# Technology for Higher Education

## What technology is available to support my studies?

During the process of applying for DSA you will meet with an assessor who will carry out an assessment of your needs. Part of the assessor’s role is to suggest to you what technology you could use to help you with your studies.

It is important for you to think in advance of your meeting with your assessor about what kind of tasks you will need to do as part of your course and where you will need to do them. This will give you an idea of what technology you may need.

Research evidence shows that often students with vision impairment use their entire equipment budget, meaning that they sometimes miss out on equipment they would ideally have received. It is therefore important to be able to prioritise the equipment you would like to receive. If you are faced with a situation where the limits on equipment budget could compromise your learning, it is important to discuss this with your assessor and look for alternative means to fund this equipment. For example, you could ask your institution whether they could fund the equipment, or if they have any grants you could apply to.

After you have attended the assessment the assessor will write a report of what technology you will need and send it to you to review. If you are not happy with the recommendations, you can go back to them for it to be rewritten. Once complete the assessment will be sent to your local authority for approval.

It important that you are happy with the equipment allocation for your DSA assessment and that it is appropriate for the duration of your course. If there is something that you will need, tell your assessor. If it is not in the report, they write then you will not be able to get it through DSA!

There is not one solution that will fit for everyone as everyone’s sight and course requirements will be different. Here are some ideas of tasks and the technology available:

### Written course work, essays, and reports

 **Laptop or PC**

One of the most provided pieces of equipment funded by DSA is a laptop or PC. Recently DSA have brought in stipulations that the student should pay the first £200 of the laptop that is provided. If you are unable to meet this cost, you should speak with your institution, who may have alternative funding available.

It is important that the laptop or PC that you are provided has a high enough specification to run the software you will be using. For example, if you are using a screen-reader, it is important that the laptop has sufficient specification to run the screen-reader alongside any course-specific software that you will need to use.

**Built in accessibility**

Windows and Mac OS come with accessibility features already built in, like magnification and an inbuilt screen reader which may be sufficient for your needs. However, it is important to consider the range of tasks that you will need to perform in HE and be open to suggestions from your advisor on specialist options that could supplement built in accessibility options.

**Magnification and Screen reader software**

There are several assistive software packages on the market that can, for example, provide magnification, adjust colour schemes, highlight cursors and pointers, and read documents. Examples include ZoomText, Supernova and JAWS. Some assistive software is available on a USB pen which means that they will work on any computer the pen is connected to. This could be helpful for working on computers in the library or in computer-based teaching sessions.

**Dictation software**

Dictation software, like Dragon Naturally Speaking, allow you to create documents using your voice. You can speak aloud what you want to say instead of typing it and it will appear on the screen.

**Large Monitors and monitor arm**

Monitors come in lots of different sizes and may benefit from having a larger monitor or one with a high resolution. You can also get a monitor arm to suspend your monitor over the desk so that it can be set at a position that is best for you.

**Large print or colour keyboards**

If you are not a touch typist and struggle to see the keys you can get large print or coloured keyboards that might make it easier for you to see. You can also get keyboard stickers that can be stuck on laptop keys.

### Following presentations during lecturesElectronically on tablet or laptop computersOften, presentation slides or materials are available in advance on an internal learning resources page. If your institution doesn’t have this facility a reasonable adjustment would be for lecturers to send you copies of slides and learning material in advance of a session so that you can follow along on your laptop or tablet during the lecture or seminar.Video magnifiers and camerasYou can get a video magnifier for your laptop that allows you to zoom in on a presentation or board where the image is displayed on your laptop. A lower tech option would be to use the camera built into a phone or tablet computer to take a photo and zoom in on the image.Monocular A monocular is a binocular for one eye. You could use this to view a presentation or board at the front of a lecture. Taking notes during lectures and tutorialsDictaphone Dictaphones come in all shapes and sizes. You can use them to record what is said in lectures or tutorials and listen back at a later stage. It is possible to get Dictaphones with vocalised menus if you are unable to read text menus.

