Reasonable Accommodations

Strategies for Teaching Students with Disabilities
The key to unlocking your students' future potential is in your hands.

“whatever you can do or dream you can, begin it. Boldness has genius, power and magic in it.”

| Goethe |
We commend this booklet to university staff in Western Australia. It is a valuable resource in our quest to enable students with disabilities and medical conditions to participate in higher education. The contents highlight the ways in which we can facilitate learning, not only for students with disabilities, but for other students as well. Strategies employed, and accommodations made by staff, will enhance teaching and communication skills, resulting in more satisfying outcomes for all concerned. We join with our national colleagues in endorsing the principles of equality in educational opportunity as described in the original text on which this booklet is based.

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TO DISCOVER THE LIMITS OF THE POSSIBLE
IS TO GO BEYOND THEM, TO THE IMPOSSIBLE.

ARTHUR C. CLARKE
Students with disabilities and medical conditions are a rapidly growing minority at all tertiary institutions in Australia, as educators, students and the community become increasingly aware of the options available to people with disabilities.

**introduction**

Although approximately 16 per cent of the Australian population has disabilities or impairments with long-term consequences, it is estimated that presently no more than 2-3 per cent of the student population has a disability.

The obligation to accommodate students with disabilities extends beyond the moral responsibility and beyond the universities’ commitment to fulfill the promise of access. Federal and State legislation currently provides protection against discrimination. The Human Rights and Equal Opportunity Commission Act (1986) has a scheduled United Nations Declaration on the Rights of Disabled Persons (1978) which recognises that disabled persons are entitled to “the right to any necessary treatment, rehabilitation, education, training and other services to develop their skills and capacities to the maximum”.

The Commonwealth Disability Services Act (1987) has as one of its key objectives that people with disabilities should receive services which are tailored to their individual needs and goals.

The Commonwealth Disability Discrimination Act (1992) has provided uniformity across all States and Territories in relation to rights for people with disabilities. Existing antidiscrimination law in Australia and overseas uses the concept of 'reasonable accommodation' to ensure equal treatment in practice for people with disabilities in many situations. The concept of reasonable accommodation, or adjustment, covers campus design, including the provision of equipment and access, and study course design. Applying the concept means that academic and administrative staff, wherever it is necessary, possible
and reasonable to do so, take into account a student's disability and make appropriate adjustments to the learning environment to lessen the impact of the disability. Accommodations should be made wherever they are reasonable and do not cause undue or unjustifiable hardship to the university.

Within this legal framework and under their various codes of practice, universities have undertaken to work towards the provision of resources, such as access for students with impaired mobility, and assistance to students with other disabilities.

Academic ability is the primary basis for participation in tertiary education. To accomplish this goal, both physical and learning access are targeted. This means more than the removal of architectural barriers and the provision of auxiliary services. It means that reasonable accommodations must be made in the teaching process to ensure every student has full educational opportunity and effective communication. This principle applies to all teaching strategies and methods, as well as to administrative policies. The means of achieving this ideal are often not merely matters of judgement. They are matters of knowledge and understanding which many academics may not have because of inexperience in teaching students with disabilities. Improved communication methods and teaching skills, resulting from removal of barriers and heightened awareness, are certain to benefit all university students, not just those with disabilities.

Students with disabilities are individuals with varying needs and they have the same rights as other students to fulfil their academic potential. This guide is designed to provide basic information and promote understanding of the needs of students with disabilities.

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**myths**

The first step in teaching students with disabilities and medical conditions seems obvious: treat them, simply, as students. They are motivated to attend university for the same reasons as others and they bring with them the same range of intelligence and academic skills. Revising our perceptions and attitudes is the first step in accommodating students who present themselves, learn or perform in ways that are different from others. It is vital to remember that their similarities with others are much more significant: we are dealing, first and foremost, with students.

**SOME EXAMPLES OF DISABLING MYTHS**

"Science courses are not suitable for students with disabilities". "Students with disabilities are more likely to drop out of courses than other students".

"Students with disabilities should all study through external courses". "People with disabilities won't get jobs". "Equal opportunity means everyone should be treated the same, so students with disabilities are not entitled to support services".

