

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 terms; 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 may be required for other 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 stories contained within, please contact Quarriers on 01505 616000 and ask for the digital inclusion department. You can also contact the Glasgow Centre for Inclusive Living on 0141 550 4455

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Introduction

Stories from the Digital Divide (SfDD) charts the progress of twelve individuals from Glasgow who experience digital exclusion. Over a six-week period in 2016, these individuals took part in computer training classes, which were delivered to three different groupings of four learners.

An initial interview recorded their basic digital skills before the classes began, and again after the classes had finished. These digital skills assessments use the Go On UK skills chart endorsed by the Scottish Council for Voluntary Organisations (SCVO). At the end of the classes, 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 project was formulated to discover why the target groups (older adult, with a disability and/or economically deprived) found themselves digitally excluded, and to determine if training and access to equipment would be enough for each person to become digitally included.

The classes themselves consisted of a six-week course titled *Mastering the Tablet*, and were written specifically around the type of tablet offered and taught to the learners. SfDD selected the Android operating system to learn with, as it was more likely that individuals in the target groups would interact with devices in this price scale. 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.

Creating a course specifically for the device we were learning with meant that we could tailor handouts and tuition for the learners. This sidesteps the common issue that technology training courses can be too generalised by trying to fit a wide range of systems.

The initial group of four learners completed six two-hour classes, which ran fortnightly. The idea of running fortnightly classes was to allow the learners time to use the tablet at home between classes; however, the general feedback was that this was too long for learners to wait to ask any questions. Additionally, technical issues meant that one learner was

unable to use their tablet for two weeks. As a result, the other two groups attended weekly classes.

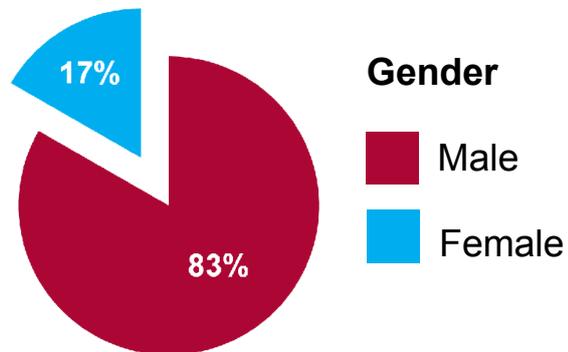
The first two groups used Asus Zenpad tablets, with the final group using the Samsung Galaxy Tab A. Training materials were updated to match the tablet change, which was due to availability of tablets at that time. All tablets shared similar specifications, which included a ten-inch screen to minimise 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 programs smoothly; touchscreens which do not register selections properly or look dim; and processors which cannot keep up with current software. The DfDD tablets cost around £200 each, bypassing the lower grade 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 which do not have internet access at home, could continue to learn outside the classroom and beyond the course without the worries of a contract. Learners also used Wi-Fi in the training room, thus saving data for use at home or when out and about.

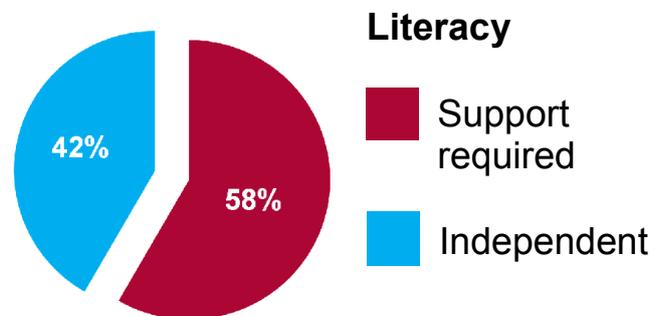
With the learning preparation, equipment and future planning for sustainability beyond the classes in place, the courses ran throughout 2016, and the outcomes of the classes were recorded.

Learner Group Demographics

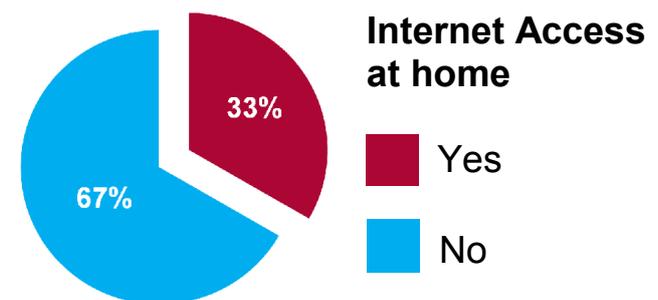
The three groups of learners were predominantly male, and all were native English speakers.



