be less important for other text-based activities.

5.1.1. Digital poverty and differentiation of access

Some staff and learners experience digital poverty. This is an inability to access and use technology, resulting in exclusion from the potential opportunities available, due to a lack of access to one or more of:

- equipment
- internet
- digital skills.

At the beginning of the global pandemic, the scale of the issue of a lack of access to the internet emerged and came into sharp focus. Prior to the lockdown, staff could access the internet through work and in other free access locations outside the home if necessary. Access to the internet for learners was most likely via Wi-Fi access through libraries and other public buildings, adult learning centres, public transport or other public spaces with free access such as shops, cafes and restaurants.

During lockdown, these previous sources of access to the internet became unavailable. They are now becoming available again in some places, depending on local restrictions.

Broadband quality is dependent on where people live, and often rural areas are at either end of the spectrum. They are often the last to be upgraded but when they are, the technology may have moved on, giving them an even better supply. However, it is worth considering that, **if you are operating in an area where there is a poor broadband connection, then people may struggle with video-based online learning.**

Most mobile data is 4G or 5G and there is coverage of approximately 90% of England for 4G. However, rural areas are most likely to have poor coverage and to have “not spots”. A not spot is an area within an area of coverage that doesn’t pick up a signal, usually due to the local geography.

5G is the newest technology and has only been rolled out since May 2019 and is now available in 98 towns and cities across the country. However, again coverage is not yet available in rural areas.

For the purposes of online learning 4G is sufficient, whereas 3G almost certainly would not be. Therefore, for delivery in urban areas it is likely that broadband and mobile networks will provide good coverage but that rural areas are much more unpredictable.

Mobile data may be included in a contract for a mobile phone and increasingly, unlimited data contracts are available. However, they are costly and on more limited contracts there may be insufficient data for an individual to access or deliver online learning this way. Some learners and staff use pay as you go data, and this may be prohibitively expensive for them to use for this purpose.

These are factors to be considered in the design of your online learning programmes both for those learners who have access to broadband and/or mobile data and those who you may need to provide access for.

5.1.2. Funding options – internet access

For services that are working with young people aged 16-19 (up to 24 for high needs) on a study programme, there is an expectation that the young people will be able to access the internet and that this should be provided using the discretionary bursary funding provided. The most likely way for this to be achieved is via a dongle, paid monthly, with a data allowance. Early on in the lockdown period, these became very costly, but prices appear to have returned to more normal levels. However, as these are often on a short-term minimum period of six months, they are still likely to be more expensive than the monthly payment for a two-year contract.

For adults, it is worth exploring other potential sources of funding for internet access. For example, some combined authorities have projects and funding to support the most disadvantaged residents to access the internet.

5.1.3. Use of public WIFI

It is also worth exploring partnerships with other organisations. For example, you may find that there are local buildings with access during the pandemic where learners can access public Wi-Fi. These might include places such as the local supermarket, pubs or others.

However, there are risks associated with using public Wi-Fi, and both staff and learners should be made aware of these. Some of those risks can be mitigated by using a Virtual Private Network (VPN) service although there is a cost for the better ones. A VPN is an arrangement whereby a secure, apparently private network is achieved using encryption over the internet. The key risk associated with public Wi-Fi is a potential lack of encryption of your data or old encryption protocols, making it susceptible to hacking. Learners should be made aware of the risks and this should be part of your information to learners about keeping safe online.

Advice and tips:

- If connectivity is reduced or goes completely during an online class, staff and learners should understand how to respond. For example, if a connection is poor during a video-based class, you may find that if all participants turn off the video, the class can continue. You may find that you need to use messaging or chat to let learners know.
- Alternatively, it may be possible to establish a wired connection instead of relying on Wi-Fi. This can usually be achieved by running a network cable from the router through to the device. Not all devices are able to accept a wired connection so this will be dependent on the equipment. Where this is not available on your device, you may be able to overcome this with a USB to ethernet adapter, which can be purchased very cheaply online.

5.2. Points to consider

When considering connectivity issues providers should ask:

- Do learners have sufficient access to the internet?
- Can learners afford the data required to access online content?
- Have you met the requirements for connectivity for young people?

- Have you identified public access options for learners?
- Do learners understand how to use public Wi-Fi safely?
- Have you provided learners with information about what will happen if the internet goes down during an online session?
- Do staff and/or learners have the option to create a wired connection to improve connectivity?

