

Stories from the digital divide



Foreword

Stories from the Digital Divide was intended to build upon the work of the Carnegie UK Trust and their report *Across the Divide – Tackling Digital Exclusion in Glasgow*. Since that report was published, there has been a slight narrowing of the digital divide in general; however, Glasgow still remains an area with some of the highest levels of digital exclusion in the UK.

This report has been created to show our project outcomes, and to provide a map of what is required for technology tutors working with individuals who have a disability.

All information gathered during this project has been anonymised.

It is hoped that this report is used to provide targeted training in the future which is of benefit to everyone. If you have any further questions about the information contained within, please contact Quarriers on 01505 616000 and ask for the Digital Inclusion department. You can also contact Glasgow Centre for Inclusive Living on 0141 550 4455.

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Introduction

Stories from the Digital Divide (SftDD) charts the progress of twelve individuals from Glasgow who experience digital exclusion. Over a period of nine months, these individuals took part in computer training classes which were delivered to three groups comprising four learners.

Interviews recorded their basic digital skills before the classes began, and again after the classes had finished. These digital skills assessments used the Go On UK skills framework endorsed by the Scottish Council for Voluntary Organisations (SCVO). At the end of the course, all learners were able to keep the tablets that they had used during the course, along with any remaining data on the SIM cards.

The study was formulated to discover why people in this demographic (older adult, with a disability and/or economically deprived) found themselves digitally excluded, and to determine if training and access to equipment alone would be enough for each person to become digitally included.

The training consisted of a six lesson course titled *Mastering the Tablet*, and comprised learning materials in the form of booklets alongside face-to-face tuition. Creating learning materials for the specific devices used in the classroom meant that we could fine-tune the images and text in the learning materials and avoid the commonly held view that technology training is too generic. SftDD selected the Android operating system as it was more likely that individuals in this demographic would interact with devices found in this price bracket. It is also the most widespread mobile system in use today. However, it does suffer from fragmentation, meaning that each version of the software can be visually and functionally different from other versions.

The initial group of four learners completed six two-hour classes, which ran fortnightly. The idea of running fortnightly classes was implemented to allow learners ample time to use the tablet at home between classes; however, the general feedback was that this was too long a wait for learners needing help. Additionally, technical issues meant that one learner was unable to use their tablet for two weeks. As a result of this, groups two and three attended classes weekly.

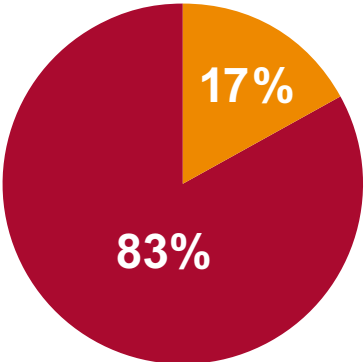
The initial two groups used Asus Zenpad tablets, with the final group using the Samsung Galaxy Tab A. This decision was based solely on availability. Training materials were updated after group two to reflect the change in device. All the tablets shared similar specifications, which included a ten-inch screen to minimise visual difficulties and a SIM card slot for mobile broadband, and were well-known brands which would provide a good user experience. Digital learners using Android systems face the lure of cheap devices which often do not have enough memory to load apps smoothly; touchscreens which do not register selections properly or look dim; and processors which cannot keep up with current software. The SftDD tablets cost around £200 each, bypassing the lower price bracket of the market and ensuring that learners had the best possible experience.

Each tablet came with a pay as you go SIM card with preloaded data to use throughout the six-week course. This meant that learners, the majority of whom do not have internet access at home, could continue to learn outside the classroom and beyond the course without the worries of a broadband contract. Learners also used Wi-Fi in the training room, thus saving data for use at home or when out and about.

With the teaching preparation, equipment and future planning for sustainability beyond the classes in place, the courses ran throughout 2016, and the outcomes of the classes were recorded.

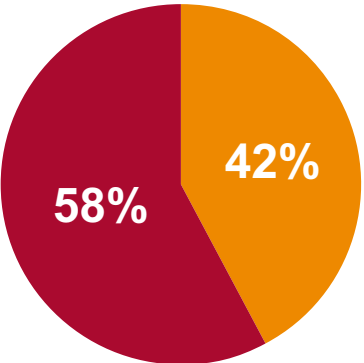
Learner demographics

The learners were mostly male, and all were native English speakers.



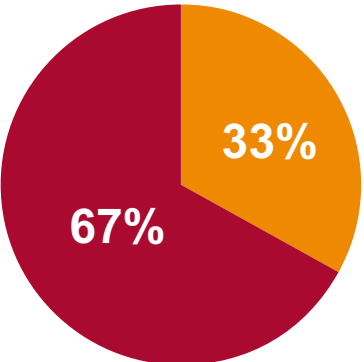
Gender
Male
Female

Five learners were able to read and write to some degree. Of these five, at least three had literacy issues due to visual impairment or learning disabilities.



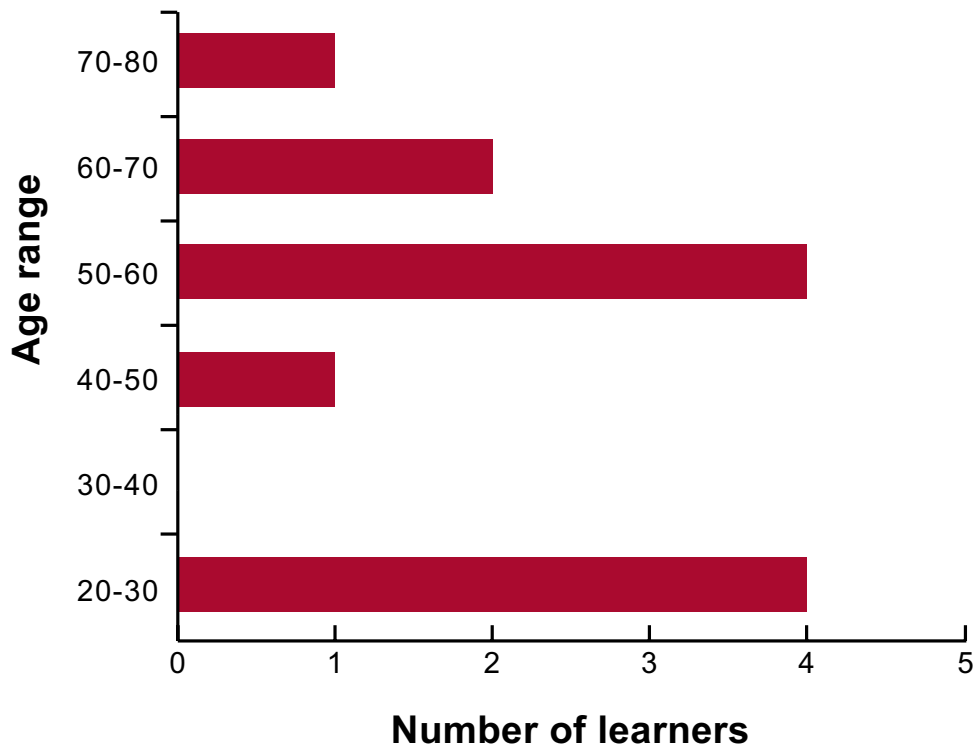
Literacy
Support required
Independent

Four learners had internet access at home. No learners owned their own property, and the large majority of learners rented from the council or local housing authority.



