

TEACHING AND LEARNING

Making Learning Accessible for Students in Further Education and Training

Published in 2016 by AHEAD Educational Press

AHEAD
East Hall, UCD
Carysfort Ave
Blackrock
Co. Dublin

Tel +353 (0) 1 7164396
Email: :ahead@ahead.ie
Website: www.ahead.ie

Written by Connie McKernan

Design and layout by Mitchell Kane Associates

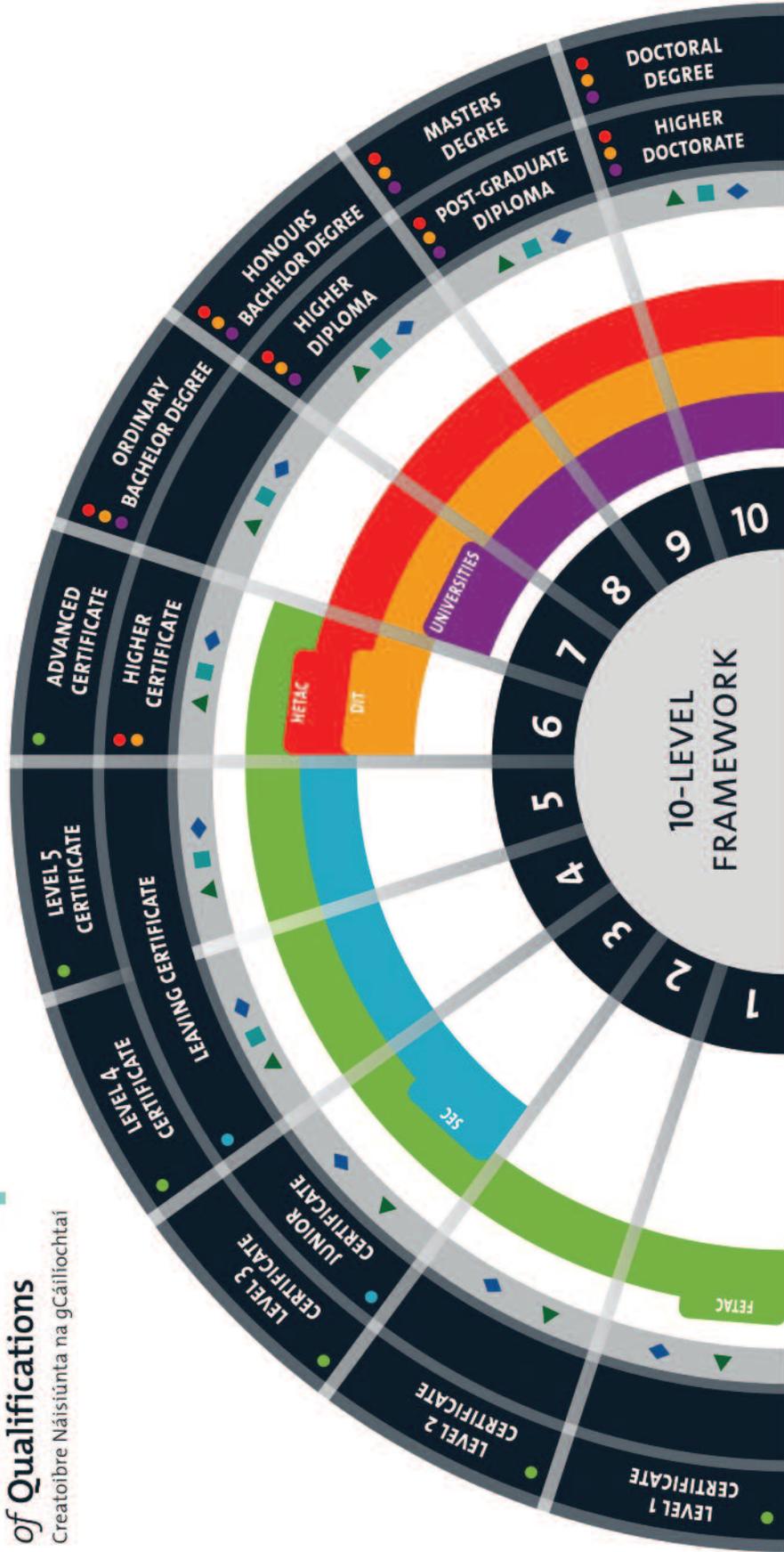
ISBN: 978-0-9954772-1-6

All rights reserved to AHEAD.

This document may be reproduced, stored and transmitted in other forms with the prior permission of the copyright owner, AHEAD

Contents

Introduction	5
Making learning accessible - what is the role of Universal Design for Learning in education and training?	6
How can I use UDL to make learning accessible for students with disabilities?	15
Students with dyslexia	15
Students with physical disabilities	17
Students with Asperger Syndrome	19
Students with mental health disabilities	21
Students who are blind or visually impaired	23
Students who are deaf or hard of hearing	25
Students with intellectual disabilities	27
Students with dyspraxia	28
What does the legislation say?	31
How do I assess what a student with a disability needs?	33
What is the role of technology in education and training?	40
How do I manage boundaries with students?	45
Disclosure – What if I don't know that someone has a disability?	48
Appendix 1 - Examples of assistive technology devices	50
Appendix 2 – Example of a needs assessment form	55
References	59



KEY

- FETAC - Further Education and Training Awards Council
- SEC - State Examinations Commission (Department of Education & Science)
- HETAC - Higher Education and Training Awards Council
- DIT - Dublin Institute of Technology
- Universities

AWARDS IN THE FRAMEWORK

There are four types of award in the National Framework of Qualifications:

- ▲ Major Awards: are the principal class of awards made at a level
- ▲ Minor Awards: are for partial completion of the outcomes for a Major Award
- ▲ Supplemental Awards: are for learning that is additional to a Major Award
- ▲ Special Purpose Awards: are for relatively narrow or purpose-specific achievement

Introduction

The last decade has seen a significant change in the profile of learners enrolling in further education and training courses. The sector now has a wide diversity of students participating in courses and we can anticipate that this trend is set to continue. Solas and the HEA, in fact have outlined clear plans to increase the participation rates of previously underrepresented groups in higher education.

The student population now comprises students from a range of different socioeconomic and cultural backgrounds including those for whom English is a second language, mature students and those with disabilities. Further education and training is an important option for these students and has the advantage of offering locally based, flexible courses with a strong tradition for student centered learning. This type of approach provides students with a wide range of learning opportunities as it incorporates flexible learning strategies such as solution focused, self-learning, portfolio based evidence and collaborative group learning in addition to more traditional methods such as lectures and tutorials. These flexible approaches to teaching and learning are further enhanced by the accessible teaching and assessment methods inherent in FET courses. This type of flexibility helps ensure that learning is barrier free for those students who learn in different ways.

This guide has been designed to assist teaching staff in further education and training to have a better understanding of the needs of students with disabilities. It describes ways of using principles of Universal Design in the design and delivery of courses so that all students have access to the same learning opportunities. Building accessibility and inclusive practices into the design and delivery of courses will benefit all students and will ensure that further education and training reflects the spirit and requirements of current legislation. Adopting a Universal Design approach will also help to ensure that the inclusion of students with disabilities is embedded into mainstream practice thus reducing the need for specialist supports to be put in place at a later stage.

Making learning accessible - what is the role of Universal Design for Learning in further education and training?

Setting the scene

Further education and training now includes a wide diversity of learners comprising of individuals who all learn differently. Furthermore, each group of learners is different, with widely different cultural, religious and socioeconomic backgrounds and levels of prior learning. They will be of varying ages, have a range of learning styles and will have a variety of likes, dislikes and interests. Some of these learners will have a disability.

Yet, in many respects, we tend to teach students as if they are all the same, providing them with the same textbooks and learning resources, expecting the same rate of progression through courses and assessing their learning attainment in the same way. Education and training has traditionally been designed to meet the needs of the average learner, the one who can read, write and learn in a text based environment without too much difficulty. The traditional approach to learning places a strong emphasis on printed text, lectures and written examinations. This approach was thought to provide a good learning framework for most students and technology has done much to help students access learning materials.

The typical curriculum, however is littered with barriers and roadblocks for many learners and those with disabilities are most vulnerable. A student with a text based disability, such as dyslexia, for example, is disadvantaged because s/he is required to learn largely from text books and to demonstrate what s/he has learned through written assignments or examinations.

Universal Design for Learning (UDL) turns this scenario on its head by encouraging the design of flexible curricula that are responsive to the needs of all students. UDL addresses the primary barrier to learning, the one size fits all, inflexible curricula that presents barriers for many students. The student with dyslexia, for example, might be able to learn better by carrying out experiments, viewing YouTube clips or using their Smart phones to listen to audio books.

Recent years have brought about change in thinking about how we address the issue of diversity in the classroom. Greater use of technology and a greater flexibility in teaching and learning strategies have benefitted many students. Terms such as 'blended learning', 'flipped classroom' and 'peer review' are becoming increasingly familiar. One Donegal school provides us with a very good example of the use of a non-traditional teaching approach called Instructional Leadership. This approach to teaching and learning is based on research that indicates that a teacher's 'instructional repertoire' is one of the best predictors of student's performance. This particular school has become one of the top ranking in Ireland as result of adopting this student led approach.

Carl O'Brien, Irish Times, 12/01/16

<https://www.irishtimes.com/news/education/a-teaching-revolution-that-makes-the-classes-come-alive-1.2488446>

What is Universal Design for Learning?

Teachers will be aware of increasing levels of diversity in the classroom. It is now accepted that further education and training classes will be comprised of a range of different types of learners: those who are single parents, foreign nationals, long term unemployed or returning to education as mature students. It is estimated that at least one in every ten Irish citizens will have some form of disability so it is likely that the majority of classes will include some learners who have disabilities. They may not be obvious as many disabilities are non-visible but they will be present in every classroom. Teaching diverse groups of learners with varying needs and abilities presents many challenges. Traditional 'chalk and talk' methods alone can lack the flexibility required to ensure that all students are provided with opportunities for learning.

UDL provides us with a different, more flexible way of looking at education so that all students can be included. With UDL, the approach to curriculum design begins with the expectation that the curriculum will be accessed by a diverse group of learners with varying levels of skill and ability. It provides a set of principles for designing the sort of curricula which will give all students equal opportunities to learn regardless of ability, age, culture or language.