5.3. Links and references

Link 22: [Article on public wi-fi security threats](#)

Link 23: [Review of the best VPN services](#)

For further resources on connectivity, see:

- [Article from Norton on how to stay safe on public wi-fi](#)
- [EE](#)
- [Vodafone](#)
- [3](#)
- [O2](#)
- [BT mobile](#)
- [Sky mobile](#)
- [Voxi](#)
- [Article - Introduction to computer network adapters](#)

6. Technological solution

6.1. Description of area – why it is important

Before you can determine what your hardware requirements are for staff and learners, **it is important to determine the software systems you will be using and from that, understand the specifications of the hardware required.**

The hardware required will be some or all of:

- Desktop computer
- Laptop computer
- Tablet
- Phone.

Many of the software systems in use now are web-based and so have little or no installation on the device itself.

The main operating systems you are likely to select between are:

- Windows 10
- MacOS
- ChromeOS

Each of these has its own strengths and weaknesses and you should ensure that whichever you select is able to implement any software plans you may have. Two articles considering the relative features of each system are included in the additional resources below.

Different local authorities and organisations have different purchasing and procurement requirements. These are discussed in [section 10](#) of the document. Regardless of these rules it is important to understand the relationship to corporate IT teams and whether they may be able to support your decision making.

6.2. Hardware/devices

You can only access your chosen software systems with appropriate hardware.

6.2.1. Staff

How your staff interact using digital technology will normally be driven by your local authority's policies and practices, and it is important that you follow these to protect both your service and your staff. Where you have more independence, it is essential that you make sure that you are fully compliant with all legal requirements for infrastructure. It is not the intention of this document to detail those fully.

Staff equipment might be their own, or it might belong to your service or the local authority.

For staff to work effectively and deliver learning using the software systems, they are likely to need access to a desktop computer, laptop computer or tablet. It is unlikely that a member of staff could deliver a course effectively with only a smartphone. However, they may need a smartphone to supplement other devices.

It is likely that a tablet will be less effective than a laptop or desktop computer, but it may be adequate in some situations. However, you also need to make sure that, if working from home, staff are able to set up an appropriate work area. The guidance is available below ([Link 25](#)).

You need to consider:

- whether the member of staff is using your equipment or their own
- how the equipment is kept secure, both physically and for data security purposes
- how the home working space is set up
- whether the equipment is fit for purpose for the software solution(s) to be used.

6.2.2. Learners

From the experience of the pandemic in 2020, learners have used a variety of equipment to access their learning including smartphones, tablets, laptops and desktop computers. The equipment learners can access should be taken into account when planning a learning programme for them.

Learners may have access to their own equipment and this is challenging to control. However, you may wish to give learners information about the minimum equipment required and the ideal solution for their learning.

Alternatively, learners may not have access to any appropriate equipment.

For **young people aged 16-19** (24 with high needs), you are expected to make sure that you can loan them equipment to participate in their learning in full. You can use your discretionary bursary fund to provide financial support to help learners to overcome specific barriers to participation so that they can remain in education. For those learners who are not included in this category, you may find that there are other local sources of funding to support them and it is worth consulting your schools' education team about this, as they may know of alternative sources of equipment.

For **adults**, you may need to find alternative sources of equipment. If you are in a combined authority area, you may find that they have identified some funds to support adults to study.

If you are lending equipment to learners, it is important to put in place a **loan agreement** with each learner. This should be a document agreed by your legal team and signed by both parties so that the terms of the agreement are clear to both parties. This is also discussed in the policy strand of the project. There is an example loan agreement that has been shared by Kingston's service in **Annex 5**.

In determining the equipment you might make available to learners, you should take into account:

- specification, including processor, operating system, screen size, memory and other factors
- connectivity to the internet and how this can be achieved. For example, can you connect using a dongle?
- accessibility features for those who require them
- protection from theft
- software to be used on it
- reliability and how robust the equipment is likely to be.

6.3. References and links

Annex 5: [Kingston - Equipment loan Use agreement – TEMPLATE](#)

Link 24: [Government guidance on maintaining provision in Autumn 2020](#)

Link 25: [Health and Safety Executive toolbox on working safely from home](#)

For further resources on hardware and devices, see:

- [Guide to purchasing a computer](#)
- [Which article - October 2020 - comparison Mac, Windows and Chromebook](#)
- [Digital trends article - April 2020 - comparison MacOS, Windows and Chromebook](#)
- [BBC webwise - what computer do I need?](#)
- [Which article on choosing the best mobile phone](#)
- [Which article on choosing the best tablet](#)

7. Communicating with learners – advice, website

7.1. Description of area – why it is important

Learners need regular communication so that they know what is happening within the service. For example, how do local lockdown restrictions affect them attending their course. They also need to understand:

- what equipment and web-access they will need
- how to use the equipment
- what options are available if they don't currently have the equipment or access to it.