Internet access
Yes
No

Age of learners

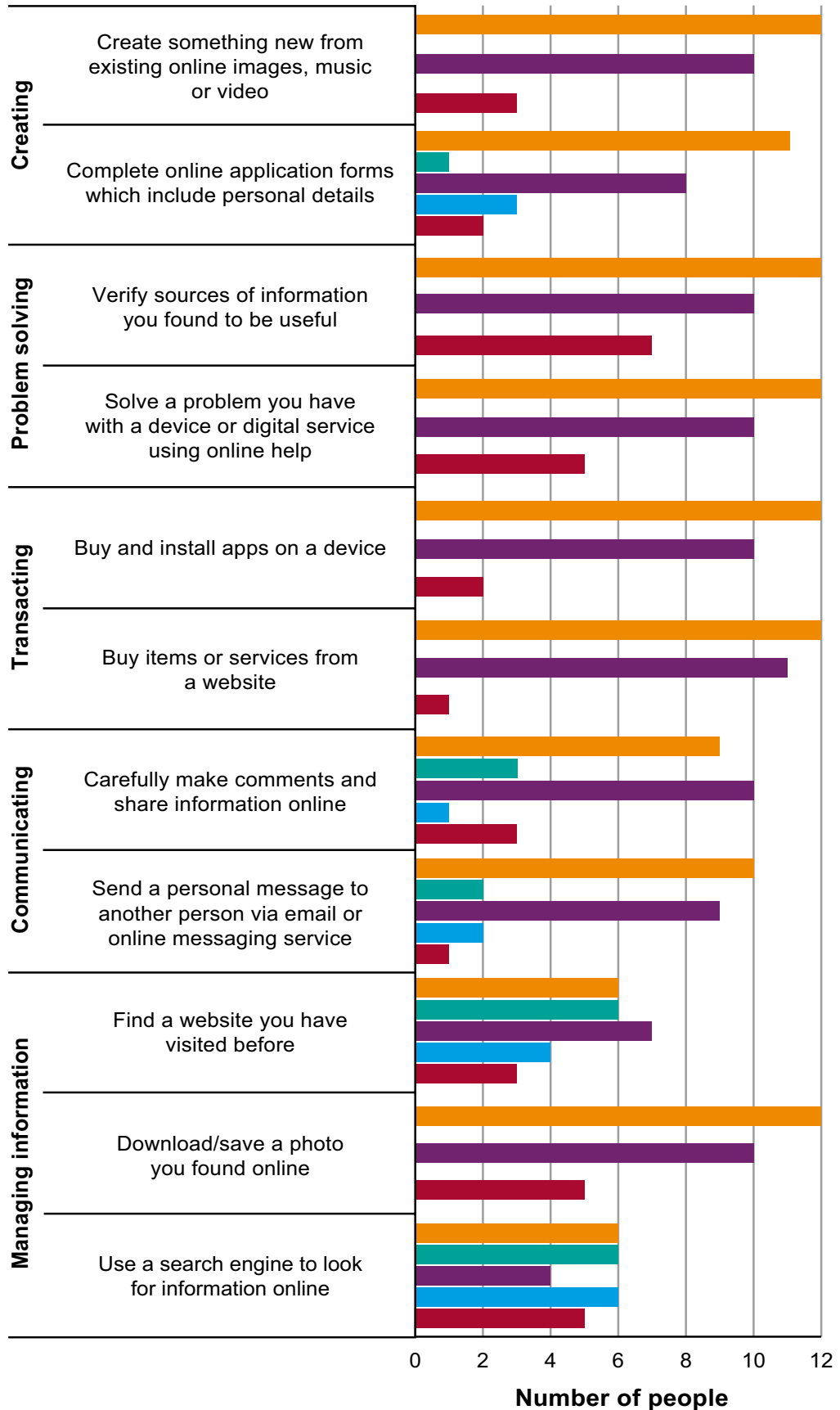


Eight learners were older adults aged between 40 and 80.
Four learners were younger adults aged between 20 and 30.

Summary of *Mastering the Tablet* course

Basic digital skills pre-course assessment

- I haven't done this in the last three months
- I couldn't do this if I was asked to
- I have no idea what you're talking about
- I have done this in the last three months
- I could do this if I was asked to



Our findings from the basic digital skills pre-course assessment highlighted a number of knowledge gaps which would stop a person from being digitally included.

Search engines

Six of the learners responded that they had used a search engine, and that this had been in the last three months. However, a number of those learners had only used a search engine with the help of family, friends and tutors. These learners were unable to search on their own, so there are a hidden number of people in the community who identify with being able to browse online but can't do it without support.

The other six learners had not browsed online within the last three months, and five of those learners didn't understand what the term 'search engine' meant. In general, these learners had never used a computer for any length of time, or had a learning disability which meant that they were unable to match the requirements of the basic digital skills chart.

Revisiting a website

All the learners who could use a search engine could also find a website they had visited before and had done this recently, although only four of those learners felt they could do this if now asked to. More people understood what was meant by 'website' compared to 'search engine', and this makes sense. In daily speech, most people refer to 'Googling' something, and the term 'search engine' did not make sense to people in this demographic.