(Joan Maguire of the University of Connecticut set out a matrix of nine principles of Universal Design for Instruction incorporating definitions and examples of how the principles might be realised in post-secondary education. This matrix has been adapted and expanded by Ann Heelan, Executive Director of AHEAD in the context of further education and training in Ireland and can be viewed on the following link, pp. 15-21)

http://www.etbi.ie/wp-content/uploads/2015/05/ETBI_Summer_2015.pdf

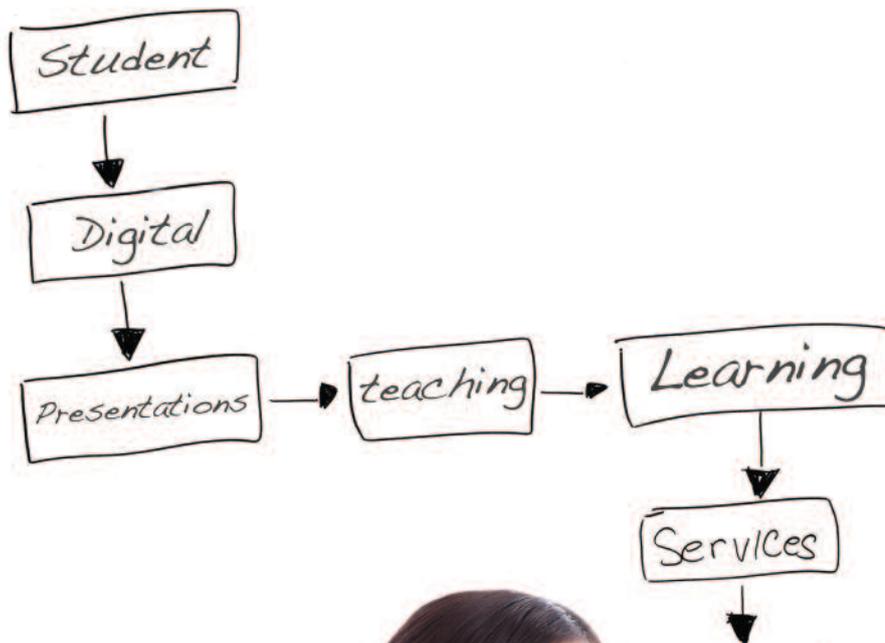
UDL provides a framework for the design and delivery of flexible, blended learning with instructional methods, materials and assessments that suit all learners. The UDL approach to instruction can be used with a diverse body of learners without the need for any special accommodations and without compromising academic standards. Indeed, research has shown that both learner's grades and retention improve when taught in a UDL classroom.

Recognising that each individual learns in a unique way, whether or not they have a disability, it posits that all curricula should be designed from the outset to meet the needs of the greatest number of users making costly and time consuming changes at a later stage unnecessary.

Using flexible instruction methods and materials:

- Gives learners an opportunity to acquire information and knowledge in a variety of ways
- Enables them to learn in the most effective way possible
- Provides all learners with alternative ways of demonstrating what they have learned
- Engages and motivates learners by tapping into their interests, aptitudes and prior knowledge

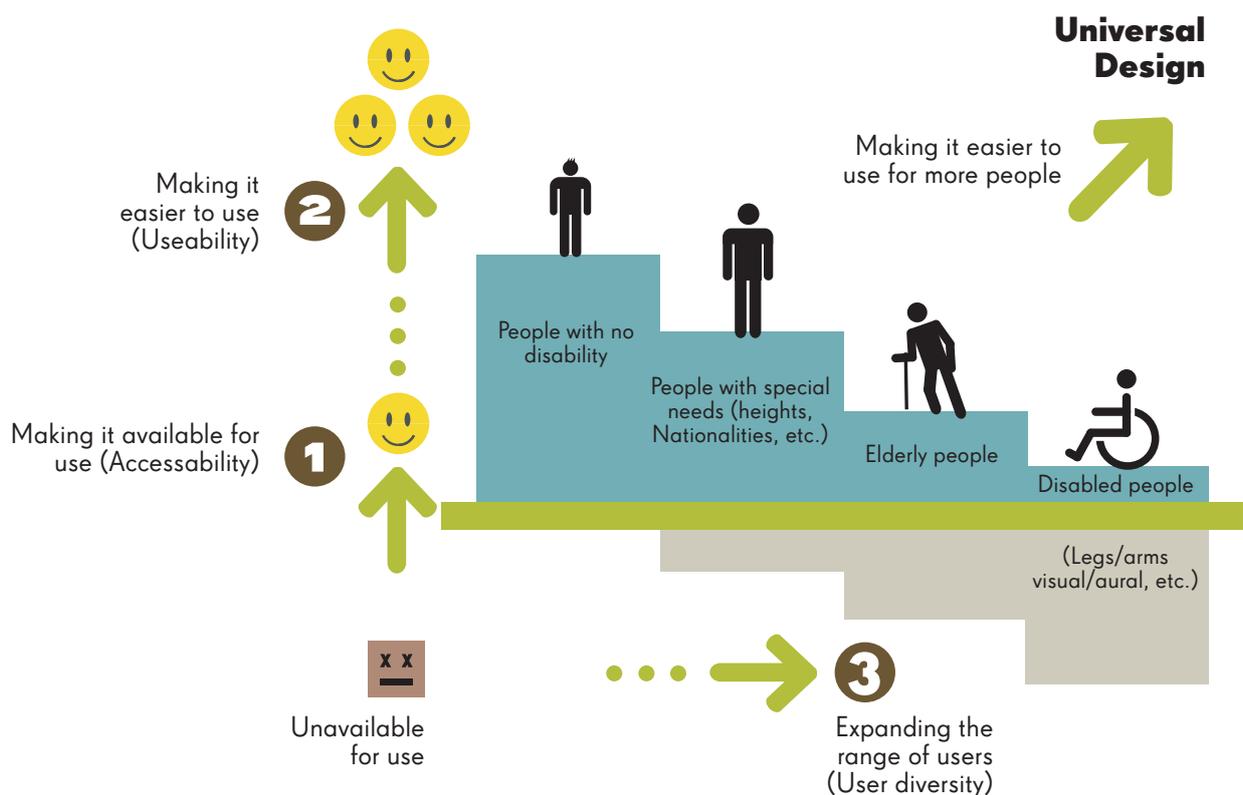
Students are more involved in their learning and benefit from being taught how to develop lifelong learning skills and become independent learners.



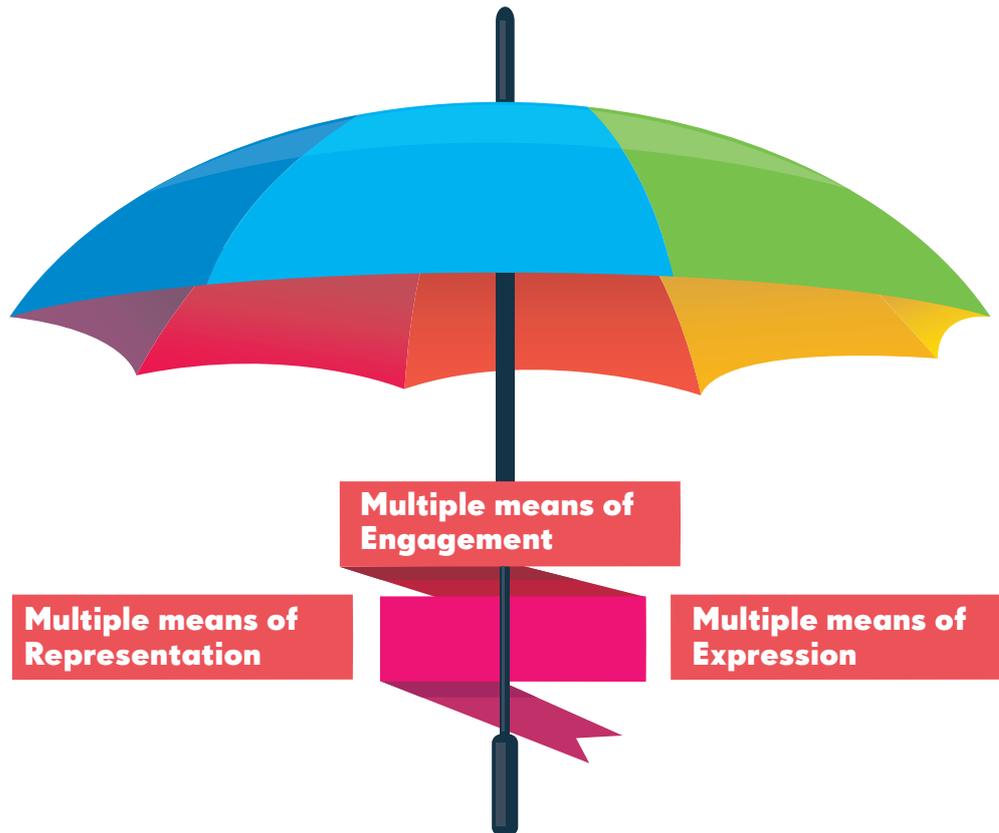
Where did UDL originate?

The UDL model was pioneered in the 1990s by Dr David Rose at the Centre for Applied Special Technology (CAST). It was inspired by the Universal Design (UD) movement in architecture and product development which aims to make environments and products as accessible as possible so that they can be used by everyone to the maximum extent possible, irrespective of ability or disability.

In other words, UD is about designing for all potential users, as distinct from the average user. Examples from everyday life would include automatically opening doors in buildings and closed caption text on our TV screens. UD involves designing accessible features into products and environments from the outset rather than retrofitting them at a later stage. The UD movement has been hugely influential and today it is not possible to construct buildings without incorporating ramps, lifts, toilets and parking facilities for people with disabilities.



Universal Design for Learning



So how does UDL work in practice?

The three principles which underpin and guide UDL are:

- Multiple means of Representation
- Multiple means of Expression and Action
- Multiple means of Engagement

Many factors affect how students learn. Some of the variables affecting learning include learning style, age, disability and spoken language. The first step in UDL is the understanding that everyone is different and bringing that understanding to the design of lesson plans and course delivery.

Multiple means of representation – the ‘What’ of learning

- Since learners differ in how they process information, multiple means of representation applies in UDL. A learner who is deaf, for example, will approach learning content in a different way than, say, a learner who is blind or one for whom English is a second language. Some learners will readily access information in a visual format whilst others may need other types of representation such as auditory, digital or Braille formats. So information such as course content needs to be presented, or ‘represented’ in a number of different ways so that all students have an equal chance to meet the learning outcomes.
- Perceptible information such as a course text can be presented in both speech and written format, text can be enlarged for people with visual impairments and sounds can be amplified to make it accessible to learners who have hearing impairments. Providing examples, highlighting critical information and using multimedia formats will help support and consolidate learning.