"I went to an experiential seminar about working with people who have disabilities. We picked our 'disabilities' out of a hat, and it was no great surprise when I drew my worst fear - quadriplegia. While in this role for one hour, I was left facing a blank wall, had coffee spilt on me, had an incredibly itchy face... and worse still, my colleagues suddenly started talking to me as a 'case' and not as me! This gave me time to think about one of my students who is in a wheelchair and I realised how thoughtless we can be. I rang him that night and we talked about the workshop and the revelations it had brought my way." University lecturer.
People with disabilities and medical conditions prefer that you focus on their individuality, not their disability, unless of course, it is the topic about which you are writing or speaking. The term 'handicapped' is falling into disuse and should be avoided. The terms 'able-bodied', 'physically challenged', 'differently abled' are also strongly discouraged. The following are recommendations:

- never use the article 'the' with an adjective to describe people with disabilities. The preferred usage, 'people with disabilities', stresses the essential humanity of individuals and avoids objectification.
- if it is appropriate to refer to a person's disability, choose the correct terminology for the specific disability. Appropriate terminology includes people who are blind; vision impaired; deaf, hearing impaired; intellectually impaired; mobility impaired. People with or who have: cerebral palsy; Downs syndrome; mental illness; paraplegia; quadriplegia; epilepsy; specific learning disability; speech impairment.
- be careful not to imply that people with disabilities are to be pitied, feared or ignored, or that they are somehow more heroic, courageous, patient, or 'special' than others. Never use the term 'normal' in contrast.
- a person in a wheelchair is a 'wheelchair user' or 'uses a wheelchair'. Avoid terms that define the disability as a limitation, such as 'confined to a wheelchair', or 'wheelchair-bound'. A wheelchair liberates, it doesn’t confine.
- never use the terms ‘victim’ or ‘sufferer’ to refer to a person who has or has had a disease or disability. This term dehumanises the person and emphasises powerlessness.

DON’T USE

the vision impaired
the disabled
the deaf
victim of AIDS or AIDS sufferer
polio victim

USE INSTEAD

PEOPLE WITH VISION IMPAIRMENT
PEOPLE WITH DISABILITIES
PEOPLE WHO ARE DEAF (OR HEARING IMPAIRED)
PERSON WITH AIDS
HAD POEIO
SOME MEN SEE THINGS AND SAY WHY?

I DREAM THINGS THAT NEVER WERE AND SAY

‘WHY NOT?’

R.F. KENNEDY
The role of the Disability Adviser in your university is to offer advice and support to both students with disabilities and staff. She/he can work together with you in finding an optimum solution to issues that affect teaching students with disabilities.

The Disability Advisers provide a communication liaison point between staff and outside agencies, as well as the students themselves and the community.

ADVISERS TO STUDENTS WITH DISABILITIES AND MEDICAL CONDITIONS

The role of the Disability Adviser to students with disabilities in your university is to offer advice and support to both students and staff. She/he can work together with you in finding an optimum solution to issues that affect teaching students with disabilities.

The Disability Advisers provide a communication liaison point between staff and outside agencies, as well as the students themselves and the community. They have extensive contacts with support services groups, inside and outside the university. As well, they can offer advice and help to locate and assess new technology and equipment. Special equipment available for use by students with disabilities is different in each of the institutions, however most are likely to have special audio-visual equipment along with computers, braille machines, text scanners and talking book machines.

SUPPORT SERVICES

Established services available at your institution may include: note-taking, amanuenses, interpreting for deaf and hearing impaired students, readers’ schemes, tutoring schemes, examination support, library-resource systems, loop systems for sound amplification, FM systems, parking, support groups, counselling services, photocopying, and ergonomically designed desks and chairs.
TO BE WHAT WE ARE,

AND TO BECOME WHAT WE ARE CAPABLE

OF BECOMING IS THE ONLY END IN LIFE.

| R.L. STEVENSON |
INABILITY TO OBTAIN LECTURE NOTES IS THE BOTTOM LINE FOR MANY STUDENTS WITH DISABILITIES AND MEDICAL CONDITIONS. FOR A WIDE VARIETY OF REASONS, THEY MAY NOT BE ABLE TO AQUIRE MATERIAL FROM LECTURES IN THE SAME WAY AS OTHER STUDENTS.