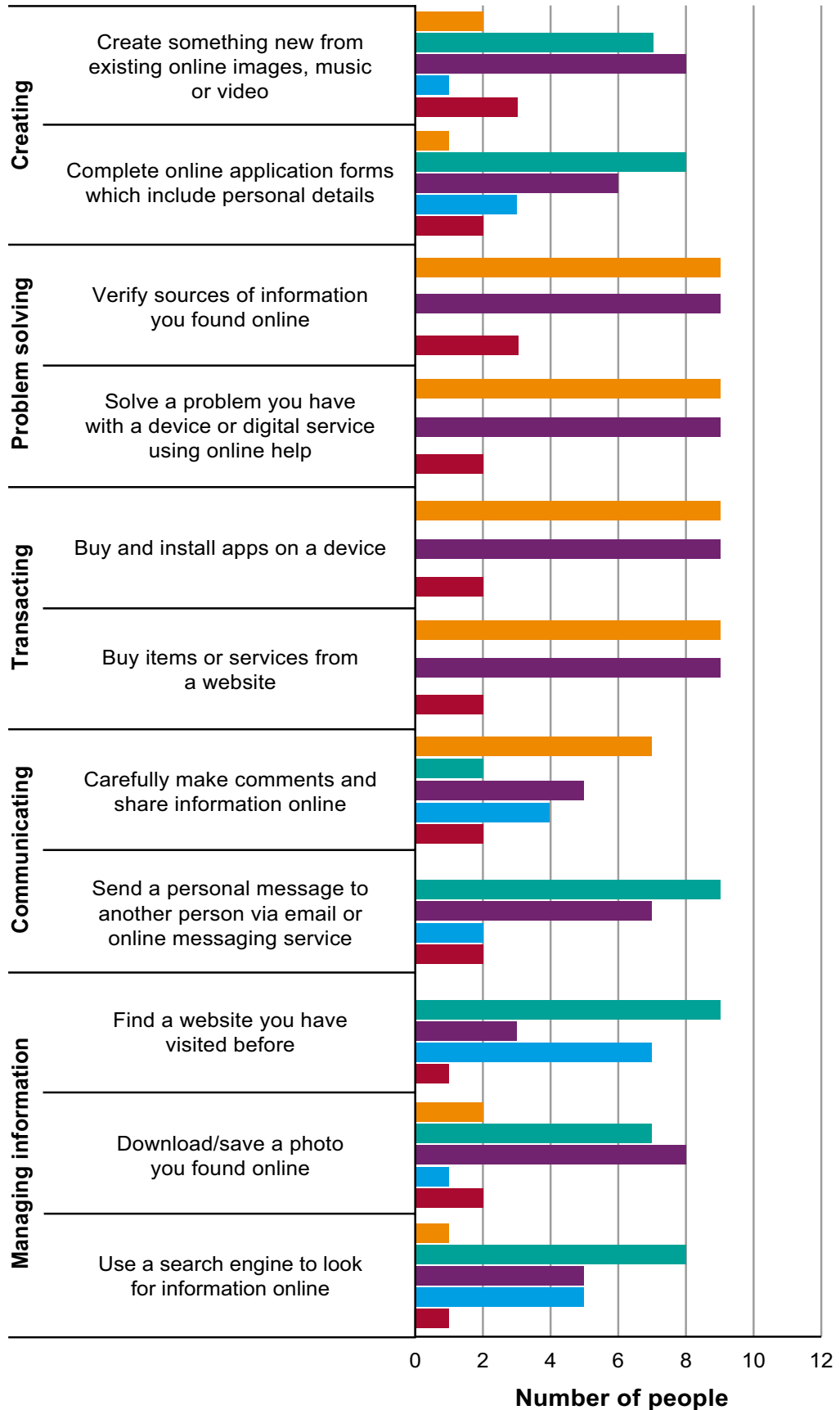
Sending personal messages

Two learners had sent personal messages or made online comments and shared information. These people often also had support from family or friends.

With regards to other basic digital skills, learners generally responded that they could not do what was asked, had not done it for over three months or did not understand what was being asked, with the most problematic areas being verifying sources online and solving problems online. Only a couple of learners felt they could complete online applications.

Basic digital skills post-course assessment

- I haven't done this in the last three months
- I have done this in the last three months
- I couldn't do this if I was asked to
- I could do this if I was asked to
- I have no idea what you're talking about



The results from all twelve learners after completing *Mastering the Tablet* show a general trend towards being more able to use search engines and find websites that they have visited before. Although all learners had learned how to download and save photos, few people were still able to do this at the end of the course. This may be due to the nature of this function in that it requires a finger press for a length of time, or it may be due to people suffering from poor memory.

Learners were able to share information online, although sending messages was still difficult. This was largely due to poor literacy and cognitive impairment rather than difficulty using the tablet itself.

No learners were able to buy items or services from a website. This level of skill was more advanced than the skills taught during the course. Although online purchases are considered a basic skill, this was something that all learners had difficulty with.

Learners were also unable to verify sources of information online and solve problems using the internet. These are considered to be basic digital skills, but that does not make them 'easy' skills to acquire. Information online can appear to be accurate and come from reputable sources but still be incorrect. The ability to assess this would again be a large undertaking for adults within this demographic.

With regard to completing online forms, there was no increase in ability after the course had been completed. Learners did attempt to complete online forms during the course, but success was down to the tutor support available.

The results of the study showed that most learners tried using search engines, saving photos, finding websites previously visited, sending messages online, completing application forms and creating something new. As result of these activities, learners' initial lack of understanding about what constituted basic skills had decreased with the familiarisation process. It was also shown that people had overestimated their computer skills in the pre-course assessment, as some skills were definitively shown to be something they 'could not do', even when asked to following the course.

Barriers faced by learners

Visual impairment

A significant number of learners had difficulty making out areas of the screen. Some buttons and text were too small.

Acquired brain injury

Brain injury can cause a number of formidable learning barriers: memory, sequencing, physical impairment, depression and stress can all be prominent.

Dyslexia

Around a quarter of the learners presented difficulties with reading text which matched those of people affected by dyslexia.

Learning disability

Around three quarters of learners had some form of learning disability which made retention of information over time difficult.

Social deprivation

Learning is often best achieved socially, and this is very true of learning how to use digital technology. The majority of learners had few social contacts, meaning that they had no one to practise new skills on outwith the classroom.

Economic deprivation

The expense of technology is a barrier. Even if someone has a device, it will eventually need to be replaced. Data and broadband are also expensive.

Autistic spectrum disorder

Autism presents differently in each individual. With some learners, this translated as problems with sequential learning and following direction from tutors.

Stress and depression

Being able to focus on new learning is only possible if a person is free from stress, and depression can hold a learner back from attempting new things.

Points for effective training

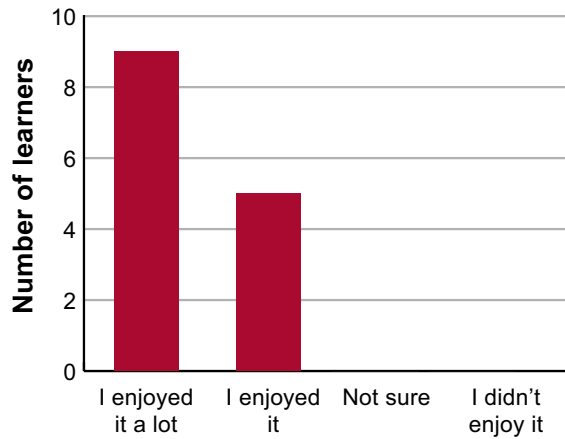
There are always going to be limitations for what a classroom-based training course can offer individual learners, but in order to maximise the intended positive impact of training, it may be worth bearing the following in mind:

- Include, where possible, a pre-course assessment.
- Plan for individual learning needs. What works for one person may not work for another. Use a broad range of teaching approaches in order to meet differing learning styles. Create a good mix between solo and group activities.
- Use 'scaffolding'. This means pitching tuition at each learner's starting point (existing knowledge, skills and ability) and building from there.
- Ensure good learner to tutor ratio. 1:1 is preferable.
- Bear in mind that social and support networks outwith the classroom are important to ensuring that learning continues and is utilised beyond the classroom.
- Create fun, interesting lessons. Learners engage best when offered activities/topics of particular interest to them.
- Formulate a clear learning plan and goals, but avoid setting unrealistic expectations.
- Flexibility of tuition. Be prepared to deviate from the planned lesson structure, if required, in order to ensure a good pace of learning.

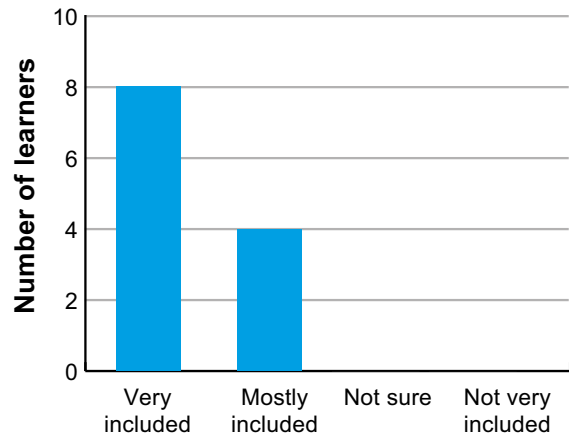
Class feedback on *Mastering the Tablet*

Feedback was obtained at the end of each six-week block to find out if the classes were perceived as suitable by those attending.

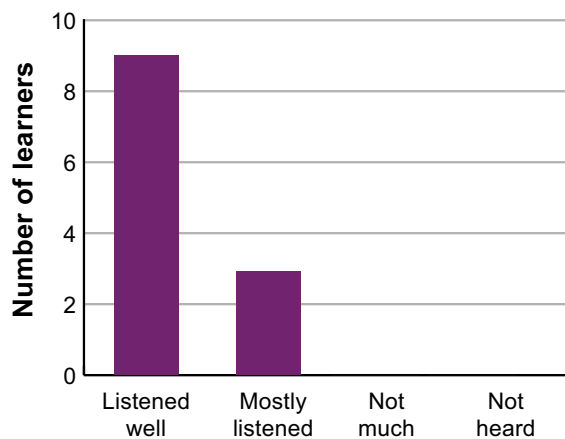
Did you enjoy the computer classes?