Examples

- Adopting a multisensory approach that uses auditory, visual, and kinaesthetic senses in learning, particularly with learners who have an intellectual disability
- Using multiple modes of delivery such as lectures, group discussion, film and internet resources
- Providing multiple pathways through content such as exploring ideas through social media or group projects
- Selecting curriculum materials that are accessible and well organised with indices, references, glossaries and practice exercises where possible
- Supporting learning by posting syllabus, study guides, class notes and key references online so that they can be easily accessed
- Providing guidelines and rubrics for writing assignments and answering examination questions
- Providing multiple opportunities for learning such as cooperative activities, group discussion and research
- Showing learners what to aim for by providing them with examples of excellence in assignments and examination answers
- Keeping communication simple and providing information in small chunks, giving concrete examples whenever possible
- Providing both written and spoken descriptions for all images, graphics or videos used in instruction
- Using the sort of technological devices that students are familiar with as teaching and learning tools. Phone apps, social media and YouTube videos can be useful resources for making information accessible

Multiple means of Expression and Action – the ‘How’ of learning

Since we all approach tasks and express ourselves in different ways, multiple means of action and expression come into play. A learner who has dyslexia, for example, may be very good at the practical side of science but can do very poorly in a summative written examination. Course materials are usually presented in text format which can be inaccessible for some learners. Providing information in alternative formats such as illustrations, verbal explanations, storyboards or film can help learners to make sense of the information they are presented with. Giving learners plenty of opportunities to practice and demonstrate what they have learned whilst providing ongoing, specific feedback will help support learning and motivation.

FETAC’s use of portfolios as evidence of learning, as opposed to examinations and assessments only, is a very good example of the use of multiple means of action and expression.

Examples

- Providing activities which encourage exploration and experimentation and including tasks which require the use of imagination and problem solving to achieve their outcomes
- Using social media and interactive web tools such as discussion forums, annotation tools and animation presentations
- Encouraging the use of mind mapping and technological devices as tools for learning
- Using multimedia such as storyboards, film, web design, story webs, concept mapping tools, pod casts
- Providing students with alternative ways of demonstrating what they have learned in assessments, for example, self-assessment, portfolios of evidence and practical projects
- Encouraging cooperative learning: Assigning group work projects where learners have clear, measurable goals, roles and responsibilities so that they can practice using a range of skills.
- Encouraging self-reflection in discussion groups or learning journals
- Engaging learners in the process of designing and conducting their own research, analysing findings and presenting results in class. Data can be gathered using search engines such as Google Scholar
- Setting aside time for learners to respond to what they have learned and engage in critical thinking by summarising and analysing key points, comparing, contrasting and discussing the strengths and limitations of main ideas
- Using formal debate where learners can present their viewpoints
- Reserving time for learners to present their work through multimedia

The following link provides some useful information on the use of multimedia in teaching and learning
<http://edtechteacher.org/index.php/teaching-technology/presentation-multimedia>

Multiple Means of Engagement – the ‘Why’ of learning

We all differ in how we become engaged with and interested in subject matter. Learners are stimulated by different things and motivated to learn for different reasons. Some students like to be challenged by new ideas or ways of approaching things whilst others prefer routine and repetition. Learners tend not to pay attention to information that does not interest them or is not relevant to their lives. Providing multiple means of engagement allows flexibility in how learners interact with and interpret the learning material. Providing variation in activities which give scope for active exploration of ideas, choice and decision making, can promote active learning and engagement with the subject. Offering a choice of tools, levels of difficulty and learning methods will help support diverse learning networks. Designing projects, agreeing objectives and assigning roles are good ways for students to engage with a learning task.

Examples

- Ensuring that students know what they are meant to do, the standard expected, and the learning outcomes on which their work will be assessed
- Creating a collaborative learning environment by building in peer mentoring, discussion forums and cooperative learning
- Providing learners with options in the type of tools, materials, content and format they use has been shown to increase learners motivation and engagement
- Activities that have a clear purpose and are relevant to real life are more likely to engage learners and sustain their interest
- Working with student’s interests within the framework of the course will be unexpected and bring an element of surprise to the learning content
- Ongoing, specific feedback on a learner’s performance is essential in maintaining motivation and allowing them to adapt and improve their performance
- Varying activities and their level of complexity will challenge learners and help maintain their interest as will varying resources and sources of information
- Heightening awareness of the importance of goals and objectives and requiring learners to formulate or restate goals
- Encouraging the setting of long term goals and short term objectives
- Encouraging learners to learn strategically by planning and assessing their own work

How can I use UDL to make learning accessible for students with disabilities?

Making learning accessible

Gaining access to further education and training can be a critical step in achieving equality of opportunity for many individuals. The UDL approach enables students to learn in ways which suit them and provides flexibility in how their learning is assessed. This brings an inherent fairness to the learning and assessment process.

How can I make learning more accessible for students with dyslexia?

DYSLEXIA
DYSLEXIA

Learners

Students with dyslexia form the largest group of students with disabilities in higher education so you are likely to encounter someone with this particular disability on further education and training courses. Dyslexia is a specific learning difficulty which is primarily characterised by difficulties with written language. The condition affects people in different ways and to varying degrees and most individuals develop a range of coping strategies.

Students with dyslexia are likely to have difficulty with the mechanics of reading, writing and maths and will generally need a bit longer to complete tasks involving these elements. They are likely to have difficulty with spelling and notetaking and can find it challenging to listen and take notes at the same time. They may have difficulty remembering things or with organising their work.

Students with dyslexia will do very well in further education and training with appropriate supports and the use of assistive technology.

Teachers

Participating in further education and training can be challenging for students with dyslexia but there are a number of strategies which may prove useful:

- A multi-sensory, practical approach works best so make use of demonstration, videos, flow charts, diagrams and other visual cues when delivering classes
- Keep text simple and break it down well into chunks, using bullet points and clear headings
- Break complex topics into smaller, simpler sections and avoid unnecessary jargon
- Highlight patterns or themes in subject matter as this enables students to make connections and associate ideas
- Encourage students to use mind mapping technique and assistive technology when taking notes, completing assignments and preparing for examinations



CASE STUDY

My name is Charlotte and I'm doing a graphic design course at my local college. I've always been very creative and love the course, particularly the practical elements. I also have to develop a portfolio, carry out research and make presentations to my class. Although I have dyslexia, my reading and writing is ok but my spelling is very weak and I have very poor short term memory. This makes it difficult for me to retain the information I have learned and I sometimes find it difficult to find the words I need to express myself, particularly if I'm stressed.

I met with my tutor and disability officer to discuss these problems and we agreed that I could have really good spell check software installed on my laptop and that I can use a Live Scribe pen to record notes. I will also be able to submit a video recording of my presentations rather than making them 'live' in front of the class. This will take a lot of pressure off and the videos can be used as evidence for my portfolio. My tutor is going to show me how to use mind mapping techniques to help me organise my work and help me remember things. I am also going to get an extra time allowance during examinations which will be a great help.

How can I make learning more accessible for students with physical disabilities?



Learners

A wide range of physical conditions can limit a person's mobility. Some of these conditions can also impair strength, speed, stamina, balance, co-ordination and manual dexterity. Access is a major issue for students with reduced mobility and there can be difficulties with gaining access to buildings, particularly older or historical ones. Getting from place to place to attend lecture or tutorials takes more time and fatigue is common.

Teachers

It is important to know exactly what sort of barriers students are likely to encounter in a learning environment. Some, for example, might have difficulties with notetaking or page turning whilst others might need assistance in reaching shelves and equipment in the library.

Tip: Individual students will be able to identify potential barriers and possible solutions.

- Access issues need to be discussed with students at an early stage and suitable arrangements put in place for attending lectures, tutorials and placements if necessary
- A wheelchair user or a student with limited mobility may encounter obstacles or barriers in getting to class on time. Flexibility around timekeeping and attendance may, at times be needed - but ground rules need to be agreed with individual students
- Arrangements for assistance may need to be made with library staff for access to card indexes, bookshelves, microfiche and other equipment
- Assistance may also be needed with the manipulation of documents and page turning
- Ergonomic chairs or adapted work stations may be needed as well as assistive technology devices such as a roller ball mouse or voice activated software
- Some students will need to be accompanied by a personal assistant
- Staff need to be familiar with the building's emergency evacuation plan for students who have limited mobility



CASE STUDY

My name is Paula and I sustained a physical disability as a result of a serious accident when I was younger. I have limited use of my upper limbs and my fingers are fairly weak but can get around using a power wheelchair. I have a personal assistant who helps me with the day to day things like washing and getting dressed.

I am doing a business administration course by distance learning and use voice activated software for taking notes and doing assignments. Because I have such limited use of my fingers, I found a conventional keyboard very difficult to use. I now have a large keyboard and tracker ball mouse which has made a big difference to my typing. I use autocorrect and sticky keys as well which saves a lot of time and energy.

I am hoping to get a part time job and have been out on a couple of placements and I got on well. The only problem is that I live in a small midlands town and most of the small offices and businesses here are not wheelchair accessible which limits my options.

How can I make learning more accessible for students with Asperger Syndrome?



Learners

Asperger Syndrome (AS) is an autism spectrum disorder which is thought to affect two in every 10,000 people. The syndrome is often characterised by rigid patterns of thinking and behaviour. There may be a preoccupation with specific subjects to the exclusion of all others. They prefer repetitive and rigid routines and rituals and have difficulty with interacting at a social or emotional level with others. Many individuals are of average or above average intelligence but lack the skills to communicate easily or interact socially with others. It is estimated that between 50% and 90% of people with Asperger Syndrome will have difficulty with motor co-ordination. This can affect their balance, manual dexterity and handwriting. Experiencing depression and anxiety is also common for people with this condition so learners need to know what support services are available to them.

Some people have exceptional memory for detail and can be very creative and original in their thinking. Some of the famous people believed to have/had AS include Bill Gates, Einstein, Mozart and Alfred Hitchcock. They may however have difficulties with reading social cues and tend to take things literally. Some individuals may also have difficulty with cognitive skills such as problem solving, organisation and abstract thinking. Routine is very important for people with Asperger Syndrome so some students might have difficulty coping with changes in routine or new situations.

Teachers

Each individual will have different requirements and carrying out a needs assessment will help determine the best approach.

Some of the following strategies may be useful:

- Consistency and routine are very important. Prepare the student well in advance for any changes to their normal routine
- A visual approach works best so use graphics, demonstration, video and storyboarding where possible
- Individual tuition will help students to develop their study skills and to structure and organise their work
- Some students can find it difficult to listen and take notes at the same time so will need to be able to use a recording device in lectures and tutorials
- Some people may find it difficult to work in a group so you may need to look for alternatives to group assignments
- People with Asperger Syndrome tend to have a natural affinity with computers. Regular computer access will give students a break from social interaction and provide them with a quiet space in which to work
- There can be a tendency to take things literally, so avoid figurative and abstract language and be explicit when giving instructions or explaining things
- Some students may be sensitive to light, particular smells or noise. This may be particularly apparent in laboratory settings
- Try and give students some space. Seated at the end of a row, for example or sitting examinations in a separate room
- It may be helpful for some students to have examination instructions explained to avoid confusion and minimise anxiety
- Students are likely to need additional time to complete assignments and examinations
- Some students may find multiple choice questions confusing so alternative types of assessment may need to be considered
- It is estimated that between 50% and 90% of people with Asperger Syndrome will have difficulty with motor co-ordination. This can affect their balance, manual dexterity or handwriting
- Experiencing depression and anxiety is common so students need to know what support services are available to them. Keeping things simple and clear and minimising ambiguity will help reduce anxiety



CASE STUDY

Ed was identified as having Asperger Syndrome during a needs assessment when he applied for a web design course. He prefers to work alone so finds it very difficult participating in group work and tutorials. Ed is also something of a perfectionist and feels that his classmates fail to make the same effort that he does and insists on telling them so. He prefers to focus on specific areas of interest and resists becoming involved in new areas.