**overview**

While many students with disabilities may learn in different ways, their differences do not imply inferior capacities. There is no need to dilute curricula or to reduce course requirements for students with disabilities. However, particular accommodations may be needed, as well as modifications in the way information is presented and also in methods of examination and assessment.

There are numerous practical ways in which these students can be assisted, such as giving lecture notes and reading lists ahead of time. This would not result in academic advantage for students with disabilities, simply a reasonable opportunity to be as up-to-date with course material as other students.

Determining that a student has a disability may not always be a simple process. Some disabilities are noticeable through casual observation - an immediately recognisable physical impairment, for example, or the use of a cane, a wheelchair or crutches. Some disabilities are less evident, such as hearing impairment, vision impairment and learning disabilities.

In some instances, the consequences of medical conditions may have a disabling effect. These include cancer, diabetes, kidney disease and epilepsy. Finally, there are students with multiple disabilities, which are caused by such primary conditions as muscular dystrophy, cerebral palsy or multiple sclerosis. Depending on the nature and progression of
the illness or injury, it may be accompanied by a secondary impairment - in mobility, vision, speech or coordination. It is not the disability itself, but the effect the disability has on the student which is relevant. Some students with disabilities will identify themselves to the university prior to enrolment so that any necessary support can be arranged with minimum delay. Support given to students with disabilities is an integral part of the responsibility of academic staff. The changes implemented should in no way affect academic standards and students with disabilities are expected to meet the normal assessment standards. If you suspect that a student has a disability, you may wish to discuss the question with the student, by taking them aside and asking if they need assistance.

TEACHING STRATEGIES

Specific suggestions for teaching students with disabilities will be offered in the sections devoted to each disability. Here are some general considerations to keep in mind:

DIVIDING THE RESPONSIBILITIES

To the extent manageable, students with disabilities bear the primary responsibility, not only for identifying their disabilities, but for making necessary adjustments to the learning environment - for reading and taking notes, for example. However, the cooperation of academic and administrative staff is vital for attaining effective communication between teacher and student. In the case of examination arrangements and use of department resources, collaboration is particularly important.

STAFF-STUDENT RELATIONSHIPS

Dialogue between the student and the lecturer is essential early in the semester, and follow-up meetings are recommended. Staff should not feel apprehensive about discussing the student's needs as they relate to the course. There is no reason to avoid using terms as they refer to the disability, such as 'blind', 'see' or 'walk'. However, care should be taken to avoid generalising a particular limitation to other aspects of a student's functioning.

Often, for example, people in wheelchairs are spoken to very loudly, as if they were deaf. The student will probably have had some experience with the kind of initial uneasiness you may bring to the relationship. The student's own suggestions, based on experience with the disability and with study, are invaluable in accommodating disabilities in university learning.

ATTENDANCE AND PROMPTNESS

The student using a wheelchair or other equipment may be prevented from getting to lectures on time because of obstacles or barriers. Others may have periodic or irregular difficulties, either from their disability or from medication. Understanding the reasons for late or irregular attendance, and being flexible in applying attendance rules would be helpful.

TEACHING ENVIRONMENT AND METHODOLOGY ADJUSTMENTS

A range of students with disabilities would benefit from:
1. receiving up-to-date book lists well prior to the beginning of term.
2. thoughtful seating arrangements.
3. a variety of presentation methods such as speaking directly toward the class, and from writing key lecture points and assignments on the blackboard.

FUNCTIONAL PROBLEMS

In addition to the adjustments that will be discussed in detail for each category of disability, some understanding is required in working with more subtle and sometimes unexpected manifestations of disability.
Chronic weakness and fatigue characterise some disabilities and medical conditions. Drowsiness, fatigue or impairments of memory or speed may result from prescribed medications. It is important to distinguish between these conditions and apathetic behaviour.