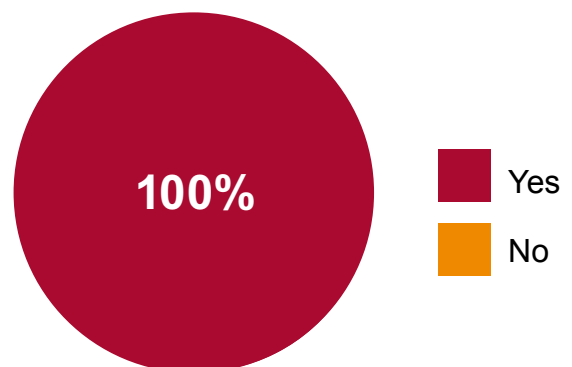
Did you feel included in the class?



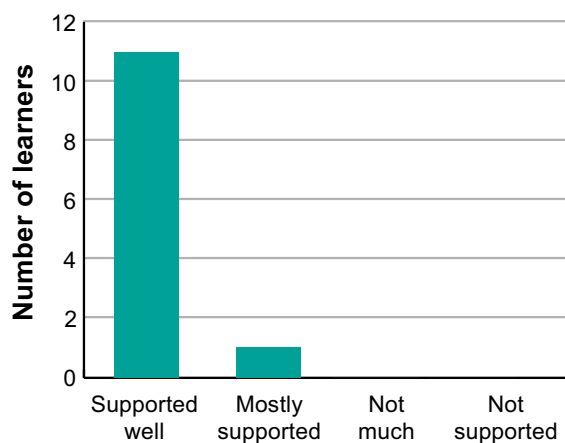
Did you feel listened to?



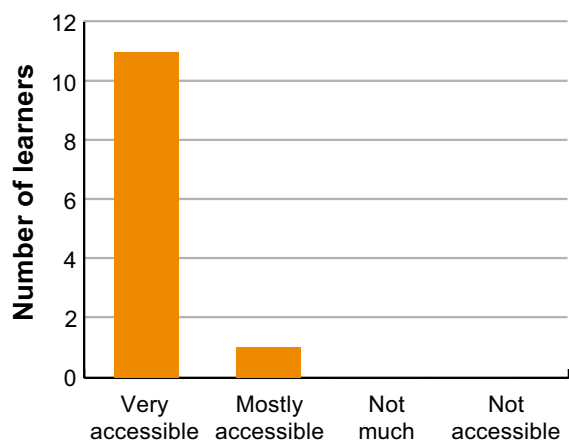
Do you the course has had a positive impact in your life?



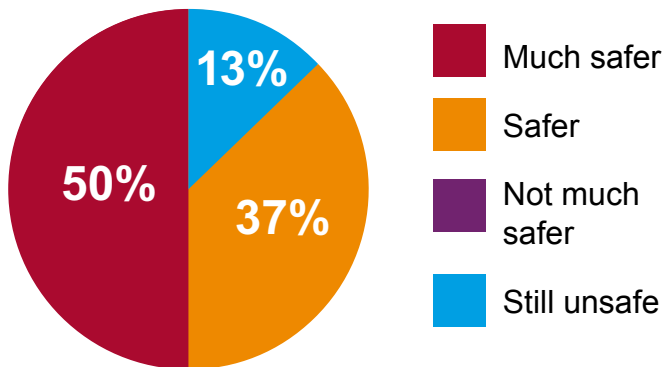
Were you given enough support to learn?



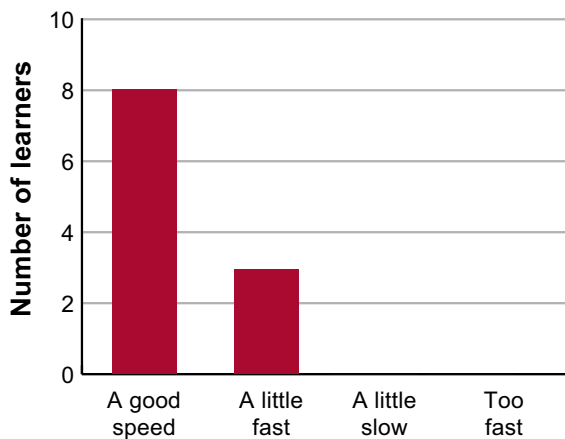
Did you find the room accessible and easy to use?



After the course, do you feel much safer online?



Was the speed of teaching okay?



Learners reported overwhelmingly positive feedback. They felt the course was enjoyable, that they were included and listened to, and that the pace was mostly good, although some felt that it was a little fast. This is to be expected in a six-week block where learners would naturally want additional classroom time to consolidate new skills.

Learners also felt supported. The materials (i.e. the booklets for each class) were felt to be useful, but one learner felt they were not useful, as they could not read them. Practical tuition was more beneficial for this learner.

Over 80% of learners reported that they felt safer or much safer using their tablets after the course than they had at the beginning, and all learners felt the course had improved their lives.

Conclusion

Stories from the Digital Divide set out to find the reasons why some people remain digitally excluded. Despite receiving training which took a broad range of barriers into account, most learners did not significantly advance their basic digital skills in line with the Go On UK basic digital skills definitions. However, that is not to say people did not significantly advance their skill level.

All 12 learners were able to use their tablets in ways which they were previously unable to. Most learners could pick up their tablet, switch it on and navigate to areas of interest such as games, internet browsers and apps like the camera or YouTube. Many were also able to change settings on their tablet such as screen rotation, screen brightness, and to a lesser extent, toggle between Wi-Fi and mobile data.

In conclusion, this demographic of learners took away digital skills which were of value to them, but were at the level below those that constitute the Go On UK framework. Although the basic skills framework makes logical sense, it is also clear that individuals at the extreme edge of digital exclusion will never fully engage with the skills required to match it. That does not mean that training should not take place with this demographic, but that perhaps the framework should expand downwards to include a very basic skill set currently not recognised, captured or measured in a meaningful way.

The 12 stories

This report follows the progress of 12 adult students who previously faced personal barriers to digital participation as they learn to use an Android tablet through a series of six structured classes.

Story 1

| | |
|------------------------------|----------------------------------------|
| Name | Robert |
| Age | 20 |
| Gender | Male |
| Internet at home | Not initially |
| Literacy level | Unknown |
| Work status | Unemployed |
| Tenure | Rented accommodation/lives with family |
| Education | Special educational needs secondary |
| Support worker in attendance | Yes |

Pre-course assessment

During practical tasks, Robert showed poor understanding of using search engines. There was no indication that he was able to undertake any of the activities within the basic digital skills framework. The only computer type device he used at home was a Nintendo DS.

Mastering the Tablet – six week training course

Attendance: Robert attended all six classes.

Initial issues: Initially, he was unengaged with activities and the learning materials, and unable to even make eye contact with people.

Continuity of support: There was little continuity of support. This lack of continuity will have had a detrimental effect on his learning. His receptivity to communicating with training staff varied from week to week, depending on who was supporting him.

Outside interference: Robert's sibling had been using the tablet without permission. This resulted in vastly increased data use, so training staff installed a security passcode.