Ed is only beginning to realise that the way in which he interacts with other people is different from that of his classmates. He finds it difficult to pick up on social cues and always says what he thinks. This sometimes alienates him from his classmates but Ed does not really understand why this should be a problem.

How can I make learning more accessible for students with mental health disabilities?



Learners

A recent report published by the Royal College of Surgeons in Ireland showed that one in five young Irish adults was experiencing mental health problems. There are a wide range of mental health conditions but symptoms have traditionally been divided into two main groups, 'neurotic' and 'psychotic'. Neurotic symptoms are most common and could be described as extreme forms of normal emotions such as panic attacks, anxiety or depression. Less common are the more psychotic symptoms which affect a person's sense of reality. These symptoms include hallucinations, paranoia or delusions where the individual experiences hearing, seeing or believing things which no one else does. The nature of psychological illnesses means that they can be episodic and sporadic. Some individuals have just one episode of illness, some can have long periods of wellness whilst others ability to function can vary from day to day. These conditions can affect an individual's day to day functioning and quality of life. Modern medication can be very effective in controlling the symptoms of mental health conditions although some can cause side effects such as drowsiness, dry mouth or blurred vision.

Teachers

Increasing numbers of people with mental health disabilities are entering or returning to further education and training. Some will have gained qualifications in the past and now need to focus on dealing with the structures, demands and routines involved in studying.

The impact of a mental health difficulty can vary greatly from one person to another. Some students may have no difficulty in coping with everyday student life whilst others may need certain accommodations to make things more manageable.

Some learners can have difficulty in meeting assignment deadlines and stressful situations such as examinations and managing multiple tasks can have an impact on their academic performance. Prioritising tasks and meeting deadlines can be difficult for some individuals and handling change and dealing with negative feedback pose problems.

Some individuals can lose confidence in their ability to perform tasks and it can be difficult for them to sustain motivation and stamina for long periods. Participating in further education and training however can be important in providing structure, consistency and stability. Being actively involved in the learning process, making progress and achieving goals can be a real force for positive change in confidence and self-esteem.

Some of the following strategies may be useful:

Focusing on the positive and providing ongoing, constructive feedback can be really helpful for learners with mental health disabilities.

- Provide key information such as syllabus, reading lists and course notes online so that they can be referred to
- Be clear about what is expected in terms of course requirements. Important information such as assignment deadlines and methods of grading and assessing student's work should be available online
- Check that the person understands what is expected
- Set clear, achievable goals and provide ongoing, constructive feedback to motivate the learner
- Agree targets and time frames for course work
- Eliminate, where possible, physical stress triggers such as excessive noise or crowding
- Negotiate arrangements for time extensions for assignments if needed
- Some individuals may need to sit examinations in a quiet room
- Be prepared for setbacks and possible temporary disengagement from the course
- Ensure that all students are made aware of the support services available to them
- Make yourself aware of where you can access support and advice if you need it

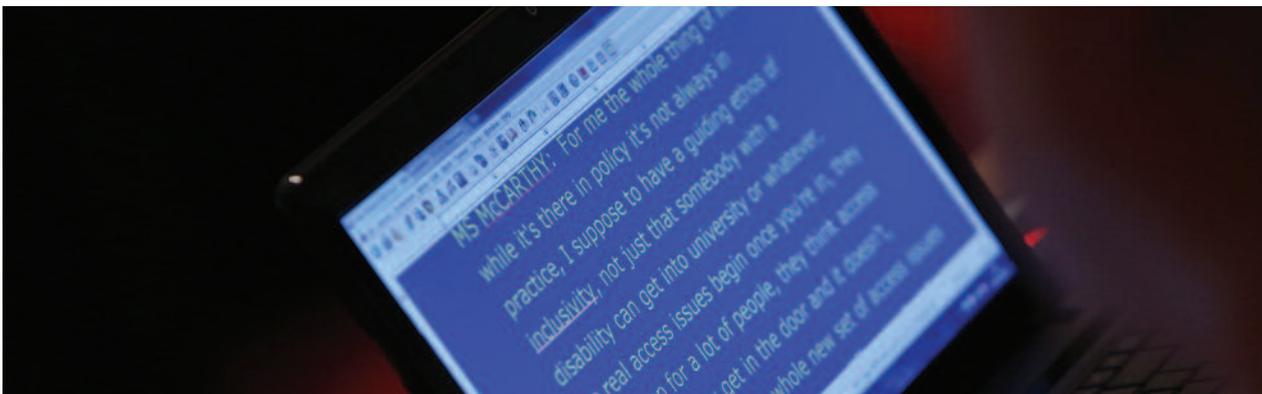


CASE STUDY

My name is James and I'm doing a part time social sciences course which has made a great difference to my life. I have had mental health difficulties for the last five years and had to drop out of college because I just couldn't manage and needed to get my medication sorted out. It took the best part of a year before I felt strong enough to try again and so far things have been going well.

Because the course is part time, I can do a lot of the work at home in my own time. So it doesn't matter if I'm not feeling great, I just do the work when I'm up to it. So far, I have only been late with one assignment and my tutor made allowances. I know that I will get extra time during examinations and will be able to take them in a room on my own if I need to. All these things reduce my anxiety and help get me through the course.

How can I make learning more accessible for students who are blind or visually impaired?



Learners

Blindness or visual impairment is a sensory disability where the level of impairment varies greatly, with some people having no sight while others will be able to see light, shapes or movement. Limitations imposed on reading and mobility can make it difficult for some students to access the learning environment.

Although they can hear lectures and discussions, blind students are unable to access materials which are only presented in printed or visual format. This includes presentations, textbooks, course syllabi, examination papers, demonstrations, films and internet sites.

It is estimated that it will take a person who is blind or visually impaired up to 60% longer to complete a written piece of work than a sighted person.

Some students with visual impairments will be able to see print which is enlarged or can read material available in Braille. Many will make use of assistive technological devices such as screen readers, scanners or voice recognition software which enables them to write text and use computer applications using their voice rather than a mouse or keyboard. Students who use some form of technology in the classroom will also have the same requirement during examinations. Some students may use guide dogs which will need to be accommodated in all locations.

Teachers

In recent years technological devices have dramatically reduced many of the barriers to education and training for people who are blind or visually impaired.

These students need access to learning materials in a non-visual way and this is now possible with assistive technology which the majority of blind students are likely to use.

Some of the following strategies may be useful:

- Course materials may need to be made available in alternative formats
- Keep reading lists focused and direct students to key texts and online resources
- Ensure that reading lists, syllabi and other key information are available in alternative formats such as audiotape, Braille, large print or online
- Remember to convey information orally as well as in writing during lectures
- Front seats may need to be reserved for students with low vision
- Encourage students to be independent learners through using assistive technology tools such as voice recognition software or screen readers such as JAWS
- Be flexible in assessing student's work. If a student is unable to carry out a task, consider alternative assignments that will allow them to demonstrate their knowledge of the subject matter in an alternative way
- It can take up to 60% longer for a student with a visual impairment to complete a piece of work so additional time will be needed for assignments and examinations
- Some students may need to use a reader or scribe during examinations



CASE STUDY

My name is Derek and I have gradually been losing vision in both of my eyes since I was 8. My vision just became increasingly worse and now I have hardly any vision left at all. The worst point for me was when I was moved to a special school and lost contact with most of my school friends. I had always been good at science and maths but it was a struggle to keep up until I learned Braille and how to use computers and a screen reader on my laptop. I was able to start using e-mail and Facebook so I could get in touch with my friends again. Things really started to improve at that point.

I'm at college now and things are working out well. I get a lot of support from my teachers who make sure that I get all the lecture notes and presentations online. I also get all the messages that are posted on the notice boards by text which is great. My tutor is trying to organise a placement with a local accountant to see how I get on. So far, so good.

How can I make learning more accessible for students who are deaf or hard of hearing?



Learners

Around 17% of the population in Ireland has some form of hearing loss, ranging from mild to profound. People who are hard of hearing are more likely to wear hearing aids and may use spoken language to communicate. Profoundly deaf people are likely to communicate through Irish Sign Language.

People who are deaf or hard of hearing can face significant obstacles in a learning or work situation. There are particular barriers in relation to the use of the English language as they cannot hear or can only partially hear what is being said so they are disadvantaged if things are not written down. Individuals who have residual hearing may use a hearing aid or avail of a loop system to amplify sound. Others may speak or use Irish sign language to communicate or can lip-read what people are saying. Students who are deaf may use services such as Speedtext to take notes during classes and are likely to need additional time for the completion of assignments or examinations.

Teachers

In teaching students who are deaf or hard of hearing, the emphasis needs to be on making course materials available in visual or written format.

Some of the following strategies may be useful:

- Classrooms need to be well lit and seating arranged so that learners can see other people's faces
- Audio loops need to be used where possible and background noise reduced to a minimum
- Lecturers need to face the class and avoid moving around when speaking
- Lecture notes and other key information need to be available in plain English and online
- New terminology and key concepts need to be presented in written format
- Key points can be highlighted using examples, diagrams or charts
- Information needs to be summarised regularly so that learners can keep up
- Examination instructions and questions need to be written in plain English and available online
- Some students may need to use sign language interpreters during examinations or may need to be examined orally
- Additional time may need to be allowed for a person to receive information being conveyed through an interpreter
- The interpreter will need to stand beside the speaker and close to any visual displays that are being used
- Translation will be made considerably more efficient if both interpreter and student are given advance information such as copies of any text to be used



CASE STUDY

My name is Mary and I have always wanted to be a nurse. I have just started a pre-nursing course and if I do well, I would like to specialise in midwifery. I use a hearing aid for my hearing impairment and can follow a face to face conversation providing the environment is quiet and there are only a few people involved. I am worried that I will not be able to follow what is going on in group discussions in classes and tutorials and I have concerns about my clinical placement. So I organised a meeting with my course tutor to discuss the best way forward.

I found the meeting very productive and reassuring and was pleased to discover that the college is well equipped with audio loops. It was agreed that I would have access to copies of notes in advance of lectures and would have reserved seating at the front of the class. I will also get some supports in using technology and spell checkers to make sure my writing is up to standard. We are going to meet regularly in order to deal with any issues which might arise.

How can I make learning more accessible for students with intellectual disabilities?



Learners

Increasing numbers of students with intellectual disabilities are now participating in further education and training. With the right supports and accommodations, these students can do well. Some of them however may find it difficult to learn new skills or may learn them more slowly. They may have difficulty with complex information and abstract concepts and may not be able to see the connections and relationships between events.