EXAMINATIONS AND ASSESSMENT
Depending on the disability, the student may require the administration of examinations orally, the use of readers and/or writers, extensions of time for the duration of the exams, a modification of test formats, availability of computers or, in some cases, different areas for sitting exams. For out-of-class assignments, the extension of deadlines may be justified.

The objective should always be to accommodate the students' learning differences, not to lessen academic requirements. The same standards should be applied to students with disabilities as to all other students in evaluation and assigning results. Special arrangements, such as those set out below, may be necessary:

• arrangements can be made for students to sit exams in a separate, quiet room. Students with learning disabilities are especially sensitive to distractions.
• time extensions on exams and written assignments should be approved when there are significant demands on reading and writing skills.
• avoid overly complicated language in exam questions and clearly separate them on the exam paper.
• try to avoid testing on material which has just been presented since more time is generally required to assimilate new knowledge.
• aids such as dictionaries, computer spell checks, a proofreader, or in mathematics and science, a calculator should be permitted.
• when necessary, arrangements can be made for students to use a reader, writer, word processor, tape recorder or typewriter.
• consider alternative exam designs. Some students with learning disabilities may find essay formats difficult. Multiple choice questions in language aimed to trick are very difficult for people with a hearing impairment and learning disability.

The learning requirements of students with disabilities should be established as soon as possible after enrolment by the adviser to students with disabilities in consultation with the relevant members of academic staff to ensure, as far as practicable, that the student is able with support to complete the requirements of the course. The student should always be involved in every level of these discussions.

• consider alternative or supplementary assignments that may serve evaluation purposes, such as taped interviews, slide presentations, photographic essays or hand-made models.
• poor handwriting or spelling may not necessarily indicate an immature or uninformed exam answer, instead it may be the result of a disability.
• exam rooms may need to be free of fluorescent lights, which cause visual disturbances in some students such as strobing effects that make reading slow and difficult.
• exam papers may sometimes need to be printed on coloured paper to avoid visual difficulties.
• special arrangements for exams can be worked out with the exam section and the Disability Adviser at the university.
Key points: Vary your presentation methods and teaching strategies. Modifications of teaching practices will benefit all students, not just those with disabilities. Establish a good dialogue and draw upon the students' own experience of their disability. Divide the responsibilities between student, adviser and academic staff to ensure effective communication. Be flexible and consider alternatives whenever possible. Plan early. Special equipment should not be seen as a substitute for good teaching practice. Assistance given to students with disabilities and changes to teaching practice will only serve to increase academic standards, not lower them.
learning disabilities

Learning disabilities sometimes occur in people of average or above average intelligence. A learning disability is any of a diverse group of conditions that cause significant difficulties in perceiving and/or processing either auditory, visual and/or spatial information. Learning disabilities involve one or more of the basic processes used in understanding or using spoken or written language. Of presumed neurological origin, they cover disorders that impair such functions as reading (dyslexia), writing (dysgraphia) and mathematical calculation (dyscalculia). They vary widely within each category in the patterns they exhibit. The condition has only recently been identified and still often goes undiagnosed. The marked discrepancy between intellectual capacity, achievement and output (expressing information and responding) is what characterises a learning disability.

EFFECTS

Achievement. One key sign is that academic achievement as revealed by tests, does not correspond to ability. The student may show consistent success in some subjects, while doing poorly in another, despite comparable effort.

Organising difficulties. The person may not perceive or discriminate patterns and arrangements in the same way as others do. They may go off at a tangent in conversation and seem personally disorganised. Problems with sequencing and organising may be reflected in poor study habits.

Undiagnosed learning disabilities. Students with undiagnosed learning disabilities may not know why they have more trouble with certain tasks, and may have poorer social skills.

Auditory processing. Some students may experience difficulty integrating information presented orally, hindering their ability to follow the sequence and organisation of a lecture.

Reading difficulties. Reading may be slow and deliberate and comprehension may be impaired for a student with a learning disability, particularly when dealing with large quantities of material. For such students, comprehension and speed are improved with the use of audio presentation methods.