Settings on Robert's tablet had been altered. The tablet had been set to Accessibility Mode (for the visually impaired) meaning that the screen- tap had been disabled. In addition, the talk-back language had been changed to Spanish and this was reset to English by training staff.

Practical learning activities: When taught about emailing, Robert followed all instructions, although his email only consisted of 'hi'. He was able to attach a picture without any support. In terms of working with images and photos, Robert enjoyed using the tablet's camera, editing pictures using manipulation apps and performing face swaps. Robert can read simple text that has been input into a blank search field (e.g. Google search) but is unable to input text into the field unaided.

Training staff downloaded what are called endless runner apps, such as Temple Run. Robert's social inhibitions prevented him from fully exploring these apps in a group setting. He did engage with the Smash Hit app, which is all about accuracy and he was very good at this, indicating either an ability to learn quickly or an existing familiarity with the game concept/rules.

Robert visibly enjoyed the Skype training even though he didn't participate in conversations. Similarly, he didn't participate in group discussion about social media but it was clear he was listening.

Post-course assessment

Robert attended the assessment with a support worker who had not been involved in any of the classes, and this complicated the process of assessment. Robert was asked to complete some tasks and, without prompting, he was able to:

- switch on his tablet
- unlock the tablet via a swipe
- navigate around apps
- interact with app menus
- understand complex rules within games
- control the volume
- return to the home screen
- switch off the tablet

Identified barriers to inclusion

- social inhibition (selective mute)
- family interference with equipment
- ever-changing support staff
- poor literacy skills
- social exclusion and lack of access to peer learning
- learning disability
- economic deprivation

Successful strategies employed

- Setting age-appropriate topics/tasks for building confidence.
- Ensuring that learning was fun and inclusive
- Using a person centred approach
- Demonstrating how to do things, rather than explaining how to do things
- Measured pace of learning

Likelihood of remaining digitally included

Unlikely, but with improved literacy skills, Robert could benefit from a follow-up training course.

Story 2

| | |
|------------------------------|----------------------------------|
| Name | David B |
| Age | 56 |
| Gender | Male |
| Internet at home | No |
| Literacy level | Good |
| Work status | Unemployed |
| Tenure | Rented accommodation/lives alone |
| Education | Secondary school |
| Support worker in attendance | No |

Pre-course assessment

David was aware of the activities involved in the basic digital skills framework, however he only felt he could use a search engine and find a familiar website. The reasons David gave for his digital exclusion were that he felt that technology was difficult to learn, and that he didn't want to look stupid trying to learn.

Mastering the Tablet – six week training course

Attendance: David attended all six classes.

Initial issues: It took time for him to adjust to the tablet's screen size. Text size was enlarged using the tablet's accessibility options. The hidden screen options appearing without warning were problematic. After the first lesson, David chose not to take the tablet home as he wanted to process what he had learned first.

Practical learning activities: One area in which David struggled, and has been a complex subject for other learners, is the concept of data. He was given an information sheet containing the data (Mbits) equivalence for emails, web browsing and streaming music/video. In spite of this, and similarly to other learners, he remained confused. His data use after the second lesson showed that he was using the tablet at home.

In a group setting, David tried Skype and email, both of which he found useful, but outside of the class he would have needed contacts with whom to practise. By the fourth lesson, David was reporting more confidence in browsing and fact finding when working at home. With some help, he installed the EE app in order to track his data use. He was able to use the camera and attach the photos to an email, but had forgotten how to open up his email account. It was clear that David had specific uses for his tablet (YouTube, browsing and watching documentaries on iPlayer), and within those parameters, showed aptitude in learning and remembering how to do things. At home, and without help, he found a childhood song his mother sang to him. This cemented the idea that technology could be useful and positive for him.

Post-course assessment

David gave similar answers to the questions that had been asked during his pre-course assessment, i.e. that he was mostly comfortable with browsing and finding familiar websites. One change, though, was that he now felt able to complete online forms.

Identified barriers to inclusion

- Difficulty in memorising controls/navigation
- Lack of confidence and memory impairment
- Lack of regular exposure to aspects of technology (communication)
- Lack of contacts with whom to practise communication apps
- Mental health issues
- Economic deprivation

Successful strategies employed

- Breaking up tasks in to smaller, individual steps
- Not front-loading tasks with explanations
- Setting a realistic and measured pace
- The use of analogies to describe abstract ideas
- Keeping tasks relevant to individual interests and preferences

Likelihood of remaining digitally included

Highly likely, but a follow-up training course would have been beneficial. David, we now know, has continued to use his tablet, top up his data and use his tablet to access a website called HomeSwappers.

Story 3

| | |
|------------------------------|----------------------------------------|
| Name | David L |
| Age | 77 |
| Gender | Male |
| Internet at home | Yes |
| Literacy level | Good |
| Work status | Retired |
| Tenure | Rented accommodation/lives with family |
| Education | Secondary school |
| Support worker in attendance | No |

Pre-course assessment

During practical tasks, David was able to use a search engine and find familiar websites. He said he was able to complete an online form, but he struggled to type while using a tablet. He said he had used Facebook, FaceTime and Skype to communicate, but we were unable to see this during the assessment.

Mastering the Tablet – six week training course

Attendance: David attended all six classes.

Initial issues: David's poor eyesight (he wears glasses, but may need a new prescription), lack of manual dexterity, single handedness and long fingernails combined to create a significant barrier to practical tasks. He would often tap an area of the screen just beside the area he wanted. This was most problematic when using the onscreen keyboard, accessing menus, switching the device on/off (via a small, side button), inputting pin codes, and varying his contact with the screen (tapping, tap and hold, swiping etc.). Poor memory and a variable attention span, when combined with the lack of accurate touch, meant that David experienced some frustrating issues accessing accounts and having to reset passwords, haphazard navigation, etc.

Practical learning activities: David had no difficulties in understanding concepts, explanations and instructions. His difficulty lay in accurately carrying out tasks. He was able to use Google Play Store to download apps. It was clear that David had used email and Skype in the past. He was able to use the tablet's camera but took a while to distinguish between the camera and the video camera. He was able to download and use Facebook, though he had trouble not accidentally activating its adverts. He took photos and applied filters to them. David was also able to download YouTube and watch nature documentaries. It was clear from the dust build up on the tablet's screen that David was not really using his tablet at home, despite having Wi-Fi at home.

Outside interference: David's grandchildren changed some settings on his device, and downloaded game apps. As a result, his home screen was cluttered, the 'invert screen colours' option had been activated, and the new wallpaper made it hard to see individual icons. David was able to resolve all these issues with some help.

Post-course assessment

David was able to switch on his tablet and enter his pass code without support or prompting. He felt he could undertake some of the basic digital skills: using a search engine, downloading a photo, finding a familiar web site, sharing information online, and creating something new. He had completely forgotten about the Google Play Store icon and what it was for. His ability to navigate his tablet appeared hesitant and faltering.

Identified barriers to inclusion

- Deteriorating physical health
- Poor eyesight
- Carer
- Acquired brain injury - stroke
- Memory impairment
- Sequencing impairment
- Partial paralysis on left side (but right-handed)
- Partial loss of manual dexterity
- Wheelchair user

Successful strategies employed

- Allowing for reminiscing
- Demonstrating tasks and actions
- Repetition and practise

Likelihood of remaining digitally included

Uncertain, as even though David was able to conduct a number of activities within the basic skills framework, and even though a follow-up training course over an extended period of time would be beneficial, his health is failing.