7.2. Points to consider

Firstly, you need to consider whether the method of communication could put learners at risk. For example, although learners may themselves get together to form a WhatsApp group, you need to form a view as to whether or not staff should be part of such a group. There are some safeguarding issues in setting up and running WhatsApp groups including GDPR issues and issues around the terms of use of WhatsApp. You also have no recourse to legally access the information held on it. You would also become responsible for any inappropriate behaviour, such as stalking, of one learner by another.

Counter to that, is the access learners have to alternative forms of group communications.

You may wish to consider these other options:

- Using your learner intranet
- Using your website
- Some MIS systems have the facility to do group email and/or text contact with learners
- Using the contact available via your virtual classroom or virtual learning environment
- Using email via a blind copy to protect the privacy of your learners
- Facebook groups
- Bulk text services.

In addition, you need to consider:

- What is the purpose of the communication?
- Who are you communicating with? All learners, a sub-set of learners, a class or an individual?
- What type of communication would be best? For example, would an email, text, chat or video call work best?
- How often do you want to communicate?
- Do you need learners to respond to the communication?

- How will you understand the learner's response to the communication, it can be harder to evaluate body language online?

7.3. Working with partner providers and sub-contractors

You should agree with any partners the standards of communication you expect. You should agree how methods of communication might be approached and, where there are common communications, how they will be managed.

7.4. Links and references

Link 26: [Article on why schools should not use WhatsApp](#)

For further resources on communicating with learners, see:

- [Staff WhatsApp groups in schools](#)
- [Five best bulk texting services](#)
- [Best bulk text services](#)
- [Article on pros and cons of Facebook groups](#)

8. Communicating with staff

8.1. Description of area – why it is important

Effective communication is key in normal day-to-day running of providers. The pandemic has made this even more critical to the success of provision. The benefits of effective communication with staff include:

- provides clarity of purpose and intent so that staff understand the current situation and what is required of them
- helps to build teamwork and make staff feel part of a cohesive organisation
- helps to support the mental health of staff, for example for those who live on their own lockdown is particularly isolating and team or service wide meetings or other communications may be the only contact that those individuals have with others.
- saves time and helps to get things right first time
- improves provider performance overall.

8.2. Points to consider

You need to consider:

- What medium you wish to use, e.g. Zoom, teams, intranet, email or other system
- What equipment is required for the communication to take place
- Whether staff know how to use the system
- What the purpose of the communication is

- How often you will communicate with staff
- How you will understand the response of staff to the communications, for example it can be harder to read body language in a video meeting than face to face.

8.3. Working with partner providers and sub-contractors

You need to consider how you communicate with partner providers and sub-contractors and their staff. Considerations should involve a dialogue to jointly determine:

- what the purpose of the communications will be
- who will you communicate with, just managers or other staff too?
- how often the communications will happen
- the medium you will use, e.g. Zoom, email etc.
- the support your partner provider or sub-contractor will need to enable this to take place.

Case study: Newcastle City Learning – staff communication

When lockdown was announced in March 2020, the Service Manager felt that it was more important than ever to maintain regular dialogue with staff to help them to feel less isolated and more supported and informed. Newcastle City Learning already used Microsoft Office 365 and, in particular, was well-established in the use of Microsoft Teams across the service. Each half term, a series of staff briefings was already held, and staff had the option of attending in person or attending online via a Teams meeting.

At lockdown this became a weekly Teams live event to which all staff were invited. The session was recorded so that staff could catch up later if they wished. Staff regularly fed back how much they valued this weekly “get together”.

Managers added to their standard meeting schedule, regular online informal meetings and get-togethers with their staff. The frequency of most meetings increased both because of the pace of change and the volume of work to be done but also to reduce social isolation and improve morale.

9. Support for staff and learners

9.1. Description of area – why it is important

Staff and learners will encounter both technical difficulties and issues arising from a lack of digital knowledge and skills. In order to either deliver or participate in online or blended learning these need to be overcome.