### Tablet /Laptop You can use a tablet or laptop to type your notes during the lecture/tutorial. It is important to note that often DSA will not fund both a laptop computer and a tablet computer. If you believe that you will need funding for both for your course, you must be prepared to justify this to your assessor. On some table computers you can use a stylus to write on the screen which then converts your handwriting into text.Braille Note takerIf you are fluent in Braille then you can follow lecture notes on a refreshable braille device. Some refreshable braille devices also allow you to make notes in braille and read them back.Note-taking softwareIt is possible to use software which will facilitate you in taking notes whilst following a lecture. This software records the content of lectures, synchronises it with lecture slides and allows you to ‘bookmark’ important information within the lecture.

### Reading Printed Materials Video Magnifiers and CCTV’SThere are lots of different portable video magnifiers and desk CCTV’s on the market. They come in a variety of shapes and sizes and offer different magnification ranges. On most products you can magnify text, change the colour scheme, and take a freeze frame.

**Scanner or camera with Optical Character Recognition (OCR)**

If you have a laptop or PC you can connect a scanner or camera that, along with OCR software, can transfer printed text to your computer. The software takes the text from the scanner/camera and can transfer it to a document where you can format it to your preferred reading format or can be read aloud by a screen reader.

**Tablets, smartphones, and apps**

You can also get apps, like KNFB reader, that act like the OCR Software above. You can use them to take a picture using the camera on your tablet or smartphone and the app will read the text aloud or you can export the text to another app of your choice for editing.

**Reading machines**

Standalone reading machines have OCR software built in and work by scanning and reading aloud printed material without being connected to a computer.

**Refreshable Braille display and Software**If you are a fluent in Braille then you may want to read your work or course materials using a refreshable Braille display. A refreshable Braille display is a keyboard that you can get for a laptop or tablet that will translate any text on the screen and display it on rows of refreshable Braille cells on the keyboard.

**Embossers**A braille embosser will allow you to emboss your work or notes on to paper for use during your studies.

### Using Lab EquipmentAs part of your course you may be required to do work in a lab or to use specialist equipment. It is possible for some of this equipment to be modified for example, microscopes can be linked to a laptop, projector or large monitor. It is important to talk with teaching staff about this if you anticipate needing such adjustments.

## Remember!

You are your own expert – no one knows your sight condition or how it affects you better than you do, therefore it is very important for you to advocate for the technology that you need. In advance of your need’s assessment think about what your needs are and what will you be doing as part of your course so that you are prepared to share this with your assessor. However, it is also important to listen to the advice given by your DSA assessor and others supporting you, such as the disability team at your institution, as they may be aware of helpful technology that you have never used before.

Your place of study has a duty to make reasonable adjustments under the equality act. This means they are required to make adjustments and ensure that you are not at a disadvantage compared with your classmates while studying. For example, providing course materials in alternative formats or making special examination arrangements, like using a computer.

If your circumstances change during your course you can apply for a top up assessment. This means that if, when you start your course you have problems participating in a module and think that a piece of technology will help or if your sight deteriorates you can apply for additional support.

Ask your place of study what they already have in place. They may have software already installed on computers in the library etc. This might change what kind of software or technology you apply for.

The sooner you apply the better! The later you apply the longer you may have to wait for your equipment, and it is likely that you will not have it in time for the start of your course.

As fantastic as technology is it might not always be the right solution. DSA can also pay for human support, like someone to take notes for you during lectures. This document focuses on technology that can support sight loss, if you have additional needs talk to your assessor as there may be other technology that might help you.

## Further Information

To find out more about other types of technology that can support your studies you can go to:

* [RNIB](http://www.rnib.org.uk/practical-help/technology-hub)
* [QAC Sight Village](http://www.qac.ac.uk/exhibitions.htm)
* [Ability net](http://www.abilitynet.org.uk)
* [Blind in business](http://www.blindinbusiness.co.uk)
* [The Student Support Service](https://thomaspocklingtontrust.eu.rit.org.uk/Pages/Category/student-support)

This document has been compiled by Hannah Rowlatt, Digital Skills Office at RNIB Cymru as part of RNIB Cymru Future Insight Project and Rachel Hewett, Vision Impairment Centre for Teaching and Research at University of Birmingham as part of the Longitudinal Transitions Study.