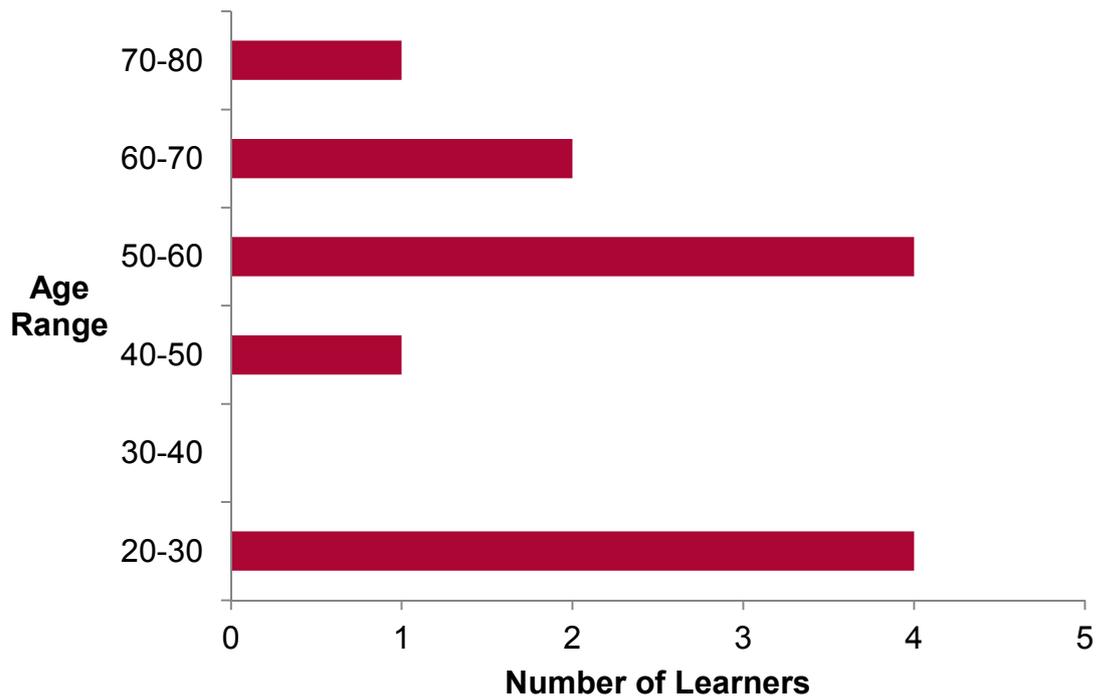
Five of the seven learners were able to read and write to some degree. Of this group, at least three had literacy issues due to visual impairment or learning disabilities.



Approximately one third of 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.



