# Bridging the digital divide

Before buying technology, it's important to check (1) whether the person could perhaps benefit from funding through one of the government or local authority schemes; (2) that the right technology is being bought. At £eithChooses, we are not huge experts in technology, but we have put this paper together with some basic guidelines, to help charities, community groups, families and individuals avoid making costly mistakes, and, hopefully get access to the most suitable technology for their particular needs.

## Help with funding

It is worth exploring these avenues before buying equipment yourself. During the response to coronavirus (COVID-19) the Scottish Government Scheme (£5 million for '***Getting People Online'***) will offer an internet connection, training and support, and a laptop or tablet to vulnerable people (all ages) who are not already online. Local authorities and the third sector will lead on identifying people to receive devices, distributing them and providing training and support. Local charities and community groups can help by identifying vulnerable people and putting them forward for help https://news.gov.scot/news/getting-people-online

The UK government is funding a scheme to provide tablets and internet access for those who are digitally excluded**:** *https://www.goodthingsfoundation.org/devicesdotnow*. It works through *https://www.onlinecentresnetwork.org*, including 9 centres in Edinburgh (though it is unclear how much help some of them could/would actually provide).

### Funding for education

The Scottish Government is providing additional funding for disadvantaged pupils, to address digital exclusion. From *https://www.gov.scot/news/schools-to-re-open-in-august*:

> *'To maximise the time pupils can have in the classroom and support children in the new model of schooling, including digital home learning, the Scottish Government is investing £9 million for 25,000 laptops or tablets – with internet access provided – for disadvantaged children as part of the first phase of provision to support their learning outside school. Working with local authorities, a second phase of investment will see further funding to support digital inclusion.'*

There will also be flexible use of the Pupil Equity Fund, specifically for hardware for pupils: See https://www.tes.com/news/pupil-equity-funding-revealed-next-two-years and https://www.gov.scot/publications/pupil-equity-funding-national-operational-guidance-2020.
All this funding will be accessed through the schools, so it is important to contact your Head Teacher as soon as possible, before the summer break if possible.

Advice and help with referral to these schemes might also be available through social workers.

## What technology to get?

As ever, there is no 'one size fits all'. And, as ever, 'you get what you pay for'. Before rushing to buy the cheapest technology, check out whether it will do what you need to do - there is no point in buying something very cheap that doesn't. For example, there are some very cheap tablets available but they may not be capable of accessing the systems that the schools use.

You also – vitally – need to check that the person who needs to use technology has access to the internet.

## Access to the Internet

A tablet or laptop without access to the internet is really no use. So any 'package' to get a school pupil or a family online may need to include provision of internet access.

Apart from free use of internet in a public place such as school, library, community centre or cafe – which is currently not possible, and may not be very secure when it is possible – there are basically three ways to access the internet:

1. Broadband connection installed in the home – usually paid for monthly, possibly the most expensive option.
2. Use of the phone network (3G or 4G) (a) via a phone, or (b) by using a nearby phone as a 'hotspot' for your tablet or laptop.
3. Use of the phone network using a SIM card with data either (a) directly into your tablet, or (b) in a separate USB 'dongle' for a laptop, or a mobile/portable 'mifi' unit, for a tablet or laptop.

## *How do these compare?*

1. Fixed-line broadband in the home is probably the most reliable and possibly the fastest, and you can get deals wrapped in with your home phone line and / or your TV. But sorting that out can take a bit of research and a bit of hassle, and not all homes can afford to install broadband and pay monthly charges.

2a. Using a phone is OK but most phones have small screens which may not be ideal for detailed work, and many phone contracts or pay-as-you-go charges do not cover very much data use (i.e. how much internet you can 'consume'), so you can run up big monthly phone bills unintentionally, or have to keep 'topping up'.

2b. Using someone else's phone as a hotspot is all very well but there are drawbacks – what happens if a child uses up all the month's data allowance on Mum's phone, on a long session? What happens if Dad leaves the house for work, with his phone, when the child needs to connect for a play or work session?