Writing Difficulties. Legibility, writing speed and spelling may be severely hampered under the pressure of time constraints of a formal exam.

Memory or sequencing difficulties. These may impede the student's execution of complicated directions.

Note-taking. Some students with learning disabilities need alternative ways to take notes because they cannot write effectively or assimilate, remember and organise material while listening to a lecture.

Participation. It is helpful to determine the student's ability to participate in class activities. While many students with learning disabilities are highly articulate, some have severe difficulty in talking, responding or reading in front of groups.

Specialised limitations. Some students with learning difficulties have poor coordination or trouble judging distance or differentiating between left and right.

Laboratory work. The science laboratory can be especially overwhelming for students with learning disabilities. New equipment, exact measurement and multi-step procedures may demand precisely those skills which are hardest for them to acquire.

Behaviour. Because of perceptual deficiencies, some students with learning disabilities are slow to grasp social cues and respond appropriately, they may lack social skills, or they may have difficulty sustaining focused attention. If such a problem results in classroom interruptions or other disruptions, it is advisable to discuss the matter privately with the student or with the adviser to students with disability.

TEACHING STRATEGIES

Once a student with a learning disability and the nature of the disability are known, these strategies may help.

Before the start of the semester
- Make required book lists available prior to the start of term to allow students to begin their reading early, or consult with the adviser about having texts put on tape.
- Extra time to read material is important.
- Provide students with chapter outlines or study
guides that cue them to key points in their reading.

**During the semester**

- Use a variety of teaching methods to enhance learning for students with learning disabilities. Communicate in the student's preferred mode(s); for example, a taped record of a discussion may be necessary, rather than written materials.
- Ensure you keep the student's attention and make the environment distraction-free.
- Use simple language and minimise the length and complexity of communications.
- Stay on the topic; demonstrate; use concrete examples.
- Repeat and rephrase information.
- Read aloud material that is written on the blackboard or that is given in handouts or transparencies.
- In laboratory situations, the labelling of equipment, tools and materials is helpful. An individual orientation to the laboratory and equipment can assist in minimising student anxiety.
- Encourage students to take essay plans to Study Skills Advisers as the organisation of ideas is particularly difficult for these students.
- Explore the use of oral or taped answers in exams with the addition of points in note form.
- Multiple choice questions where a number of similar but different statements are offered are very difficult.
- The Association for the Blind of WA provides services for these students as people with a print handicap. Material can be taped through this service.
- A guide for oral and tape assessments has also been produced - contact the Disability Adviser at your institution.

**vision impairment**

Whatever the degree of impairment, students who are vision impaired should be expected to participate fully in lecture and tutorial activities, such as discussions and group work. To record notes, some students use tape recorders, laptop computers with speech or large-print output, or computerised braille writers. They may confront limitations in laboratory classes and field trips, for example, but with planning and adaptive equipment their difficulties can be minimised. Remember that glare is a big problem and they will see better on some days than others. It is important to remember, that while equipment is useful, assistance from academic staff is vital for students with vision impairment.

**TEACHING STRATEGIES**

**Before the start of the semester**

- Provide reading lists or course outlines in advance to allow time for arrangements for taping or brailling of texts to be made. Ensure reading lists are up-to-date.
- In cooperation with the adviser to students with disabilities, assist the student in finding readers, note-takers or tutors, as necessary, or pair the student with a sighted classmate or laboratory assistant.
- Reserve front row seats for low-vision students. If a guide dog is used, it will be disciplined and require little space. Under State and Federal legislation guide dogs must not be refused entry to buildings and classrooms.
- Ensure that students with vision impairments are notified of organisational changes in an appropriate way. It is difficult to find lecture rooms if changed at the last minute.

**During the semester**

- Face the class when speaking. Speak clearly in a normal voice, not loudly, slowly or with exaggeration.
- Identify yourself by name, in case the person does not recognise your voice.
- Indicate verbally whenever you are entering or
leaving the person's presence.