Story 4

| | |
|------------------------------|----------------------------------|
| Name | Brian |
| Age | 56 |
| Gender | Male |
| Internet at home | No |
| Literacy level | Poor |
| Work status | Unemployed |
| Tenure | Rented Accommodation/lives alone |
| Education | Secondary school |
| Support worker in attendance | No |

Pre-course assessment

Brian was unaware of many of the activities within the basic digital skills framework. He was aware of some activities, though, but felt he couldn't do them, namely find a familiar website, send personal messages, share information online and online shopping.

Mastering the Tablet – six week training course

Attendance: Brian attended five out of six classes.

Initial issues: Working with Brian, it was clear that he couldn't rely on reading to navigate his way round the tablet. Luckily he could recognise symbols, shapes, colours and the location/placement of key features on the screen relative to each other. He was sometimes able to remember the sequence of moves required in order to navigate. When faced with binary choices, he managed quite well, but his lack of literacy proved more challenging when faced with more complex choices. In addition, he was tentative about tapping or swiping the screen. His long fingernails did not help.

Practical learning activities: Brian wanted to download a Solitaire app, a game he had never played before. He was able to recognise the symbols for the suit of the card, but he struggled with the face value of each card (poor numeracy skills), not knowing which card could be placed on top of another in the numerical sequence. It was clear that Brian was using his tablet outwith the class and he had been listening to music and a radio station. Brian struggled with tapping the screen and appeared unable to tell the difference between a push and a tap. Much of his learning was centred round increasing his manual dexterity and demonstrating/explaining the difference in pressure and duration between a push and a tap. He was helped to download literacy apps and bookmark YouTube videos. Brian was able to use a browser's search facility with help, and with less help he was able to take photos and manipulate them. Due to his poor literacy skills, he was unable to type an email, but the email address auto-complete facility was very helpful, and he was able to attach photos and send them to his contact.

Post-course assessment

Brian has learned to deal with his learning difficulties by pretending to understand much more than he does. This is his coping strategy, but it means he continually masks/hides the true extent and nature of his difficulties and is therefore less likely to get the help he really needs. The only basic digital skill he felt he could now do unaided was to find a familiar website.

Identified barriers to inclusion

- Difficulty in memorising sequences of moves
- Inability to consistently tap the screen
- Illiteracy and innumeracy
- Giving impression of having understood
- Overstating his own ability
- Social deprivation
- Economic deprivation
- Undiagnosed learning disability
- Potential dyslexia
- Memory impairment

Successful strategies employed

- Repetition and practise
- One-to-one support
- Double checking, verbally and through practical activity, that something has been understood
- Practical demonstrations
- Distinguishing true ability from stated ability

Likelihood of remaining digitally included

Unlikely, as Brian would require substantial support to remain digitally included, and this is currently unavailable in his life.

Story 5

| | |
|------------------------------|----------------------|
| Name | Hugh |
| Age | 50 |
| Gender | Male |
| Internet at home | Yes |
| Literacy level | Good |
| Work status | Unemployed |
| Tenure | Rented Accommodation |
| Education | Secondary school |
| Support worker in attendance | Yes |

Pre-course assessment

Hugh had heard of all the activities within the basic digital skills framework, but only felt he could complete an online form and use a search engine. His support worker was able to tell us that Hugh had a problem with his vision and did not want to get involved with social media.

Mastering the Tablet – six week training course

Attendance: Hugh attended three of the six classes.

Initial issues: Hugh's 'retreat' from the world around him is quite noticeable. Thankfully his support worker was attentive, motivated and happy to translate into words any visual clues that Hugh gave, as having just met Hugh, training staff were unable to pick up on the subtleties of gestures or eye movements on the occasions when Hugh was very slow to respond or verbally unresponsive.

Practical learning activities: Training staff had little input into teaching Hugh directly, as his support worker was able to follow what was going on in class and work closely with him. Hugh was part of a class of four people who, for a variety of reasons, all required intensive support, and this meant that training staff were often stretched thin.

Hugh's support worker helped him through all the learning activities, but Hugh did not engage much with any of the activities or communicate with other people in the room. Hugh seemed unwilling to try out even simple tasks for himself, though he was happy to watch demonstrations. It was hard to determine whether he was absorbing information, and to what extent he understood how to undertake activities. Some game apps were downloaded and installed, and a football game that did not require fast reactions was Hugh's favourite.

Limited mobility in one arm meant that Hugh was unable to hold his tablet steady while swiping or tapping at the screen.

Post-course assessment

With the help of his support worker, Hugh was able to tell us that he could use a search engine, find a familiar website, make comments and communicate online, and complete an online form. He didn't feel he could do any of the other activities within the basic skills category.

Identified barriers to inclusion

- Disengaged learner
- Lack of upper limb mobility
- Social apathy (uncommunicative and unresponsive)
- Mental health issues - depression
- Wheelchair user
- Acquired brain injury (stroke)
- Sight impairment
- Partial paralysis down one side

Successful strategies employed

- Intensive one-to-one support
- Person-centred approach
- A tablet cushion or stand

Likelihood of remaining digitally included

Highly unlikely, as Hugh lacks the personal motivation to use technology and this is compounded by his acquired brain injury and its associated issues.

Story 6

| | |
|------------------------------|------------------------------|
| Name | Geraldine |
| Age | 54 |
| Gender | Female |
| Internet at home | No |
| Literacy level | Poor |
| Work status | Unemployed |
| Tenure | Private landlord/lives alone |
| Education | Unknown |
| Support worker in attendance | No |

Pre-course assessment

Due to having attended a Basic Digital Skills class in the past, Geraldine was familiar with all the activities within the basic digital skills framework. She felt she could use a search engine and complete an online form if asked to do so.

Mastering the Tablet – six week training course

Attendance: Geraldine attended all six classes.

Initial issues: Geraldine had forgotten her glasses, and this combined with never having used a touch screen before resulted in her pressing the wrong keys and pressing around icons, struggling to read the onscreen keyboard, not noticing some smaller items on the screen and finding it hard to adjust her finger pressure on the screen.

Practical learning activities: Geraldine was able to undertake all of the learning activities on the training course with only moderate guidance and support. She was able to undertake some activities without any prompting, e.g. finding, downloading and installing apps from Google Play Store and taking photos. She was very keen to use the internet for the purpose of communication, so getting on Facebook, Skype and setting up an email account were important to her. It was clear she was using her tablet at home, perhaps with the help of friends, and had been using BBC iPlayer, Spotify, YouTube, iPlayer Radio and the tablet's camera to take selfies and photos of her home. She was able to manipulate photos and toggle between the front and back facing camera.

Again with moderate prompting, she was able to find and then check her tablet's settings menu for battery, Wi-Fi and storage, etc. She was able to check her data use using the EE app. It was clear that Geraldine was actually learning and making good progress. Practising on the tablet between classes was a bonus as it meant new skills were being reinforced through repetition. Additionally, exposure to the internet and technology through friends and family meant that Geraldine already had a good idea of what technology could offer her and of what she wanted to use it for.

Geraldine's lack of literacy meant she required help with any activity that involved typing.

Post-course assessment

Geraldine felt that she could use a search engine, find a familiar website, send a personal message, and make comments/share information online.

Identified barriers to inclusion

- Poor literacy/numeracy
- Economic deprivation
- Mental health issues - anxiety
- Mild learning disability
- Mild dyslexia
- Carer

Successful strategies employed

- Repetition and practise
- Measured pace of learning

Likelihood of remaining digitally included

Highly likely, though a follow-up training course would be beneficial. Geraldine found that using her tablet reduced her anxiety levels with regards to her role as a carer. This was a strong driving force throughout her learning.