3a. A possible alternative to a full-scale broadband connection for the home is to buy 'mobile broadband' in the form of a preloaded SIM card for your tablet. **But to be able to do this, you need to be sure that your tablet is the sort that can take a SIM card. Tablets do not all offer this facility and the ones that do tend to be a little dearer. So don't buy a tablet until you have sorted out what internet access you are planning to use.**

The range of SIM choices (from phone network operators and elsewhere (e.g. Amazon) is rather bewildering. This is a useful guide: https://www.tigermobiles.com/blog/preloaded-data-sim

Basically, you only need data, not phone calls and texts, so look for a 'data SIM' or a 'data-only SIM' (or some suppliers might call it a 'tablet SIM card') They will be called 'pay as you go' but you probably want one with a single upfront payment (rather than one that needs constant topping up). It will come preloaded with a set amount of data and will expire after the stated time frame. The expiry date can be anywhere between 30 days and 12 or 24 months after activation. For example, the **Three pay as you go trio data SIM preloaded with 24GB of data** lasts 24 months before the data expires if it has not been used. (This one costs £44).

3b. Another alternative, if you have a laptop or a tablet that doesn't take a SIM directly, is to use 'MiFi' in the form of a small separate device (with a SIM card inside) that creates a localised Wi-Fi signal giving 'mobile' or 'portable' wifi access to the internet. This could be a USB dongle to plug into a laptop, or a no contact 'portable travel wifi hotspot', often otherwise known as a 'mobile broadband router'). These can be purchased easily from Amazon or elsewhere online and cost approximately £45 (plus the SIM card itself which is inserted inside it, another £44). For example:

This can be a very good option if you have a device that does not take a SIM directly. However, a disadvantage of these is that you need to charge the wee device and keep it charged up or it may run out on you just when you need it most. Also, as a 'small separate device' - they are rather too easy to lose, so maybe not ideal in a busy household with kids… And you may have to keep connecting and reconnecting to the internet with this device, if you are not using it constantly.

### Best Bet?

So, all in all, charities wishing to support their service users by providing technology to allow them to get online might be best advised to buy a tablet that takes a SIM card directly, along with a 'preloaded' data only SIM card. This allows for communication functions via email and internet messaging eg. Whats App, and Messenger, as well as social media, while also facilitating access to information and to Apps that are needed for education.

# A basic 'spec'

For school children trying to follow and submit school work – check first with the child's own school what technology they recommend for their pupils.

Some schools use the online learning platform Glow which provides a range of learning materials in each curriculum area (and/or other platforms).

Edinburgh schools all seem to be going their own way – there is no one standard piece of recommended hardware. However, it seems that most schools seem to use Microsoft OneDrive so pupils need to be able to access that App (or Microsoft Office, which allows use of free online versions of Word, Powerpoint , Excel etc.) Some schools are doing interactive teaching and learning and require access to Microsoft Teams or Google Classroom Apps. Laptops will be able to offer these, but if thinking of buying a tablet, try to make sure it is capable of accessing such Apps.

The school should give individual pupils a log-in and offer lots of support to get them online and using this software, so families are not necessarily left alone to figure this out on their own.

We asked the Director of CALL Scotland (Communication, Access, Literacy and Learning) at Edinburgh University for some advice about tablets and laptops, very informally, and this was what he said:

> *Some schools and local authorities are getting Chromebooks but I wouldn't. You can get them cheap but they're nasty, and a decent machine costs almost as much as a Windows laptop. Light, good battery life, quick to boot up, but too many things that don't work reliably. I'm not sure about Androids…Local authorities tend to avoid Android because they are hard to manage – too many devices, too many variations on the OS, and I believe there are security questions. But maybe OK for home use. I think iPads are the most useful personal technology for children and young people, in general.*

### Tablets

Tablets tend to come in two screen-sizes: standard (about 25 cm /10") and mini (about 18 cm/7").

### iPads

Many schools recommend the standard Apple iPad (and there is also an iPad Mini (20cm/8" screen). These are not the cheapest tablets. The most basic model iPad usually costs £339 (John Lewis, Curry's) and upwards depending on which model/how much memory it has. It's best to try and get more than the minimum storage. (32GB appears to be the smallest Apple currently puts in its normal iPads.) More storage enables you to install more programmes and keep more and/or bigger files. This is probably essential if you are doing work involving sound or graphics. (Even though your schoolwork should be kept on the school's servers, and just accessed via the device, it is likely that you will need 'local copies' – and they can take up a lot of space.) You don't need to worry about the other sort of memory computers use for actually running programmes. Apple installs the right amount in each model of iPad, and it can't be upgraded.