Teachers

A structured, multisensory approach works best and information will need to be simplified or broken down. It may be helpful for some students to record lectures.

Tip: You may also need to:

- Restructure tasks or assignments and break down large or difficult tasks into smaller steps
- Use short, simple sentences in plain English and avoid words with dual meanings. Avoid open ended questions
- Present information in a sequence and give instructions one step at a time
- Provide lots of repetition and feedback
- Demonstrate new tasks and give concrete examples to illustrate
- Frequently check student's understanding of topics
- Use visual cues such as video or storyboarding where possible and point out associations, links and connections
- Encourage students to use mind mapping techniques as a learning strategy
- Buddy systems, group discussion and peer learning will facilitate learning
- Try to avoid interruptions when working on new concepts or material
- Allow extra time for assignments and examinations



CASE STUDY

Michael is studying on a retail skills course in his local ETB. He has a mild general learning disability with a reading age of eight. This means that he finds it difficult to read some of the course textbooks. His written work is slow so it takes him much longer to complete written assignments. Michael is enthusiastic about his course and although he finds complex instructions difficult, he understands them when they are broken down into simple sentences. He is competent in using the computer once he has been given clear instructions but he can sometimes take longer than expected to complete tasks. Michael is good with customers and likes practical tasks such as stacking shelves. He is hoping to complete as many of the course modules as he can and would like to get a part time job with one of the local supermarkets.

How can I make learning more accessible for students with dyspraxia?

Dyspraxia

Learners

Dyspraxia is a lifelong condition which affects a person's coordination and both fine and gross motor skills. It can also affect speech and perception and some people can be over or under sensitive to certain sensory stimuli. Dyspraxia is thought to affect up to ten per cent of the population with males having a higher incidence than females.

Some of the difficulties experienced will include poor balance and posture, poor hand-eye coordination and clumsy gait and movement. There can be a lack of manual dexterity and poor manipulative skills which makes tasks such as handwriting difficult.

Common difficulties which can affect learning can include a limited ability to concentrate and a tendency to be easily distracted, poor short term memory and sequencing which can cause problems with maths, reading and spelling and writing assignments. There may also be problems with accuracy in copying, the physical act of writing and proofreading. Some people can find it difficult to follow a sequence of instructions, may be slow to finish tasks and are likely to need to do things one thing at a time. They will perform best in one to one situations rather than in group activities.

Teachers

Students with dyspraxia can learn to succeed and be independent but it is important that they be provided with alternative learning opportunities that include repeated practice. Students will need time and over learning.

Some of the following strategies may be useful:

- Performance can be unpredictable and inconsistent so motivation and confidence can be affected.
Give recognition for effort rather than performance and replace criticism with reassurance
- Make goals attainable and give frequent feedback
- Make lecture notes clear and available in hard copy and online
- Write new terms and concepts down, visually highlighting important items
- Encourage students to use technology devices for recording notes
- Repeat and summarise the main points of lectures
- Prioritise books on reading lists
- If students have slow speech, allow them more time to ask and answer questions
- Break large pieces of work down into segments
- Students will benefit from attendance at study skills tutorials to help with planning, organising, writing and proofreading their work
- One to one tuition at least once a week with a tutor will be beneficial
- Existing assignments can be shown as examples and written directions and checklists for the completion of assignments would be helpful
- Assistive technology can make it easier for students to work: large monitors, mice and keyboards, good spelling and grammar checks, voice activated, speech to text, and mind mapping software
- Students will need an extra time allowance for examinations and may need to sit examinations in a separate room to avoid distraction



CASE STUDY

My name is Jim and I'm 23. I did badly in primary school and my handwriting was atrocious. I couldn't understand why my classmates always seemed to finish tasks without any real effort. I managed to hide the fact that I couldn't spell or read very well. I also found it difficult to concentrate and to remember things.

As I went through school, I worked hard at hiding my difficulties but I found it impossible to construct sentences or follow a sequence. Things got worse when I went to secondary school where I could hardly read the timetable. I was very anxious all the time and began avoiding going to school. I left when I was fifteen without any qualifications and drifted between low paid jobs for a while.

I managed to get a place at my local FET College with the encouragement of my parents. During college orientation I heard the disability officer's presentation and decided to make an appointment to discuss my previous issues in school. The disability officer recommended that I get an assessment for dyspraxia. (I didn't even know what it was). So I went for an assessment with an occupational therapist who confirmed the diagnosis. It was a shock but it helped explain why I had been having such problems all through school. My needs assessments listed all my difficulties and said what help I needed to get me through my course. I'm attending a pre-college study skills course and I am learning how to use computers with voice activated software and use a Live Scribe pen to record things. It's early days but I am trying hard and am getting a lot of encouragement from the staff at the college.

Follow this link for a useful guide on dyspraxia and learning

http://qatrain4students.org/resources/files/challenge_guides/disability-and-skill-guide---dyspraxia--final-v3.pdf

What does the legislation say?



Equality legislation in Ireland requires that employers and educational establishments give people with disabilities access to the same education, training and employment opportunities as their non-disabled peers. It is now unlawful to discriminate against individuals on the grounds of their disability.

Students with disabilities are entitled to have access to the supports and reasonable accommodations they need to reduce the impact of their disability and gain equal access to the same services and learning opportunities as other students.

The important thing to remember is not to treat students with disabilities less fairly than you would other students and to ensure that they receive the accommodations they need.

The legislation relevant to education, training and employment includes:

- **The Employment Equality Acts** (1998-2011) which prohibit discrimination on the grounds of a disability. Under the Acts, discrimination is described as ‘the treatment of a person in a less favourable way than another person is, has been or would be treated in the same situation...’.
- **The Disability Act** (2005) which provides a legislative basis for improving access to a wide range of public services and facilities for people with disabilities and states that all public bodies must ensure that their services are both integrated and accessible. This accessibility requirement extends to information as well as buildings and it is now required that public bodies, including providers of education and training make all relevant information accessible in a range of formats.
- **The Equal Status Acts** (2000-2011) promote equality by extending the legislation to cover all organisations providing services such as education and training, who must now make a reasonable effort to accommodate the needs of people with disabilities.

These Acts determine that organisations have a duty to make ‘reasonable accommodation’ with regard to their policies, practices and procedures as well as physical access to ensure that people with disabilities are treated fairly and are enabled in education, training and employment.

What is a reasonable accommodation?

A reasonable accommodation is any intervention or support which serves to reduce barriers to participation in education, training or employment for people who are at a disadvantage due to the impact of their disability. The provision of reasonable accommodations helps address many of the barriers to education, training and the workplace caused by the impact of an individual's disability so that they are able to access the same opportunities as their peers.

This could include adjustments to the physical environment, the provision of equipment or information delivered in alternative formats. Most accommodations involve little or no cost. It could be something as simple as giving someone more time to complete a task or allowing them to work in a quiet area.

Some students may need technology such as a Live Scribe pen or assistive technology such as voice activated software. Reasonable accommodations enable students to perform essential tasks while on their course and will also help them to perform competently in the workplace.

Funding for reasonable accommodations for students is usually sourced through the Fund for Students with Disabilities which is applied for through the college by the Disability or Access office. Students are required to have had a needs assessment in order to be able to access this fund. This fund is not available to students studying part time or if completing a course in an adult education centre (VTOS). The course must be a level 5 or above on the national qualifications framework.

The purpose of accommodations is not to give students with disabilities an edge over other students but to reduce a significant disadvantage caused by the impact of their disability. The same professional standards, domains of competence and learning outcomes apply to all students. Those students who have a disability may need more time to complete a task or may need to do things in a different way, using a recording device in lectures for example or using a magnification device when reading small print. Some students with dyslexia will find it difficult to listen and take notes at the same time. This places them at a disadvantage when they are being given verbal instructions. Allowing them to use a recording device removes this disadvantage and enables them to follow the same instructions as other students.

For more examples of reasonable accommodations, go to:
<http://www.ahead.ie/supports>

How do assess what a student with a disability needs?



Assessment of needs

A needs assessment is the system used to identify what sort of supports and accommodations a student will need. Many students will require little or no assistance whilst others will require very specific accommodations whilst on courses or work placements. A needs assessment will usually identify the sort of supports a student is likely to need in order to be able to meet the demands of their course or placement. A student with a visual impairment, for example might need written instructions to be made available in large font.

What is a needs assessment?

A needs assessment is a systematic process for the collection of information and data upon which to base an accurate description of the strengths and learning needs of a particular individual. It forms the basis for planning the provision of reasonable accommodations for students who need them.

Carrying out a needs assessment helps to:

- Clarify what supports and accommodations are needed in the mainstream classroom or as an add-on support
- Identify learning gaps and the resources and accommodations needed to bridge those gaps
- Form a basis for planning and reviewing student's progress
- Provide evidence when applying for student support/funding

The assessment process needs to involve:

- Team work between the various personnel involved, communication between disability support and input from academic staff is particularly important
- Inputs from a multidisciplinary team as appropriate
- A sharing of information with relevant staff
- A system for the dissemination of assessment information to key participants
- Clear referral pathways

What steps are involved in the assessment process?

- The student registers with Disability Services and provides relevant documentation such as psychological or medical reports as outlined in the criteria for the Fund for Students with Disabilities
- An assessment interview is conducted with the student to identify their needs and the steps required to reduce the impact of their disability
- An action plan is produced and disseminated to the student, relevant staff and a review date is set
- The assessment report is signed off by the assessor and student and an application for relevant funding submitted to the Fund for Students with Disabilities

What are the main components of a needs assessment?

There are three main components involved in carrying out a needs assessment:

1. Identification of course demands; what are the skills and competences needed?
2. Identification of student needs; what supports or accommodations are required?
3. A statement of needs or an assessment report, outlining the accommodations needed by a student.

1. Analysing course demands

Identifying the demands a course will place on an individual is an important first step in discovering what accommodations or supports they are likely to need. Establishing what sort of critical skills a person needs to undertake a particular course means breaking that course down into its component parts. The learning environment is made up of skills components which vary depending on the nature of the course. The levels of reading, for example will be very different for a law degree than for a catering course.

Here are some examples of the skill areas you might want to consider when analysing the demands of a course:

- **Learning skills** such as reading, note-taking, study skills, time management, using the library, completing assignments
- **Communication**, the ability to be able to communicate or receive communication in its various forms, verbal, written, auditory or visual
- **Cognitive skills** such as memory, attention, analysing and processing information, problem solving and language processing
- **Physical demands**; some courses may have more emphasis on movement, co-ordination, dexterity, or fine motor skills, such as using a pen. Transport and access issues also need to be considered

2. Identifying student needs

An assessment of needs will focus on identifying:

- The impact that an individual's disability is likely to have on their learning
- The gaps between what is demanded by a course and the student's actual performance
- The sort of accommodations and resources which are needed in order for the student to be able to bridge those gaps

Example

A student with a physical disability or dyspraxia may find it painful to write for long periods during lectures or examinations. Accommodation for this individual might include the use of voice activated technology such as Dragon Naturally Speaking, a scribe or a recording device.