Age of Learners

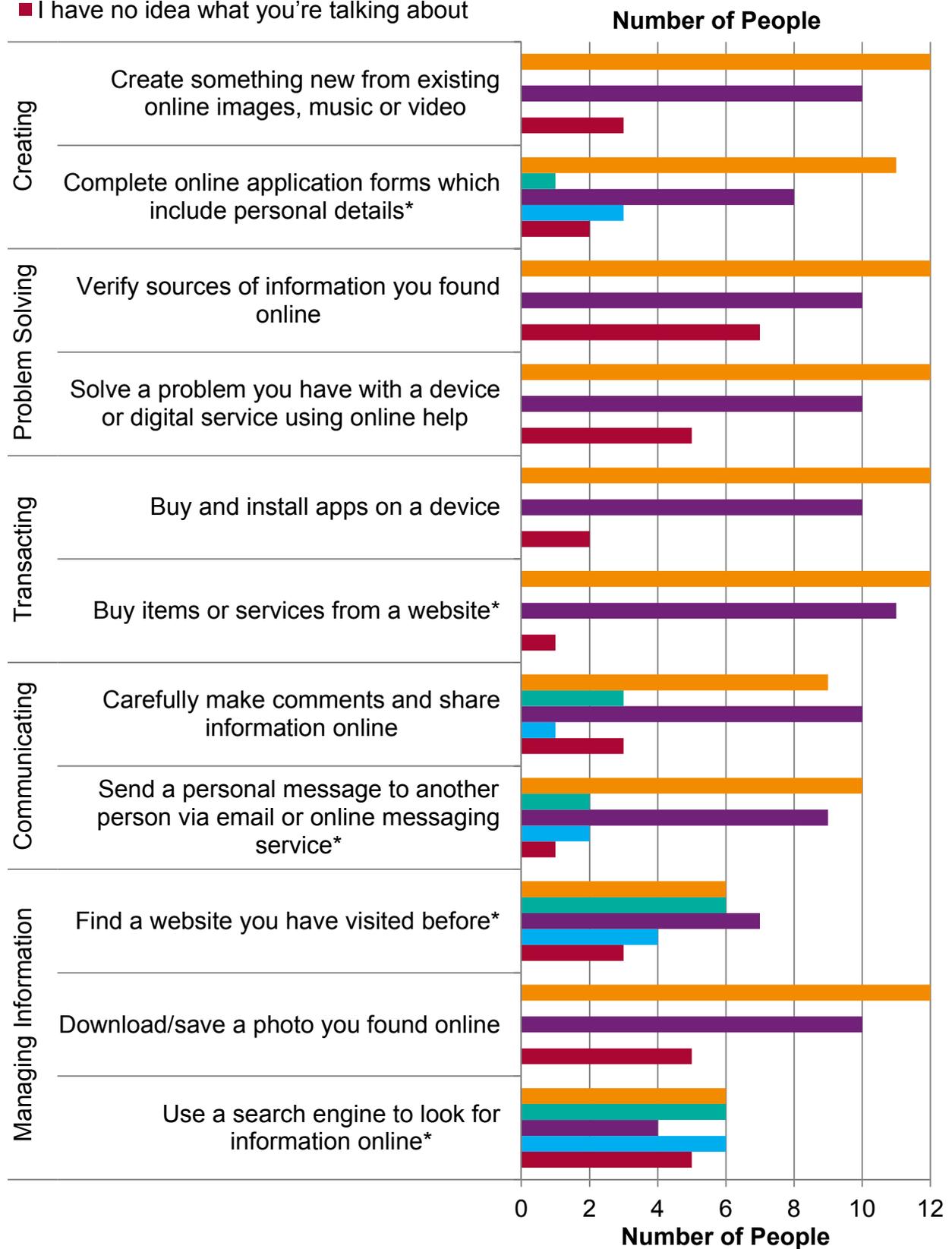


The majority of the learners were older adults, between 45 and 70. Around a quarter of learners were younger adults between 20 and 25.

Summary of *Mastering the Tablet* course

Basic Digital Skills Pre-Class Assessment

- I haven't done this in the last 3 months
- I have done this in the last 3 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



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

Approximately half of the learners responded that they had used a search engine, and that this had been in the last few months. It was usually the same individuals who answered positive to both; however, a number of users had used a search engine with the help of family, friends and tutors. These learners were unable to search on their own, so there is a hidden number of people in the community who identify with being able to browse online, but crucially, not without support.

The remaining half of the learners had not browsed online within the last three months, and a slightly smaller number 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.