* Convey orally whatever you have written on the blackboard or shown on overheads. Use simple, clearly understood language.
* Work with the student and service providers to ensure information is received in appropriate formats - enlarged copies of the required size, brailled information or audiotapes - for all important or recurrent information.
* If you are planning to use a video tell the student and discuss alternative ways to approach information that the students may miss.
* Be flexible with assignment deadlines and allow extra reading time wherever possible.
* Ask if assistance is required, don't assume it is, but be alert to the person's needs.
* Keep doors closed or open, not partly open.
* Objects should not be moved from their usual places without letting the person know.
* Keep corridors and pathways clear of objects.
* Open-book exams pose a major problem for students with vision impairment. If you are planning to use this method, discuss with the student and/or the adviser whether an alternative is required.
* Use of an amaneunsis, extra time and adaptive equipment is necessary in exams.

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**hearing impairment**

The effects of hearing loss on communication may depend on the extent, type and age of onset of the impairment. The extent may range from mild to profound, and may involve the loss of some or many frequencies of sound. It is often possible for people to hear certain sounds (usually of low frequency, such as vowels) but not others. A 'mild' loss may still make it impossible for the person to understand a lecturer's voice eight metres away, even when a hearing aid assists at closer distances. If a student has been deaf from birth, they may require the use of a thesaurus, dictionary or sign language interpreter during exams. Speech may be minimal, and there will be a resulting difficulty in grasping language and vocabulary. Students who have lost hearing after birth may have varying degrees of speech, depending on the age the loss occurred.

The more common types of hearing loss are conductive loss, resulting from impairment to the outer or middle ear, and sensori-neural loss, if the inner ear is affected. These two types can occur in conjunction with each other. A hearing aid offers reduced assistance for sensori-neural loss, because it cannot replace the lost or damaged nerve cells in the inner ear.

Students with hearing impairment may use speech, lip reading, sign language interpreters and hearing aids to enhance oral communication. Hearing aids or amplification systems may include public address systems and transmitter/receiver systems with a clip-on microphone for the lecturer. For those who use lip-reading, only 30-40 per cent of spoken English is comprehensible, even for those who are highly skilled. For people who are deaf or hearing impaired and who choose to speak, feedback mechanisms are limited, therefore vocal control, volume and articulation may be affected. These secondary effects are physical and should not be viewed as mental or intellectual weaknesses.

Indications that a student has a hearing loss may include a student's straining to hear, use of loud or distorted speech, and consistent failure to respond.

**TEACHING STRATEGIES**

* Students with hearing impairment will benefit from front-row seating. An unobstructed line of vision is necessary for students who use interpreters and for
those who rely on lip-reading and visual cues. If an interpreter is used, the student's view should include the interpreter and the lecturer. Do not speak when facing the blackboard.

- Be aware that moustaches, beards, hands, books or microphones in front of your face can add to the difficulties of lip readers.
- Keep your face within view of the student and speak in a natural tone. Explain new concepts as you introduce them and write key words on the board.
- When an interpreter is being used, speak directly to the student and not to the interpreter.
- Recognise the brief amount of extra processing time that the interpreter takes to translate a message from its original language into another language (whether to English or sign language, or vice versa) because this will cause a delay in the student's receiving information, asking questions and/or offering comments.
- If a student in your class has an interpreter, approach them and ask for their suggestions on how you can assist. Contact the Disability Adviser for more detailed information about working with interpreters.
- Repeat questions or remarks of others in the room.
- Try to avoid using amplified sound.
- Use visual aids to reinforce spoken presentations when possible.
- If requested, assist the student with finding a notetaker or contact the Disability Adviser.
- When possible, provide the student with class outlines, lecture notes, lists of new technical terms and printed transcripts of audio and audio-visual materials.
- Do not hesitate to communicate with the student in writing when conveying important information such as assignments, scheduling or deadlines.
- Ensure your face is well lit, and that lipreaders are not facing into the light.
- Use your usual lip patterns, but speak just a little slower than usual. Do not speak while the person is writing. Do not shout.
- Arrange seating in a circle for tutorials to assist students who lip-read or seat the student beside you.
- Make sure you have the attention of the student before you attempt to communicate.
- Be amenable to wearing a microphone transmitter for use with an FM aid if asked.
- Encourage students to ask lots of questions in tutorials so they can have some control of discussions. Place in smallest tutorial group.
- Give student reading references for next lecture and tutorial topics in advance.