The assessment process is likely to be informed by a number of different sources which can include:

- Dyslexia screening reports
- Psychological assessment reports
- Assistive technology assessment reports
- Literacy and numeracy screening reports
- Self-assessment by the student
- Student interview
- Academic records

The assessment process will therefore always involve discussion with the student as to:

- Any difficulties being experienced or anticipated
- The impact or potential impact of these difficulties of the student's work
- Any strategies which have been successful in the past
- The specific accommodations which are required
- The specific type of resources which are needed

Student assessment interview – what does it involve?

The student interview is an essential part of the needs assessment process. This is the forum where students can present their views, describe the impact of their disability, explain what worked well in the past and describe what they need now that they have progressed to further education or training. Students are experts on their own disability so need to be included in the assessment process and facilitated to describe what they need.

Here are some tips to remember when conducting assessment interviews with students:

'Dos'

- Adopt a user friendly approach and use accessible language and terminology
- Keep it structured. This is a discussion with a purpose, which is to determine a student's strengths and areas of need
- Adopt a logical, evidence based approach and focus on precisely what is needed by students in order to meet the demands of their course
- Do extend the interview to include external placements as well as college based activities

'Don'ts'

- Avoid leading questions which assume that you already know what the person needs
- Avoid any bias towards a particular course or solution
- Avoid intrusive questions

Key point

It is good practice to explain the purpose and content of the assessment to students and to include them throughout the process.

How should I structure the interview?

The student interview needs to be structured and remain focused on the demands of the course and on identifying the accommodations the student requires in order to meet those demands.

Here are some examples of the sort of issues which could be discussed during an interview with a student:

- Accessing course materials, do they need to be available in an alternative format?
- Remembering things, is there a need for a laptop, recording of lectures, mind mapping?
- Physical access and transport issues
- Accommodations required for placements
- Notetaking; can the student listen and take notes at the same time?

- Tuition needs such as study skills, producing assignments, dyslexia support
- Understanding of diagrams and other abstract concepts
- Following written instructions and accessing written materials
- Using the library and carrying out research
- Computer literacy and assistive technology
- Examination and/or assessment accommodations
- Equipment or assistive aids

A key task prior to meeting with a student is to gather as much relevant information as possible. This information could include the students CAO supplementary information form and supporting documentation, such as a psychological or medical report. This preparatory work can provide useful background information and speed up the assessment process.

It is good practice to have in place a referral form to pass on student information from one assessor to another when there are a number of different people involved in the assessment process. It is important however, that a designated person is responsible for completing the needs assessment. A sample needs assessment form can be used to assist with this process. (An example is shown in Appendix 1).

The needs assessment process should help to formulate a plan with the student which can then be reviewed on a regular basis. Students should receive a copy of their assessment report and bring it with them to subsequent courses, new departments or placements to ensure continuity of support.

3. The assessment report – what do I need to know?

The outcome of the assessment process should be a statement of the student's needs in the form of an assessment report. This report will be used as a guide for staff in organising student supports and accommodations. It will also be used as part of any application to the Fund for Students with Disabilities. Carrying out an assessment of needs can involve examining and using information relating to student's disabilities. Confidentiality in the management of sensitive information is therefore essential.

What sort of information should be included in the assessment report?

- Student details such as name, date of birth, address, contact details, assessment date and assessor's details
- Educational profile including examination details
- Any additional assessments such as psychological reports, assistive technology assessments, dyslexia screening reports, literacy or numeracy assessments should be attached
- The nature of the presenting disability and its impact on the students' learning
- Students' requirements and recommendations should form the core of the report. This should be a description of the accommodations and supports needed and a clear explanation as to why they are needed
- Recommendations which should be specific and bullet pointed in order of priority
- Any supporting evidence to back up recommendations

What do I need to remember when writing an assessment report?

Assessment reports need to be:

- **Individualised** rather than generic. The report should reflect the needs of the individual being assessed and not generalised to those of others with similar disabilities
- **Confidential:** the information contained within the report needs to be restricted to a limited number of people as agreed with the student
- **Focused on student ownership.** This is the student's report so it is important that they are fully aware of its contents and are given a copy

- **Be accurate** in all details
- **Based on evidence** and facts rather than opinion
- **Standardised** in format so that it is easy for readers to access relevant information
- **Professionally presented** and completed within an agreed timeframe
- **Appropriate in its language** which should be factual and non-judgmental

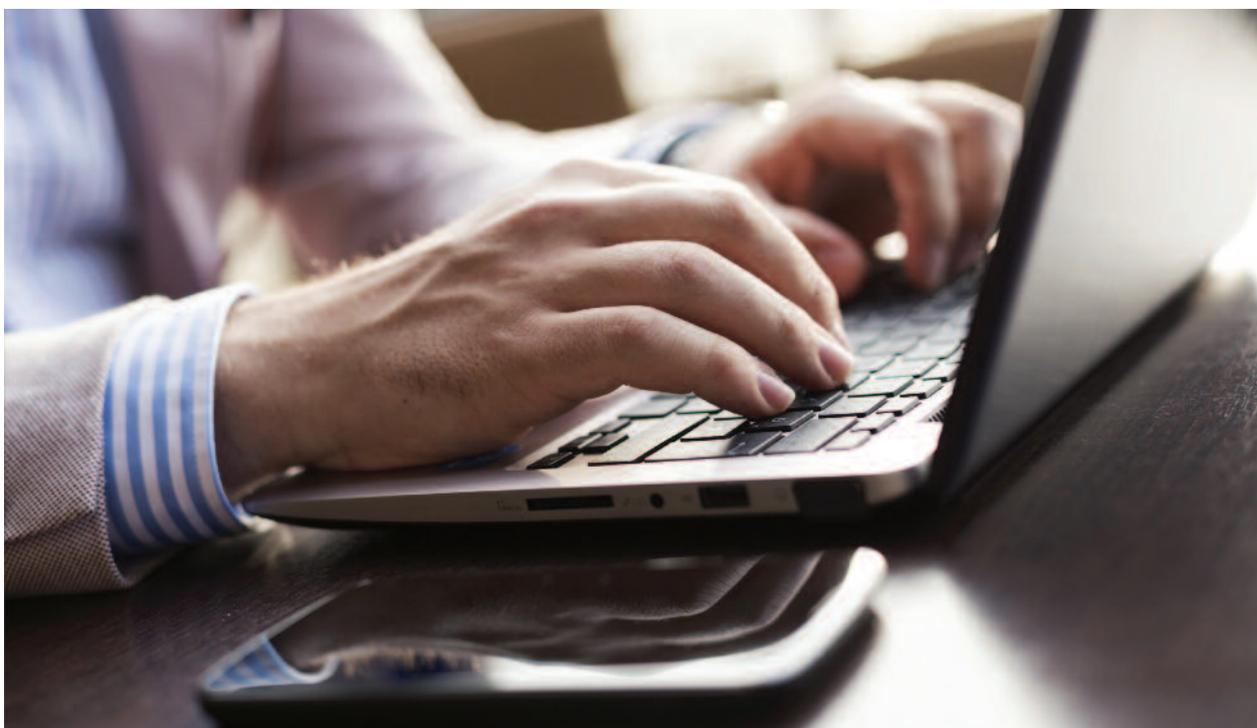
Example

A student with dyslexia has particular problems with short-term memory and information processing. This makes it difficult for him to consolidate information when writing assignments. Mind mapping software, such as Inspiration, would enable him to organise relevant information so that it is more accessible.

Key point

A needs assessment report is an important part of an application for funding for students with disabilities. The quality of an assessment report can make a real difference to the success of an application for funding from the Fund for Students with Disabilities.

What is the role of technology in education and training?



Assistive technology is a powerful tool for inclusion for people with disabilities. Today, many people with disabilities are breaking barriers through the use of the sort of technologies which enable them to avail of the same learning and employment opportunities that most of us take for granted.

Technology has dramatically changed the face of education and training for many people, particularly those who have a disability. New and developing technologies, particularly in the area of computer software, enable many students to learn through a wide range of media. The use of technology in education and training can greatly increase an individual's standard of performance and many of the functional problems experienced by people with disabilities in the past are now easily solved by simple technological solutions.

Who can benefit from the use of technology?

Technology can be the great equaliser in a classroom comprised of diverse learners and all students can benefit from the use of technological devices and tools which improve their learning skills.

Students who experience functional gaps in their learning capacity because of a disability can significantly bridge those gaps through the use of carefully selected assistive technological devices.

Even students with severe disabilities can now use assistive technology to participate in the classroom and achieve their potential in ways which, not so very long ago, were deemed to be impossible.

Appropriate technology tools can now help people with disabilities to overcome or compensate for gaps in their learning capacity caused by their disability. They can be used to support learning and bypass difficult tasks such as handwriting.

Assistive tools such as screen readers and scanners, for example, can really benefit students who are blind. Students who are hard of hearing are able to participate in classes because of the availability of hearing loops and simple phone apps can help students with dyslexia to organise and proofread their work.

What is assistive technology?

Assistive technology refers to the devices and services that are used to increase, maintain, or improve the capabilities of a student with a disability (Dell, Newton, & Petroff, 2012).

Any item or piece of equipment that can be used to increase a person's independence and make the environment more accessible can be regarded as an assistive technology tool. Assistive technology does not replace teaching support but rather complements it by providing individuals with tools to enable them to perform tasks more quickly, more easily or to a better standard.

Assistive technology is a growing and dynamic field and tools can range from very simple, low tech devices such as a pencil grip for someone with a physical disability and high tech devices such as eye tracking technology which enable those with significant mobility impairments to use a computer. Devices such as tablets and smart phones with sophisticated computer applications are now commonly used by the student population and are portable, accessible and affordable. Pen top computers such as Live Scribe smart pens are a cheaper option to tablets and can provide text to speech, note taking and organizational functions.

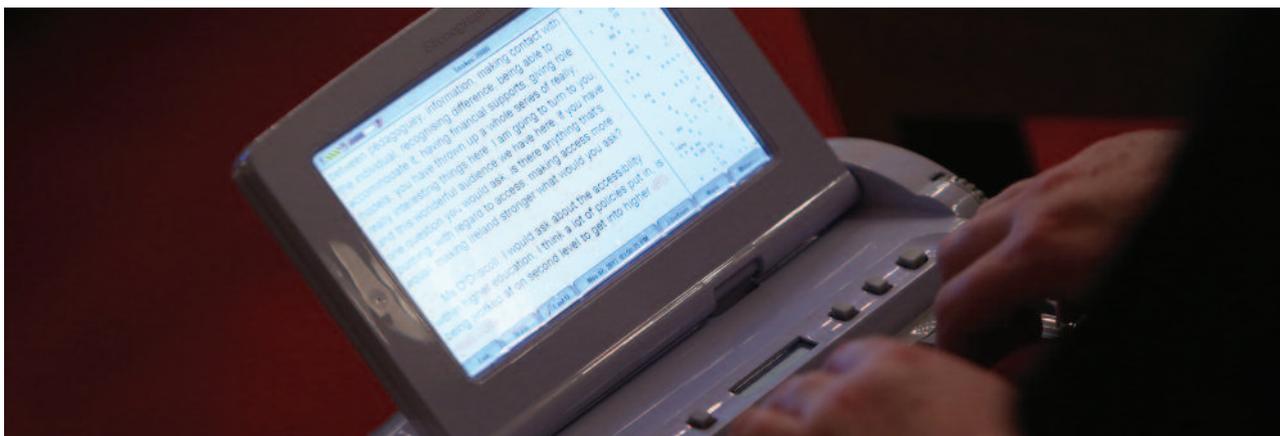
Assistive technology in the classroom

We shall now look at the types of devices that can benefit students with different disabilities.