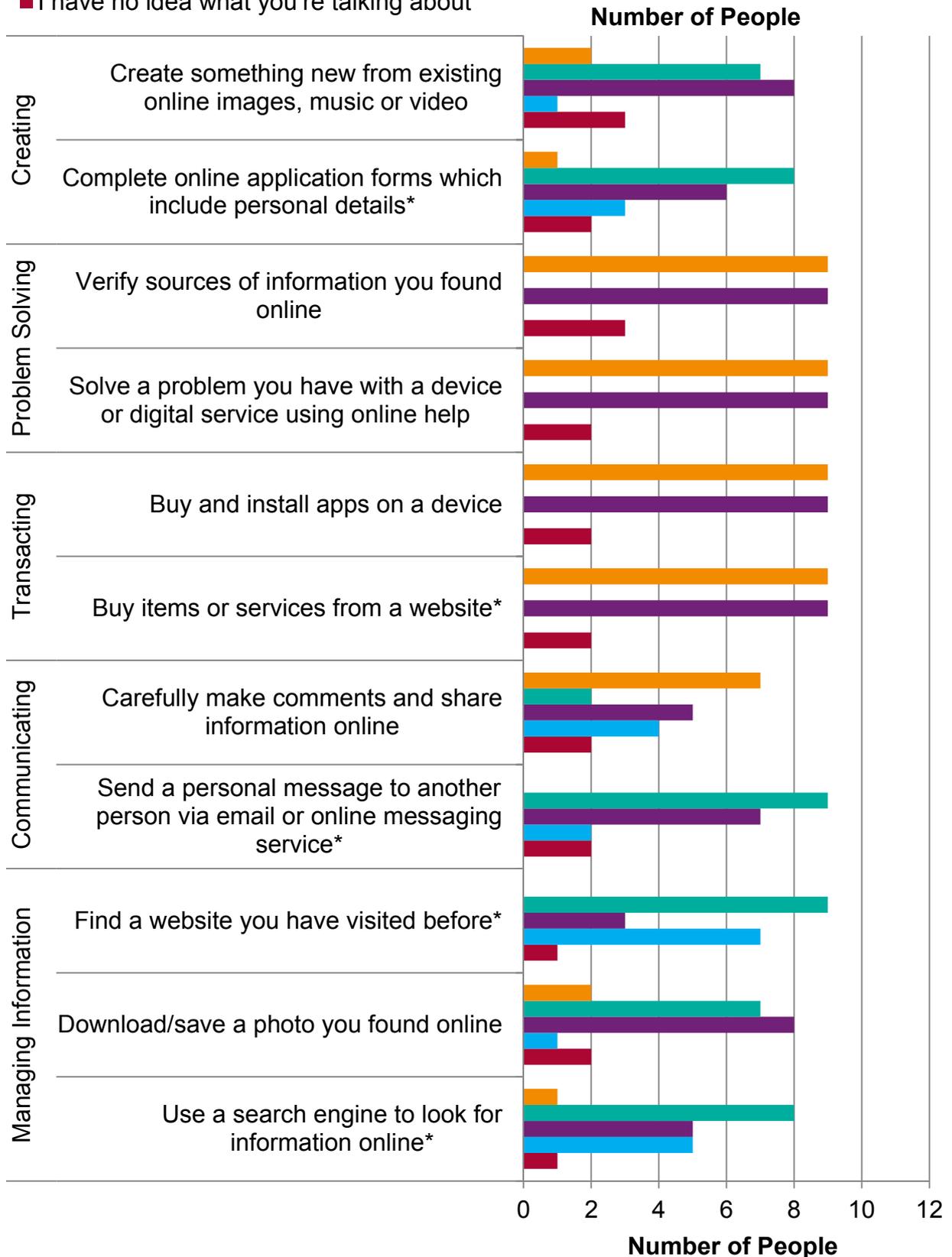
Almost the same proportion of learners who could use a search engine to look online could also find a website they had visited before, although slightly less could do this if asked to. More people understood what we meant by 'website' compared to 'search engine' and this makes sense. Most people refer to 'Googling' something in daily speech, and the term 'search engine' did not make sense to people who are digitally excluded.

Just under a quarter of learners had sent personal messages online or made comments and shared information. These learners often also had support from family or friends, as five of the seven learners were unable to read or write, and of these five, visual impairments meant they found using computer screens very difficult, even with accessibility options enabled (which in themselves, can have complex software settings)

In most other areas of 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. Most of the lack of understanding centred upon verifying sources online and solving problems online. Only a couple of learners felt they could complete applications online.

Basic Digital Skills Post Class Assessment

- I haven't done this in the last 3 months
- I have done this in the last 3 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 three groups 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 the entire group 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 without movement.

Learners were more able to share information online, although sending messages was still difficult. This was largely due to literacy and cognitive ability, 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 what had been taught during the course. Although online purchases are considered a basic skill, this is likely something that most learners on the course would have difficulty with due to understanding of monetary values, and literacy.

Learners were also unable to verify sources of information online and solve problems using the internet. These are 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. Learning this would again be a large undertaking for adults with learning disabilities.

Approximately the same number of learners were able to complete forms online before and after the course. Again, this was mostly inhibited due to literacy issues, and the main difference in the class was that more people had attempted (with support) to fill in forms.