**If you want to add a SIM card to provide internet access, you have to get the 'WiFi + Cellular' type, not the plain 'WiFi' type.** You can sometimes get good secondhand deals from the Apple Refurbished iPad shop: https://www.apple.com/uk/shop/refurbished/ipad (currently selling iPads at £269) and this means it will be covered by a warranty, which is important. You can sometimes get iPads from eBay with up to a year warranty for

about £150. Even cheaper if you go for an older one. However, you need to make sure it supports the latest iOS (operating system), currently IOS 13 otherwise it may not be capable of running some of the necessary Apps.

## Cheap Tablets

There are numerous cheaper tablets than the iPad but some may be a false economy because they may not do what you need. They may **say** they can access certain apps but a little research shows that people have experienced problems. For example, it's best to avoid the Amazon Fire (really designed for media viewing) whose record with Microsoft Office/One Drive/Teams is dodgy. And it's rpobably best to avoid costing less than £100.

The Android operating system is advisable/recommended. You don't need the 'latest' version (Oreo) but avoid anything before Android 8. Many/most apps that are available for Apple iPad are also available in an Android version. One important difference between Apple and Android apps however is that the Google Play App store is unregulated (nothing to stop you wasting money on rubbish apps or downloading apps unsuitable for kids) whereas the Apple App Store is closely regulated and quality controlled). The cheapest are mini size (7" or 8" screen). Again, you probably want a minimum of 32GB memory.

Amongst the cheapest tablets, most are WiFi only – there are few if any that take a SIM card directly.

Prices climb according to make, memory, most recent models and SIM card function, and some are approaching the Apple iPad price range. If you want the ability to take a SIM card, look at Samsung Galaxy (the Tab range) which is a highly reputable make, and Huawei (Media Pad M5 range) make reasonably priced tablets and get good reviews. Try Amazon for the widest range of options. (The HUAWEI MediaPad T5 – 10.1" Android 8.0 Tablet looks like a decent deal at £149.99 from Amazon.

### Laptops

Secondary school learners who need to research information online, gathering information from different sources and keeping several windows open at once and who are expected to write extended answers or essays or to manipulate spreadsheets or databases, etc. would probably benefit from having a Windows laptop rather than a tablet. (Apple laptops are more expensive.)

These can often be obtained fairly cheaply, especially refurbished ones, and may end up being cheaper than a higher end tablet. The advantage over a tablet is the larger screen and the keyboard.

Again, laptop users will be able to access the full range of software required by schools (and laptop versions sometimes offer extra features and better usability than tablet versions e.g. Windows gives the full version of Word.) For downloading, see https://www.youtube.com/watch?v=_RDxU7l05Nw. If you can't get a laptop through the school or a council or government supported scheme, check out local charities to see if a refurbished laptop might be available.

- Edinburgh Remakery – Email: hello@edinburghremakery.org.uk
- People Know How – Email: contactus@peopleknowhow.org

# SmartPhones

A smartphone is obviously not as good as a laptop or a tablet for school work, because of the small screen and keyboard, but it is better than nothing. Some smartphones have pretty big screens these days and there are some cheap ones to be had.

The Alcatel U3 2019 is pretty much the cheapest smart phone we could find, at £25 for the Pay as You Go phone, plus a SIM that provides data (staring at £10 for 3GB data (15GB offer on until July) and going upwards from there (see above for other SIM card options).

People often want an iPhone, which again is not the cheapest, and they are usually not available as Pay as you Go. It shouldn't be a necessity just for phone function. But it can make sense if you are also trying to work across with an Apple iPad. Slightly older models can be bought second hand e.g. frome. iPhone 7 for about £150 and an iPhone 6S (still supports latest iOS) for £100).

**For all purchases, you are advised to check that your supplier will provide a receipt and, ideally, a warranty. And you must keep these safely.**