Text to speech assistive tools such as Kurzweil 3000 and Intel Reader are designed to help those who have difficulty reading print. The technology works by scanning printed or digital text and reading it using a synthesized voice. Text to speech software is typically used by people who have conditions which impede their ability to read. This includes those who are blind or visually impaired, have dyslexia or other learning disabilities and those who have physical disabilities which limit their ability to read standard text.

Speech to text software such as Dragon Naturally Speaking transcribes speech into computer text enabling students with physical or learning disabilities to bypass the demands of writing or typing. This allows students to spend more time planning their work and developing ideas.

Proofreading software is geared towards people with learning disabilities, such as dyslexia, which make reading and writing difficult. Software such as Ginger (www.gingersoftware.com) includes features such as grammar checkers and sentence construction tools that can greatly improve the speed and accuracy of student's work.



A wide range of **physical conditions** can limit mobility and/or hand function. Some of these conditions can also impair strength, speed, endurance, balance, coordination and dexterity. Those with hand coordination problems can experience difficulty with tasks requiring fine motor skills, for example, holding a pen or manoeuvring a mouse.

Some students may need:

- Adapted workstations
- Ergonomic chairs and desks
- Page-turners
- Wrist rests
- Roller ball mouse
- Adapted keyboards

Students with dyslexia are likely to be slow readers and can have particular difficulty with low frequency words and word recognition. Almost all of the characteristics associated with dyslexia are associated with poor short-term memory. As a consequence, students may experience problems in organising their work and taking notes whilst listening to lectures.

Students with dyslexia can really benefit from using:

- Speech to text software such as Read & Write Gold
- Scanning/Reading pens
- Mind mapping software such as Inspiration to improve their language and problem solving skills.
- Smart pens such as Live Scribe to record lecture notes

Students who are deaf will be unable to follow lectures or tutorials without some form of assistive technology. Using these devices will enable students to participate in their learning

- Hearing loops in lecture theatres, laboratories and classrooms
- Captioning to make audio content accessible
- Speech to text software

Students who are blind or have a visual impairment affect a person's ability to perform everyday tasks such as reading and writing. Since learning materials are largely available in written format, this makes it virtually impossible for students who are blind or have a visual impairment to access them without using some form of assistive technological device.

Some of the assistive technological tools used by students who are blind or have a visual impairment include:

- Reading and scanning software, such as Kurzweil 1000
- Screen Magnification Software such as Zoom Text Extra
- Voice recognition software, such as Dragon Naturally Speaking
- Screen readers such as JAWS

For some more examples of assistive technology devices from www.ahead.ie, see Appendix 1

How are student's assistive technology needs assessed?

Carrying out an assessment of AT needs will help identify appropriate technological supports and will ensure a good match between the user and the assistive tool.

Deciding on the most appropriate technology can involve:

- A team approach to include input from technology, teaching and disability staff
- Training in the use of the selected technology
- A trial period of use for the student
- Consideration of the portability, cost and practicality of the equipment
- Examination of the skills required to operate the equipment
- A long-term focus on the AT skills the student will need to develop for use in the workplace

An AT assessment needs to:

- Be based on the specific demands of the course to be undertaken
- Identify any difficulties being experienced and the impact of these difficulties on the student's learning
- Recognise that some students may not have the necessary IT skills. Knowledge gaps need to be identified and skills upgraded to the required standard
- Consider what strategies have or have not worked in the past
- Look at what resources are currently available
- Identify what new resources need to be put in place
- Identify what training needs to be provided
- Be carried out as soon as possible so that appropriate supports can be put in place at an early stage

What is involved in carrying out an assistive technology needs assessment?

The following are some of the areas usually included in an AT assessment:

- A functional assessment of AT requirements
- An assessment of student's IT literacy
- An interview with the student
- A self-assessment by the student
- A review of any existing assessment reports (with student's permission)
- Discussion with other team members
- Production of an assessment report or statement of AT needs

For more information on assistive technology in education and training, go to:
<http://www.ahead.ie/assistivetech>

For more information on assistive technology products, go to:
www.urability.com

How do I manage boundaries with students?



The majority of people have a good understanding of the sort of codes of behaviour which are acceptable in learning and work situations. Some individuals, however, may come from environments where boundaries around behaviour are insufficient or unclear. Some students may lack an understanding of the conventional social cues which most of us take for granted. In some situations, these students can face challenges in identifying and adhering to the sort of rules and boundaries they are likely to encounter in further education and training.

Key point

Clearly defined boundaries provide protection for both teachers and students and help avoid or manage difficult situations.

There will be times when even the most experienced members of staff will encounter inappropriate or challenging behaviour in the classroom. Having clear boundaries in place can prevent problems happening and can help you to know what to do if they do arise.

How do I establish boundaries?

The starting point in establishing boundaries is being clear about roles, rules and responsibilities. Most people function best when they know what the rules are and what the consequences are if the rules are broken. The absence of clear boundaries can make it difficult for some people to understand the parameters of the relationships with staff and peers which are part and parcel of being a student. This can make it difficult for them to negotiate some of the situations and relationships they are likely to encounter in a learning or work situation.

Some of the following strategies may be useful:

- Outline institutional, classroom and work placement rules to students at the beginning of each academic year so that everyone is clear about what is expected. Rules should be short and to the point and should be available online
- Be clear about expectations. Be explicit about what is expected in terms of behaviour, assignment standards and deadlines, the standard of work expected and the system for assessing and marking student's work
- Explain your role and your responsibilities in relation to students, colleagues and your institution
- Discuss people's rights in the classroom. For example, everyone is entitled to learn, to be respected and to feel safe
- Be clear about your own boundaries and set a good example by being on time and being organised
- Meetings with individual students are best conducted in a space where both student and teacher can be seen: for example, a room with a glass panelled or open door
- Document disciplinary meetings with students and keep superiors informed as necessary



CASE STUDY

Sharon is a wheelchair user in her first year of an access course. Sharon was accustomed to having a lot of assistance throughout her primary and secondary education. This is her first experience of mainstream education and her expectations are that she will receive similar assistance during her course. Sharon has, in fact been assigned a Special Needs Assistant to help lessen the impact of her disability in the classroom.

Judy, the assistant, is experiencing some difficulty in managing the various demands which Sharon is placing on her. Sharon expects Judy to help her research and write her assignments and asks her for advice on personal issues. She has, on occasion asked Judy to do her shopping and once asked Judy to lend her money.

Judy brought these matters to the attention of Sharon's tutor and they both agreed that Judy needed to re-establish professional boundaries in relation to Sharon. Judy met with Sharon and explained the role of the Special Needs Assistant. She described the various areas where she could provide support and assistance and clarified the areas where she had no responsibility. Sharon was accustomed to having a high level of care during her time in special education and was surprised to learn that her relationship with Judy had a different purpose.

Judy and Sharon agreed the parameters of their working relationship and Judy consistently reminded Sharon of this agreement on occasions where she attempted to seek inappropriate assistance.

How do I maintain boundaries?

Boundary management is an institutional concern and everyone needs to focus on managing and maintaining professional relationships between students and staff.

Key point

Clear, professional relationships with students reduces ambiguity and creates an environment where learning can be most effective.

Some of the following strategies may be useful:

- Reduce unrealistic expectations by establishing clear policies in relation to your availability. Meet students by appointment and set limits on the amount of time you spend with each individual
- Be clear about when and how often you will respond to student's emails
- Discuss sensitive issues in person rather than by email
- Be clear about what is expected when setting assignments
- Be consistent when applying rules so that they are continuously reinforced
- Be friendly but not familiar so as to ensure a professional working relationship with students
- Return presents
- Remain calm and respectful when dealing with difficult situations. Showing anger will undermine your authority
- Take the class temperature regularly by obtaining student feedback so as to identify dissatisfaction and keep small problems from becoming large
- Document any confrontation with students and any unwelcome contacts
- Know when and how to refer students to other supports
- Seek help and advice when dealing with difficult situations

Disclosure – What if I don't know that someone has a disability?

Disclosure



Current legislation requires that educators and employers provide reasonable accommodations for people with disabilities and to ensure that they do not discriminate against them. There is no legal obligation on individuals to disclose that they have a disability and some choose not to do so. It is important however, that individuals are encouraged to disclose that they have a disability so that they can have access to the accommodations and supports that they need.

Promote disclosure whenever possible. Inform all new students and staff of the accommodations and resources that are available and how to access them, giving contact details of relevant staff. Post the same information in areas where staff and students congregate, in offices, cloakrooms and canteens.

If someone discloses to you that they have a disability, you need to let them know that you will be passing that information on to members of staff who need to know so that appropriate supports can be provided if needed. Relevant personnel would usually include those who supervise or have responsibility for student's work. Students who object to this need to sign a waiver to that effect.

Key point

Respect student's right to confidentiality. There is no need to inform people of a disclosure if they do not need to know.

Encourage students to disclose their disability to a member of Disability Support Services who will explain how they can gain access to funding for any accommodations they might need.

What if I think that someone has a disability but they have not disclosed?

Disclosure is one of the most challenging issues relating to disability, particularly when it comes to accessing education, training or employment. Most people who supervise the work of others prefer to know if someone has a disability so that they can make any necessary adjustments and avoid any misunderstandings. Many people with disabilities however, choose to keep this aspect of their lives private for a variety of reasons, perhaps because of previous experiences or because they do not want to be treated differently.

The culture of an institution will tend to influence how people behave in it. The sort of environment which encourages disclosure is one which adopts an institution wide approach in explicitly publicising the supports available to all students, not just those available to those with disabilities. Having clearly defined access to support services with clearly designated staff will ensure that students know where to go and who to go to if they need assistance.

It is the role of the education and training provider to ensure that students have relevant information on the standards and domains of competence required on courses so that they are able to decide whether their particular disability will have an impact on their performance and whether they will or will not disclose.