mobility impairment

A wide range of conditions may limit mobility. Among the most common permanent disorders are such musculoskeletal disabilities as partial or total paralysis, amputation or severe injury, arthritis, muscular dystrophy, multiple sclerosis, head injury and cerebral palsy. Additionally, respiratory and cardiac diseases, which are debilitating, may consequently affect mobility. Any of these conditions may also impair the strength, speed, endurance, coordination and dexterity that are necessary for proper hand function. While the degree of disability varies, students may have difficulty getting to or from lectures, participating in tutorials, and managing assignments and examinations. All mobility impairments increase the time and effort which students must expend. Using facilities which others take for granted, such as toilets, canteens, libraries and lecture rooms may be a major undertaking.

ACCESS

Physical access to lecture rooms is a key concern for students with physical disability. Those who use
wheelchairs, calipers, crutches, canes or prostheses, or who tire easily find it difficult moving about, especially within the time constraints imposed by lecture timetables. Occasional lateness may be unavoidable. Absence or lateness may be caused by transportation problems, inclement weather or lift or wheelchair breakdown. Getting from lecture rooms may pose similar problems, especially in cases of emergency. The universities are working towards creating campus environments which are accessible to wheelchair users and others with mobility impairments. These practical physical access accommodations include installing ramps, handrails, lifts, correctly positioned light switches, car parking, toilet facilities and signs using the international access symbols. These modifications to the campus environment are benefiting all students and staff, not just those who have mobility impairment.

TEACHING STRATEGIES

• Speak directly to the student as you would to any other person - even if speech is impaired; use the same tone of voice and volume and the same eye contact.
• Stand or sit free of a wheelchair, as it is often considered part of the person's body space.
• Be alert to offer assistance unobtrusively with holding doors open, carrying objects, providing photocopies, assisting with phone calls, ensuring clear passageways and removing library books from high shelves.
• Allow in-class written assignments to be completed out of class with the use of a writer, if necessary.
• Facilitate a barrier-free environment.
• Plan allocation of accessible tutorial rooms in advance.

Speech impairments range from problems with articulation or voice strength to complete voicelessness. They include difficulties in projection, as in chronic hoarseness and oesophageal speech, fluency problems, as in stuttering and stammering, and the nominal aphasia that alters the articulation of particular words or terms.

Some of these difficulties can be managed by such mechanical devices as electronic ‘speaking’ machines or computerised voice synthesisers. Others may be treated through speech therapy. All of them can be aggravated by the anxiety that may be associated with oral communication in a group.

TEACHING STRATEGIES

Patience is the most effective strategy in teaching students with speech impairments.
• Give students the opportunity - but do not compel them - to speak in a group situation.
• Allow students the time they need to express themselves, without interrupting them by filling in gaps in their speech. Don’t be reluctant to ask a student to repeat a statement and don’t make assumptions on what has been said.
• Address students naturally. Don't assume that they cannot hear or comprehend. Difficulty with speech and communication does not necessarily mean the thinking process is faulty.
• Consider course modifications, such as one-to-one presentations or a typed presentation read by another student in the group.
• Check whether the person uses an alternative communication system/aid eg. Cannon Printer.
• Maintain eye contact.
• If difficulties are holding up the flow of the class after a reasonable time, suggest student meets with you after class to discuss the points.
Students with psychological/psychiatric disabilities present some of the most difficult challenges to university academic staff. Like those with other disabilities, their impairments may not be visible and may, in fact, be latent, with little or no effect on their learning. Unlike others, however, their emotional disturbances may manifest themselves in negative behaviour ranging from indifference and recalcitrance to disruptiveness. Such conduct makes it hard to remember that they have as little control over their disabilities as do students with physical disabilities.