9.2. Points to consider

In considering how best to support staff and learners you need to consider:

- **Who will be supported?** For example, staff and/or learners using equipment belonging to the provider or will you provide wider support? Perhaps staff are accessing corporate systems via a portal such as Citrix and you need to consider

whether you would support this. Will the staff and/or learners of partners or sub-contractors be included?

- **What will be supported?** For example, you might support learners with software access issues on any equipment but not hardware issues on their own equipment
- **How will the support for hardware be provided?** You might consider a series of FAQs, chatbots to support the FAQs, technical support helpline and/or a software support helpline. You may find that hardware and other technical support for staff is available from the corporate helplines which may already be in place. Can these be extended to your learners? If not, how can they be supported?
- **How will support for software be provided?** For example, if a learner has no knowledge of how to use software, do you have a course for them to take or other support such as online videos? It may be simply that a learner has lost the code to access a particular class and this can easily be provided to them via either a helpline or FAQs.
- **When will support be available?** For example, your FAQs and chatbot can be available via your website or learner intranet 24/7. For a telephone helpline, you need to determine the hours it is available, particularly given that learners may wish to access their online learning at all hours of the day and night.
- **Where will the support be accessed from?** You may be able to use internal support, but you may also wish to procure an external partner to offer this support. However, the support is offered, you need to have a formal agreement in place which should:
 - detail what is to be included
 - identify the standards of service to be delivered, including timescale and quality
 - who support is available to and will learners with partners and/or sub-contractors be included?
 - be drawn up, or at least checked, by your legal team
 - be signed, dated and formally agreed to.

10. Procurement, outsourcing and service level agreements

10.1. Description of area – why it is important

Digital technology and software systems can be an expensive investment and it is important to make the best use of public funds you can. Therefore, ensuring the best value for money should be a priority.

10.2. Points to consider

Your organisation will have established procurement processes that you will be required to follow. Therefore, it is important to make sure that you understand them, as there are differing levels of autonomy in each organisation. You should also consider whether:

- colleagues in your corporate procurement team and/or IT teams already have partnerships in place that result in good value deals being available to you

- equipment purchased meets your policy expectations and is compatible with existing systems
- corporate teams working in the local authority and/or with schools have already negotiated good value deals with mobile data providers. Early in the pandemic prices quoted were very high, but these returned to more reasonable levels by the summer.

10.3. Working with partner providers and sub-contractors

You need to ensure that partners and/or sub-contractors understand your requirements and expectations. If necessary, you may need to negotiate a variation to your contract or service level agreement with them to make sure that your funds are used in the best way possible to support learners.

You may also wish to consider whether or not your partners or sub-contractors need additional funds from you or support to understand opportunities for free or subsidised equipment in order to meet your minimum standards.

11. Summary of key points

- At lockdown, staff tried a range of systems for delivering online learning. As time has progressed, providers need to make some strategic decisions about what they will use. **There is no single correct solution for the combination of systems to be used.** The decisions will depend on the history of the provider, the current circumstances, curriculum, staff and learner expertise and equipment alongside the local authority requirements.
- **Your local authority IT team may be a useful source of support and advice.** They can make sure that your decisions are in line with corporate policies and procedures, so it is a good idea to get to know the key people.
- The **requirements for data protection are laid down in law** and it is incumbent on providers to ensure that the systems used meet them.
- Consider how any **partner providers and/or sub-contractors can be included** in your decision making and implementation processes
- Make sure you **communicate effectively with staff and learners.**
- The most important decisions you will make are which main platform(s) to use for your **virtual classroom and videoconferencing activities.**
- If you intend to run a device loan scheme for learners, you need to have a robust **loan agreement** in place.
- If you need to provide **internet access** for your learners at home, shop around for the best deal.
- The **selection of hardware should follow the selection of software** to ensure it has the appropriate specification for your needs.
- Make sure the **hardware requirements for learning are clear to your learners** and that you are able to support them if they are unable to meet those.
- You may be able to find **funding support for purchasing equipment** for learners to borrow or you may find a scheme that allows them to borrow from elsewhere.

- It is important to provide **FAQs, a helpline and possibly chatbots** to help learners to overcome technical challenges.