CASE STUDY

I am a training supervisor on a hospitality skills course in a large, busy training organisation. Part of my duties involves delivering induction and orientation training and I generally look forward to welcoming the new intake of students. Last year, I had a student called Graham who seemed to be very keen to learn, fitting in well with other students on the course.

It was while I was demonstrating health and safety procedures that Graham had a seizure. I didn't know that he had epilepsy and didn't really know what to do. Luckily, he came round fairly quickly but in the meantime, some of the other students had become quite distressed. So it was a difficult situation to manage because it was so unexpected and we were completely unprepared for such an episode. Apparently, Graham was sensitive to the strong smell of the cleaning products stored in the area we were working in and this triggered a seizure.

I felt very upset by the whole episode, particularly since Graham decided not to continue on the course. He showed such promise and if I'd known what his problems were, I'm sure that some provisions could have been made for him. I feel very strongly that students should disclose if they have a disability. I know that they want to be treated the same as everyone else but if we don't know that they need help, how are we supposed to provide it?

For a free download of AHEAD's Guidelines on Disclosure, go to:
<http://www.ahead.ie/publications-for-students-parents?id=59&qstring=>

APPENDIX 1

Examples of assistive technology devices

Category	Title (click for web link to official site if applicable)	Demo vid if available	Comment	Approx cost per license/unit
Screen Reading	Jaws	Demo	Lots of training required. For those who have no or very low vision.	€1000
Screen Reading	Android built in (Talkback)	Demo	Great for using general phone functions/email etc. – proper desktop software like JAWS required for full education use.	Built in
Screen Reading	iOS built in (Voiceover)	Demo	Great for using general phone functions/email etc. – proper desktop software like JAWS required for full education use.	Built in
Magnification	Zoom Text	Demo	Advanced Magnification and High Contrast software for students with low vision.	€550
Magnification	Magnifier (Android only)		App that replaces a real magnifying glass for low vision users reading actual printed documents (e.g. in the library).	Free
Magnification	iOS built in (Zoom)	Demo	Screen magnification and follow focus features.	Built in
Magnification	Android built in	Demo	Screen magnification.	Built in
Braille Devices	BrailleNote Device	Demo	Allows braille users to type documents through braille as a standalone device or can be used to interact with a computer, write emails/documents and read emails/webpages through braille using refreshing braille displays.	Huge price range depending on features

Category	Title (click for web link to official site if applicable)	Demo vid if available	Comment	Approx cost per license/unit
Literacy AT/Text to Speech	Read & Write Gold	Demo	Leading all in one literacy software featuring read aloud, advanced spelling & grammar, screen masking, homophone checking, referencing assistance, basic mind mapping and subject specific dictionaries and more.	€520
Literacy AT/Text to Speech	ClaroRead	Demo	Offers the core functionality of Read & Write without the neat add ons. Great option if budget is a concern.	Various – standard option is €270
Literacy AT/Text to Speech	ClaroSpeak Plus App (IOS only)	Demo	Offering scanning and good text to speech functionality on iOS devices.	£4.99
Literacy AT/Text to Speech	Grammarly (web based subscription)	Demo	Advanced web based spelling, grammar and citation checker.	€130 per year
Mental Health	Headspace App/Web based	Demo	Students can learn simple meditation techniques to help them de-stress. Free to take first 10 sessions; it teaches the basics in 10 mins per day over 10 days.	€130 per year
Speech to Text	Dragon Naturally Speaking	Demo	Leading speech to text software enables users to speak, edit and do some basic formatting on documents using only voice commands. Requires training period for Dragon to get used to voice.	€300

Category	Title (click for web link to official site if applicable)	Demo vid if available	Comment	Approx cost per license/unit
Speech to Text	Built in Android	Demo	Built in speech to text. Does very well at understanding text but no ability to edit with voice. Good for students to start an assignment on before transferring text to word doc for editing.	Built in
Speech to Text	Built in iOS	Demo	Built in speech to text. Does very well at understanding text but no ability to edit with voice. Good for students to start an assignment on before transferring text to word doc for editing.	Built in
Notetaking	Cogi App (Android/iOS)	Demo	Capture audio highlights of a lecture. Uses 15 sec buffer so when you realise this is an important part and tap 'Rec' it starts recording from 15 sec previously. Recording app designed to assist people who already take reasonably good paper notes!	Free
Notetaking	Live scribe Pen	Demo	Using special pen and paper, record audio linked to notes that were written at the same time and play back by placing tip of pen on written text word to hear audio recorded at that point. Newer models require smartphone for audio recording.	Echo model is €135 – 3d headset (worth buying for audio quality) €35

Category	Title (click for web link to official site if applicable)	Demo vid if available	Comment	Approx cost per license/unit
Notetaking	Sonnocent Audio Notetaker Desktop/IOS/Android	Demo	Brilliant Notetaking app which helps you record lectures, highlight different topics with colour, and sync with presentation slides later + add your own notes and annotations.	\$85 per year subscription service.
Organisation/Planning	Errands App (iOS)	Demo	Good simple 'To Do' List app with reminders.	Free
Organisation/Planning	CloudCal App (Android)	Demo	Great visual, colour based scheduling app – can for example set a colour for lectures, another for study, another for project work and see your schedule visually. Add tasks and notes too!	Free
Organisation/Planning	Trello App (Mobile and Web based app)	Demo	Excellent project planning tool to ensure things are being done on time. Especially good for collaborative group work.	Free
Organisation/Planning	Coggle App	Demo	Web based mind mapping app	Free basic
Organisation/Planning	Inspiration	Demo	Desktop mind mapping tool	€60
Organisation/Planning	Xmind desktop	Demo	Decent free alternative to Inspiration. Not as slick or pretty but does core functions well.	Free basic plan

Category	Title (click for web link to official site if applicable)	Demo vid if available	Comment	Approx cost per license/unit
Focus	Focus Lock App (Android)	Demo	Locks selected apps for selected time period so students can ban themselves from using facebook etc. during study periods. No way to override the lock so quite effective but watch demo vid for some downsides. Can be useful in conjunction with Pomodoro Technique.	Free
Productivity	Evernote	Demo	Cloud storage for all your files, favourite web pages, photos etc. Key is the integrations with countless other apps and devices meaning you can save stuff to it so easily. Also great tags feature to help you organise and find your content. Also has note-taking functionalities.	Free
Productivity	Google Docs	Demo	Brilliant free suite of online tools including word processor, spreadsheet program, online form creator, drawing tool and PowerPoint alternative.	Free

Follow @aheadireland on twitter – every Wednesday we have an appwatch feature.
View previous Appwatch features here.

APPENDIX 2

Example of needs assessment form

Personal Information

Name of student:

Course:

Student background:

Previous educational supports:

Impact of disability within an educational context:

Please indicate reasons for supports, describe the impact of disability in context of course requirements and demands (research, workshops, lecturers, placement, library etc).

Types of Supports

Learning Supports Personnel:

- | | |
|--------------------------|----------|
| ■ Note-taker | Yes / No |
| ■ Subject Specific Tutor | Yes / No |
| ■ Dyslexia Tutor | Yes / No |
| ■ I.S.L Interpreter | Yes / No |
| ■ Speed Text Operator | Yes / No |
| ■ Educational Support | Yes / No |

Examination support recommendations:

■ An additional 10 minutes per hour	Yes / No
■ Alternative exam location	Yes / No
■ Rest breaks	Yes / No
■ Spelling/grammar waiver	Yes / No
■ Reader or scribe	Yes / No
■ Examination papers in alternative formats	Yes / No
■ Enlarged text	Yes / No
■ Sign language interpreter	Yes / No
■ Computer with JAWS software	Yes / No
■ Computer with Zoom text software	Yes / No
■ Computer with SLD software (e.g. TextHelp)	Yes / No
■ Digital recorder	Yes / No
■ Adapted seating	Yes / No
■ Adapted table	Yes / No
■ Additional lighting	Yes / No
■ Wheelchair access	Yes / No
■ Other (if applicable):	

Assistive Technology:

■ Jaws voice synthesiser for visually impaired student	Yes / No
■ Voice Recognition Software	Yes / No
■ Braille & Speak	Yes / No
■ Kurzweil Scanner & Zoom Text for visually impaired students	Yes / No
■ SpeedText software for deaf students	Yes / No
■ Mind-mapping software	Yes / No
■ Radio Aids	Yes / No
■ Portable Loop system	Yes / No
■ Computerised dictionary (e.g.: Franklin Spell)	Yes / No
■ Text Help Read & Write software	Yes / No
■ Read & Scroll pen	Yes / No
■ Smart Pen (Live Scribe)	Yes / No
■ Adapted keyboard	Yes / No
■ Other (if applicable):	

Please indicate reasons for supports in context of educational demands and course participation.

Personal Supports:

Personal Assistant

Yes / No

Please indicate reasons for supports in context of educational demands and course participation.

Services:

Transport

Yes / No

Please indicate reasons for supports in context of impact of disability on educational demands and course participation.

Photocopying

Yes / No

Please indicate reasons for supports in context of impact of disability on educational demands and course participation.

Costing of Supports

Learning Supports Personnel:

Support Cost	Hours per week (HPW)	Hours per year (HPY)	Rate per hour (RPH)	Total (T)
Note-taker	(HPW)	(HPY)	(RPH)	(T)
Subject Specific Tutor	(HPW)	(HPY)	(RPH)	(T)
Dyslexia Tutor	(HPW)	(HPY)	(RPH)	(T)
ISL Interpreter	(HPW)	(HPY)	(RPH)	(T)
Speed Text Operator	(HPW)	(HPY)	(RPH)	(T)
Educational Support Assistant	(HPW)	(HPY)	(RPH)	(T)

Personal Supports:

Support Cost	Hours per week (HPW)	Hours per year (HPY)	Rate per hour (RPH)	Total (T)
Personal Assistant	(HPW)	(HPY)	(RPH)	(T)

Services:

Support Cost	Kilometres per week (KPW)	Weeks per year (WPY)	Rate per kilometre (RPK)	Total Cost (TC)
Transport	(KPW)	(WPY)	(RPK)	(TC)

Support Cost	Photocopying allocation for year	Total Cost (TC)
Photocopying	(Photocopying allocation for year)	((TC)

Notes:

Assessor: _____

Student: _____

Date: _____

References

AHEAD Educational Press, Teaching and Learning – Making learning accessible for students with disabilities in further education (2011)

Dell, A., Newton, D., & Petroff, J. (2012). Assistive technology in the classroom: Enhancing the school experiences of students with disabilities (2nd ed), Boston, MA: Pearson

Education & Training Boards Ireland Journal, Summer Edition, pp.15-21

McGuire, J. (2011) Inclusive College Teaching: Universal Design for Instruction and Diverse Learners. Journal of Accessibility and Design for All, JACCES, 1 (1) pp 38-54

Royal College of Surgeons Ireland, 'The Mental Health of Young People in Ireland', (2013)

Rose, D., Meyer, A. & Gordon, D. (2014) Universal Design for Learning, Theory and Practice, CAST