All learners showed three main changes. Firstly, most people in the classes tried search engines, saving photos, finding websites previously visited, sending messages online, completing application forms and creating something new. Secondly, learners' lack of understanding about basic skills decreased following the class. Finally, it was shown that learners had overestimated their computer skills ahead of the classes as some skills were definitively shown to be something they 'could not do' if they were asked to, following the course. This overestimation was sometimes due to family and support information relayed, where previously used skills were remarked upon but perhaps out of context, or in an overly positive light.

Barriers faced by learner groups

Visual impairment

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

Dyslexia

Around a quarter of the learners presented symptoms of text difficulty which matched dyslexia. These were undiagnosed.

Social deprivation

Social learning is important, and this is also true of learning how to use digital technology. A large proportion of learners had few opportunities to speak to others online, meaning even if they learned how, it would be an unused skill due to lack of contacts

Autistic spectrum disorder

Autism presents differently in each individual. In many cases in the class, this translated as problems with sequential learning and following direction from tutors.

Acquired brain injury

Brain injury can include a number of formidable learning barriers. Issues with memory, sequencing, physical impairment and depression or stress can be prominent.

Learning disability

Approximately three quarters of learners had a type of learning disability. This can make the retention of information difficult across time.

Economic deprivation

This is an issue which does not affect learning directly, but due to the pressures of modern life, can mean that 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.

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 or training course can offer individual learners. Following this project, the golden standards which could be aimed for are as follows:

- Planning for individual differences in learners throughout courses. What works for one person does not always match another. Using a range of techniques means there will be something for everyone.
- One-to-one training is optimum for overcoming all barriers faced in these groups.
- Social networks and supports out with the classroom are essential to ensuring that learning continues and is utilised beyond the training.
- Creating fun, interesting learning is important. The learners engaged best when they were able to enjoy the things they created and take part in learning which involved other people.
- Formulation of a clear learning plan and goals. Avoid setting unrealistic expectations.
- Inclusion of an initial meet and greet session of learners before classes commence to gauge the needs and requirements of learners. This helps to set the correct pace for learning.

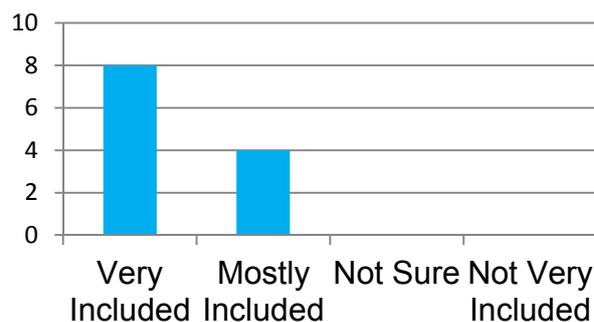
Class feedback on *Mastering the Tablet*

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

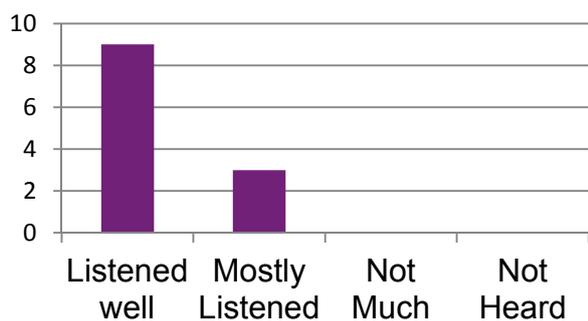
Did you enjoy the computer classes?



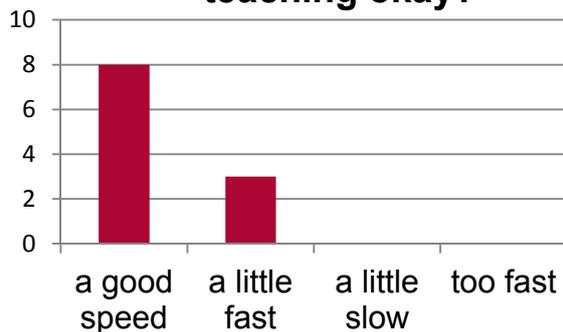
Did you feel included in the class?



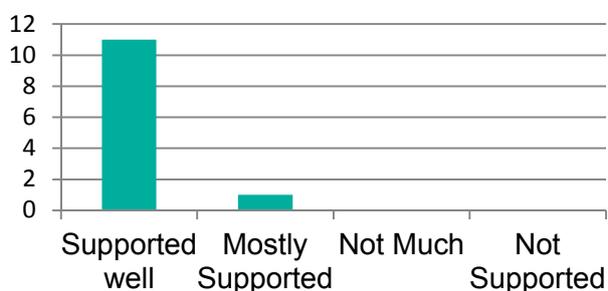
Did you feel listened to?