12. 10 Tips from the sector for the sector

1. Build from what you have
2. Take your staff with you
3. Test and review systems with roll out and beyond (build in time delays initially).
4. Build on staff's skills by using existing staff who are IT savvy to deliver training and development.
5. Set up a student buddy system so students support each other
6. Develop a group of digital champions to support staff
7. Systems should be easy to navigate and support users with weakest IT skills and most barriers
8. Build in feedback systems
9. Use web-based platforms as they can be accessed from tablets and phones
10. Consider working with partner organisations such as the local university to open up your offer more widely.

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Margaret Joojo	Hounslow Adult and Community Education	Service Manager

14. References and Links

14.1. Summary of links within this document

Link 1:	Ufi/HOLEX Digital ACE survey report May 2020
Link 2:	Recording of Digital ACE Underpinning Technology webinar
Link 3:	GDPR - government site
Link 4:	The Information Commissioner's Office guide to GDPR
Link 5:	Article - 6 most common ways in which data breaches occur
Link 6:	Government publication - minimum cyber security standard
Link 7:	https://www.jisc.ac.uk/eduroam
Link 8:	Lightspeed
Link 9:	Meraki
Link 10:	Moodle
Link 11:	GSuite for education
Link 12:	Using Microsoft Teams for education
Link 13:	Zoom
Link 14:	Google Meet
Link 15:	Big blue button - open source
Link 16:	Google article on using sites for an eportfolio
Link 17:	Mahara
Link 18:	What you need for excellent eportfolios - article
Link 19:	Government update on exams and assessment in 2021
Link 20:	Article on the impact of online assessment - July 2019
Link 21:	Blog on creating a chatbot - Nov 2019
Link 22:	Article on public wi-fi security threats
Link 23:	Review of the best VPN services
Link 24:	Government guidance on maintaining provision in Autumn 2020
Link 25:	Health and Safety Executive toolbox on working safely from home
Link 26:	Article on why schools should not use WhatsApp

14.2. Further links for government guidance: (Frequently updated)

- Advice on what colleges and other providers need to do during the coronavirus (COVID-19) outbreak. <https://www.gov.uk/government/collections/further-and-higher-education-coronavirus-covid-19>

- Advice on face coverings in education:
<https://www.gov.uk/government/publications/face-coverings-in-education>
- Guidance on Coronavirus (COVID-19) home test kits for schools and FE providers: <https://www.gov.uk/government/publications/coronavirus-covid-19-home-test-kits-for-schools-and-fe-providers>

14.3. Links to the Local Digital Skills Partnerships, where available:

- [Lancashire Local Digital Skills Partnership](#)
- [Heart of the South West Local Digital Skills Partnership](#)
- [West Midlands Local Digital Skills Partnership](#)
- [Cornwall & Isles of Scilly Local Digital Skills Partnership](#)
- [Cheshire & Warrington Local Digital Skills Partnership](#)
- [South East Local Digital Skills Partnership](#)

14.4. Digital ACE information and strands

Funded after the establishment of a partnership between HOLEX and Ufi VocTech Trust, the Digital ACE project enabled HOLEX to review and collate best practice and recommendations across key areas of online provision.

Digital ACE has been designed to support ACE providers on the next stage of their technological journey and help them develop their digital capability so that they can enhance their offer to students while still maintaining their learner centred and high quality approach to adult learning.

The various Digital ACE resources and materials are available via the [Digital ACE page](#) on the HOLEX website.

Digital ACE Strand	Content of materials
Policy	Guidance on how to develop a digital policy and the areas which should be considered.
Safeguarding & Prevent	Guidance on what to consider for moving effective Safeguarding and Prevent practice online.
Developing Materials & Resources	Guidance to support the training and development of staff in producing and adapting materials, live streaming lessons, use of video and YouTube recordings, online presentations and webinars, use of externally prepared materials, assessment and learner engagement.
Quality Assurance	Guidance around quality assurance for online adult education, including existing externally produced materials and in-house provision.

Supporting Low Skilled Learners

Guidance on how best to determine an online offer which enables providers to engage and induct learners with low level skills.

Underpinning Technology

Guidance around the most effective and cost efficient underpinning technological solutions for adult learning, managing a service in this context, connecting and integrating with learners and communicating with staff.

15. Annex list - Good practice examples and templates for you to adopt and adapt

Annex 1: [Learning Technology Evaluation TEMPLATE](#)

Annex 2: [How to Guide for learners \(GSuite for Education\)](#)

Annex 3: [How to download a Word document \(Google classroom\)](#)

Annex 4: [Example resources from GSuite for Education](#)

Annex 5: [Kingston - Equipment loan Use agreement – TEMPLATE](#)