Story 7

| | |
|------------------------------|----------------------------------|
| Name | Malcolm |
| Age | 59 |
| Gender | Male |
| Internet at home | No |
| Literacy level | Poor |
| Work status | DLA |
| Tenure | Rented accommodation/lives alone |
| Education | Unknown |
| Support worker in attendance | Yes (but not all the time) |

Pre-course assessment

Malcolm was not aware of the majority of activities within the basic digital skills framework. He had, though, heard of email and online shopping, but knew he couldn't undertake these activities if asked to.

Mastering the Tablet – six week training course

Attendance: Malcolm attended all six classes.

Initial issues: Due to never having used a tablet before, Malcolm struggled to tap or swipe the screen. His tendency to monologue and follow rigid trains of thought, combined with very poor concentration, made it quite hard to engage him in any activity that wasn't on his own terms.

Practical learning activities: Malcolm was less interested in group activities, instead preferring to forge into testing the capabilities of the equipment, e.g. can I use it to record what is currently being broadcast on my television screen? With prompting and direct assistance, he signed up for a Google account, registered his SIM card, downloaded apps from Google Play Store, browsed and searched for images of swans and used email and Skype to contact other people in the class. He enjoyed watching nature programmes on BBC iPlayer. He attempted to play Solitaire but didn't understand number sequences, and he attempted a word search but could only find the words placed horizontally.

His data use indicated that he was using his tablet outwith the class, but was being careful about not going over his data limit.

Much of the class time was spent answering Malcolm's questions about how electrical devices work as this was a pet topic of his. Towards the end of the course he was able to, with prompting, use the home button, recognise the Play Store icon, and choose an app and install it. Much time was also spent teaching him how to download videos while using Wi-Fi in class so that he was then able to watch them at home without using any of his data.

It was clear from listening to Malcolm that he was mostly left to his own devices at home with regards to his tablet use, and that he was unable to solve many of the navigation and functional problems he encountered. This meant that when he attended the class, he was quite anxious about unresolved issues and urgently needed those issues explained and resolved before the class could start.

Post-course assessment

Malcolm was clearly now familiar with all the activities within the basic digital skills framework. He felt he could find a familiar website, but that he wouldn't be able to do any of the other activities without support.

Identified barriers to inclusion

- Poor concentration (ADHD)
- Obsessive thoughts and ideas
- Poor literacy
- Rigidity of thought (ASD)
- Illiterate and innumerate
- Economic deprivation
- Socially isolated
- Memory impairment
- Speech impairment (stuttering and repetition of phrases)
- Learning disability

Successful strategies employed

- Prompts for refocussing
- Person centred approach
- Passive approach to teaching (listening)
- Keeping tasks relevant to interests
- Dealing with presenting anxieties immediately upon arrival

Likelihood of remaining digitally included

Likely, and a follow-up training course would be beneficial. Malcolm will use his tablet for his own unique, specific purposes, but it's debatable as to whether this could be described as digital inclusion.

Story 8

| | |
|------------------------------|-------------------------------|
| Name | Jimmy |
| Age | 65 |
| Gender | Male |
| Internet at home | No |
| Literacy level | N/A |
| Work status | DLA |
| Tenure | Care Home |
| Education | Unknown |
| Support worker in attendance | Yes (supported by his sister) |

Pre-course assessment

In terms of assessing Jimmy's skills, we were able to find out from his sister that he had never done anything online before and had never used a tablet. He had no idea of any of the activities within the basic skills framework. We showed him a tablet and explained a bit about the course.

Mastering the Tablet – six week training course

Attendance: Jimmy attended all six classes.

Initial issues: Due to Jimmy only having the use of one arm and hand, he required the support of two people to hold his tablet, one person on either side of his wheelchair. He was unable to angle the wrist and finger of his 'good' arm, therefore was finding it difficult to tap the screen. Instead, he was stabbing at the screen, making navigation quite difficult.

Likewise, he was unable to swipe the screen with a horizontal swipe but this was more successful than attempting a vertical swipe.

Practical learning activities: With a lot of support Jimmy, was able to download some music and television apps, and watch a cookery programme on BBC iPlayer. We also bookmarked various websites that catered for his food related interests.

Verbal communication was difficult, and without his sister translating for us, training staff would not have been able to understand much of what Jimmy was saying. We trialled Skype with other class members and used the camera to take photos, which we attached to emails and sent to other class members. Jimmy struggled to maintain interest for the duration of the class, usually wanting to go home or wanting to sleep after the lunch break. He enjoyed the process of emailing, though he was reliant on training staff to type and come up with suggestions as to what he might like to say, at which point he would either agree or disagree. He enjoyed watching soap operas on STV Player, but didn't really enjoy any of the game apps we downloaded.

Jimmy was not taking his tablet home between classes due to there being no care staff at the nursing home available to help him use it. His sister was also concerned that, if left to his own devices with the tablet, he would break it in frustration.

Post-course assessment

With regards to the activities within the basic skills framework, it was clear that Jimmy had no real idea what was involved. He did know what browsing the internet entailed and what a search engine was, but couldn't have engaged with either activity if asked.

Identified barriers to inclusion

- Profound and complex needs (physical and mental)
- Wheelchair user
- Learning disability
- Speech impairment
- Partial loss of manual dexterity

Successful strategies employed

- Intensive two-to-one support
- Abandonment of all course materials in favour of a person-centred approach
- A tablet cushion

Likelihood of remaining digitally included

Highly unlikely as to remain digitally active, Jimmy would need significant support and this support is currently unavailable.

We are forever indebted to his sister for assisting him to attend the class and for her translation skills.

Story 9

| | |
|------------------------------|----------------------|
| Name | Geraldine C |
| Age | 25 |
| Gender | Female |
| Internet at home | Yes |
| Literacy level | Good |
| Work status | DLA |
| Tenure | Rented accommodation |
| Education | Secondary school |
| Support worker in attendance | Yes |

Pre-course assessment

Geraldine was aware of all the activities within the basic digital skills framework apart from verifying sources of information. She felt she could do most of the activities related to managing information and communicating. She also felt she could complete an online form. The activities related to transacting, problem solving and creating were ones she felt she couldn't do.

Mastering the Tablet – six week training course

Attendance: Geraldine attended all six classes.

Initial issues: Geraldine's physical disability meant that she required a tablet stand. She found it hard to straighten out her fingers to tap and swipe the screen, making lengthy activities very challenging.

Practical learning activities: Geraldine was very capable. There were no issues in following the course materials, and besides from Geraldine forgetting passwords to some accounts she didn't appear to experience many problems. Although Geraldine had a mild learning disability which significantly affected her speech, she was fully literate and able to communicate on social media and by email. Geraldine appeared to have lots of social contacts and was not dependent on other class members for trialling Skype and email. She was very quick to pick up, and experiment with, the functionality of various apps and appeared to have prior knowledge of their functions.

Post-course assessment

Geraldine reported no changes to her initial responses concerning the activities within the basic digital skills framework. We undertook some practical tasks with Geraldine, and with minimal prompting she was able to install and uninstall apps, manipulate the swipe-down menu and access settings, recognise apps, and switch her tablet off.

During the three weeks since the last class, Geraldine had been using her tablet to play games, follow people on Twitter, and watch TV and films on Netflix. She admitted to using her mobile phone more than her tablet, especially for Facebook, which matches the wider societal trends of mobile phone use.