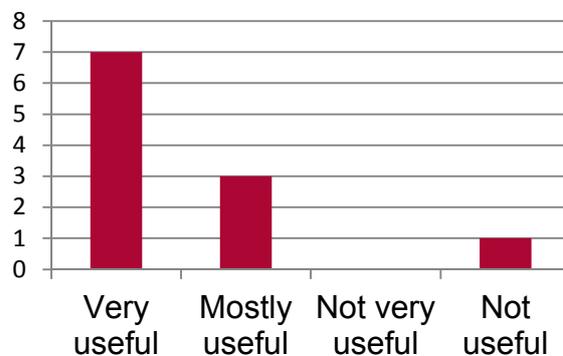
Was the speed of teaching okay?



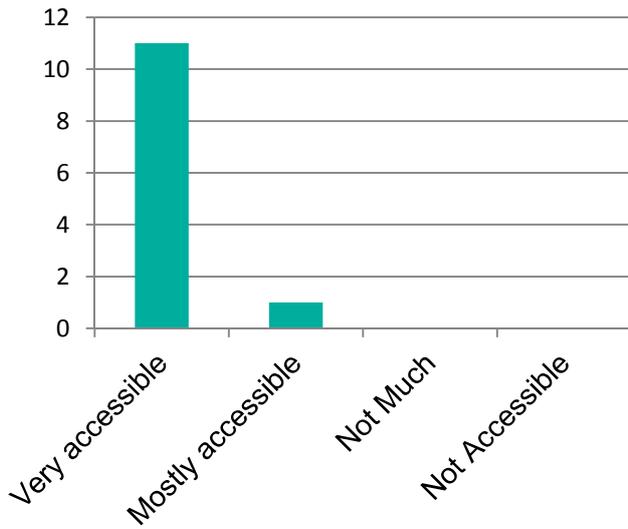
Were you given enough support to learn?



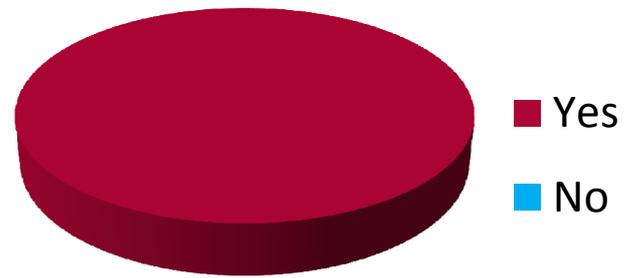
Were the learning materials useful?



Did you find the room accessible and easy to use?



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



After the course, do you feel much safer online?



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

Learners also felt supported. The materials in general (e.g. the booklets for each class) were useful, but one participant felt they were not useful as they could not read what was written within. Direct tuition was more beneficial for this participant.

Most people reported that they felt safer or much safer using tablets online after the classes, 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 training which took account of a range of barriers, most learners did not significantly advance their basic digital skills in line with the Go On UK basic digital skills definitions. However, learners did significantly advance their understanding and use of digital skills when examined in more detail.

All twelve learners were able to use their tablets in ways which they were previously unable. Most learners could pick up their tablet, switch it on and navigate to areas of their own interest, such as games, internet browsers for news and information, and individual apps such as the camera, iPlayer or YouTube. Many were also able to change settings on their tablet such as screen rotation, brightness, and to a lesser extent, switch the Wi-Fi and mobile data on and off. Every learner was able to use their device in a way which benefited them, independently for the most part.

In conclusion, this group of learners took away real digital skills, but at a different level to what is considered within the Go On UK framework. Further, although the basic skills framework makes logical sense, it is also clear that individuals at the extreme fringe of digital exclusion will struggle to fully engage with the skills required to match this when only starting out in the digital world. It is suggested that perhaps another layer of basic skills or pre-basic digital skill level is required to signify that individuals are computer literate in particular ways, before then progressing onto the standardised basic digital skills. The skills learned here were not captured in a meaningful way in the existing framework to currently highlight the learning progress of people facing a range of disabilities.

End of report

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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