Identified barriers to inclusion

- Wheelchair user
- Learning disability
- Speech impairment
- Partial loss of manual dexterity

Potentially, Geraldine would have issues with time-dependent online forms and activities.

Successful strategies employed

- Tablet stand/cushion
- Prompting
- Accessible information with clear and simple language.

Likelihood of remaining digitally included

Highly likely, though a follow-up training course with the focus on online forms would be beneficial.

Story 10

| | |
|------------------------------|--------------------|
| Name | Scott |
| Age | 20 |
| Gender | Male |
| Internet at home | Yes |
| Literacy level | Poor |
| Work status | Unemployed |
| Tenure | Living with family |
| Education | Secondary school |
| Support worker in attendance | No |

Pre-course assessment

Scott was aware of nearly all the activities within the basic digital skills framework. The only one he hadn't heard of was verifying sources of information. He felt he could use a search engine and find a familiar website if asked to do so.

Mastering the Tablet – six week training course

Attendance: Scott attended all six classes.

Initial issues: No issues.

Practical learning activities: Scott was able to follow instructions and the learning materials with some support from training staff. He enjoyed many of the visual activities the most: choosing wallpapers, using the camera and manipulating images with funny apps. He also appeared to enjoy apps that made funny noises or involved shooting/firing/aiming activities. When left to his own devices, he was quick to abandon class learning activities and go onto Google Play Store where he mostly seemed happy to aimlessly browse apps. Scott needed help with reading the learning materials due to his poor literacy skills, though he was able to navigate menus and read the text on most of the buttons. His memory was good and he had no problem in recalling his pin code for the tablet every week. Scott wasn't so much interested in communication apps like Skype and email. Towards the end of the training course, he still struggled to access the hidden swipe-down menu for quick settings, and needed help setting up Wi-Fi connections.

Post-course assessment

Scott reported that he was now aware of all the activities within the basic digital skills framework, but only felt he could use a search engine, find a familiar website and complete an online form.

Identified barriers to inclusion

- Learning disability (mild)
- Autistic spectrum disorder
- Poor literacy

Scott's learning disability is a mild form of disability and not a barrier to inclusion as such. What was more of a barrier was his lack of a sense of purpose. Many activities simply held no meaning for him.

Successful strategies employed

- Support with typing and reading
- Making learning fun
- Regular attention/prompting to avoid drifting towards 'playing around'

Likelihood of remaining digitally included

Highly likely, though a follow-up training course would be beneficial. At present, Scott lacks the motivation to pursue full inclusion and sees his tablet more as a games console.

Story 11

| | |
|------------------------------|--------------------------------------|
| Name | Dylan |
| Age | 24 |
| Gender | Male |
| Internet at home | Yes |
| Literacy level | Unknown |
| Work status | DLA |
| Tenure | Living with family |
| Education | Sporadic attendance secondary school |
| Support worker in attendance | Yes |

Pre-course assessment

Dylan reported that he had heard of search engines, downloading photos, personal messaging, online shopping and installing apps, but stated that he couldn't do any of these activities if asked to.

Mastering the Tablet – six week training course

Attendance: Dylan attended all six classes.

Initial issues: It was very hard to engage Dylan in a conversation as his attention span was so short. He was very easily distracted (meaning he couldn't pay attention long enough to follow what someone was saying) and had repetitive speech patterns.

Practical learning activities: Dylan's comfort zone for years has been centred around playing football games on his PlayStation. Getting him to deviate from that default position and into learning new activities for any meaningful length of time was quite difficult. The training staff and his support worker followed the course material as much as was possible, and he appeared to enjoy some of the activities, e.g. Face Swap app, and a sensory app that paints with exploding fireworks. In spite of having a social contact outwith the class, Dylan struggled to engage with email or Skype as they are both communication-based activities. Left to his own devices, Dylan would have been content to simply watch football on his tablet. Unlike other class members, who also struggled at times, Dylan could not feign an understanding of processes/ concepts or feign an interest in activities that did not interest him.

Post-course assessment

Dylan wasn't aware of any of the activities within the basic digital skills framework. In addition, he reported that couldn't do any of the activities if he was asked. We undertook some practical tasks with Dylan, and he was able to recognise and use the tablet's home button, as well as the install and open button when downloading an app from Google Play Store.

Identified barriers to inclusion

- Poor concentration
- Difficulty in listening
- Poor literacy/numeracy
- Learning disability
- ADHD
- Fragile X Syndrome
- Economic deprivation

Successful strategies employed

- Intensive support
- Person-centred approach
- Prompts for refocussing
- Keeping tasks relevant to interests

Likelihood of remaining digitally included

Unlikely, as Dylan would require a lot of support in order to remain digitally included.

Story 12

| | |
|------------------------------|----------------------------------|
| Name | Frank |
| Age | 60 |
| Gender | Male |
| Internet at home | No |
| Literacy level | Poor |
| Work status | Retired |
| Tenure | Rented accommodation/lives alone |
| Education | Unknown |
| Support worker in attendance | No |

Pre-course assessment

Frank had heard of the activities within some basic digital skills categories (managing information, communicating and transacting), but stated that he couldn't do any of the activities if asked.

Mastering the Tablet – six week training course

Attendance: Frank attended all six classes.

Initial issues: During our initial skills assessment, Frank had stated that his eyesight was fine and that he didn't wear glasses, but it was clear from working with him that he had great difficulty seeing what was on the screen. He also found it difficult to hold the tablet without accidentally pressing on the main three navigation buttons found at the bottom of the screen.

Practical learning activities: Frank was happiest diving into activities independently, but he did struggle with tapping the screen, and scratched at it instead. This caused him a lot of frustration, as the tablet wouldn't respond the way he wanted it to. He would also move his finger around an icon rather than on it, because of his poor eyesight. Frank's exploratory attitude meant he was not at all cautious or hesitant about doing things and always seemed to know what he wanted to achieve. Frank was impatient and gave up on tasks if the Wi-Fi was running slowly. In spite of him doing very well at hiding his learning difficulties, it was clear that there were definite limitations to what he could do unsupported, e.g. he would bypass pop-up menus as he couldn't read the options/questions, and missing this additional layer of navigation got him into difficulties that he couldn't resolve by himself. He was very keen to use Google Maps Street View and found the navigation within that quite easy. Between classes he was using his tablet to listen to radio stations and Spotify and get Sky Sports news. He was also using jigsaw and word search apps.

Although Frank always remembered to charge his tablet, he was not able to remember longer sequences of navigation moves on his device.

Post-course assessment

Frank reported that he would be unable to do any of the activities within the basic digital skills framework by himself, but now knew what all the activities entailed. Upon further discussion, and after setting him some practical tasks, it was clear that he couldn't identify the icons for Gmail, Google Chrome and Play Store. He couldn't download and install an app, and couldn't remember how to switch his tablet off.

Identified barriers to inclusion

- Poor eyesight
- Memory issues
- Poor manual dexterity
- Learning disability
- Poor literacy/numeracy

Successful strategies employed

- Tablet cushion/stand
- Repetition and practise
- Double checking, through practical activity, that something has been understood

Likelihood of remaining digitally included

Uncertain, as Frank would need a level of support that is not currently in place. He's a very physically active person, and sedentary activities don't seem to appeal enough for him to overcome his barriers.

This report follows the progress of 12 adult students who previously faced personal barriers to digital participation as they learn to use an Android tablet through a series of six structured classes.



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