A common psychological impairment among students is depression. The condition may be temporary, in response to inordinate pressures at university, in a job, at home or in social life. It may be manifested as a pathological sense of hopelessness or helplessness which in its extreme may provoke threats of, or attempts at suicide. It may appear as apathy, disinterest, inattention, impaired concentration, irritability, or as fatigue or other physical symptoms, resulting from changes in eating, sleeping or other living patterns.

Anxiety is also prevalent among students and may also be the transient reaction to stress. Mild anxiety, in fact, may promote learning and improve student's functioning. Severe anxiety, however, may reduce concentration, distort perception and weaken the learning process. Anxiety may manifest itself as withdrawal, constant talking, complaining, joking or crying, fantasising, or extreme fear, sometimes to the point of panic. Bodily symptoms might include episodes of lightheadedness or hyperventilation. Some students who are undergoing treatment take prescription medication to help control disturbing feelings, ideas and behaviour. This medication might cause side effects such as drowsiness and disorientation.

**TEACHING STRATEGIES**

- In dealing with psychological conditions that impair functioning of the affected student alone, the principles outlined for all students with disability in the Overview section generally apply. If the behaviour begins to affect others or your course, other measures may be
THINGS DO NOT CHANGE
WE CHANGE.

HENRY DAVID THOREAU
Generally, when we think of disability, we think of blindness, deafness or mobility disability. In fact, because educational environments require different activities and functions, many chronic medical conditions also become a great hindrance to the achievement of individuals’ educational goals. Such health problems as chronic fatigue, respiratory illnesses, overuse injury, arthritis and other illnesses causing chronic pain can sometimes be even more debilitating than what are commonly regarded as more severe disabilities. There are a number of disabilities and medical conditions that may interfere with a student's academic work, their ability to attend lectures, concentrate, complete assignments or complete exams. Some of the symptoms, like limited mobility or impaired vision, and the types of intervention required may resemble those covered elsewhere in this guide. The same general principles apply to teaching all students with disabilities, particularly the need to identify the disability and to discuss with the student both its effects and the necessary considerations. Below are brief descriptions of some of the more prevalent disabilities among students, along with recommended teaching strategies.
cerebral palsy

Cerebral palsy is caused by an injury to the motor centre of the brain, which may have occurred before, during or shortly after birth. Manifestations may include involuntary muscle contractions, rigidity, spasms, poor coordination, poor balance or poor spatial relations. Visual, auditory, speech, hand-function and mobility problems may occur. Those severely affected may need to use a wheelchair, while those mildly affected may have no physical manifestations at all. For appropriate teaching strategies, refer to sections on speech, vision and mobility impairments.

multiple sclerosis

Multiple sclerosis is a progressive disease of the central nervous system, characterised by a decline of muscle control. Symptoms may include disturbances ranging from mild to severe blurred vision, blindness, tremors, weakness or numbness in limbs, unsteady gait, paralysis, slurred speech, mood swings or attention deficits. Because the onset of the disease usually occurs between the ages of 20 years and 40 years, students are likely to experience difficulty in adjusting to the symptoms of their condition. The course of multiple sclerosis is highly unpredictable. Periodic remissions are common and may last from a few days to several months, as the disease continues to progress. As a result, mood swings may vary from euphoria to depression. Striking inconsistencies in performance are not unusual. For appropriate teaching strategies, refer to sections on speech, vision and mobility impairments.

muscular dystrophy

Muscular dystrophy refers to a group of hereditary progressive disorders that most often occur in young people, producing degeneration of voluntary muscles of the trunk and lower extremities. The atrophy of the muscles results in chronic weakness and fatigue and may cause respiratory or cardiac problems. Walking, if possible, is slow and appears uncoordinated. Manipulation of materials in class may be difficult. Refer to the section on mobility impairment for appropriate teaching strategies.

respiratory problems

Many students may have chronic breathing problems, the most common of which are bronchial asthma and emphysema. Respiratory problems are characterised by attacks of shortness of breath and difficulty in breathing, sometimes triggered by stress, either physical or mental. Fatigue and difficulty climbing stairs may also be major problems, depending on the severity of the attacks. Frequent lateness or absence from lectures may occur and hospitalisation may be required where prescribed medications fail to relieve the symptoms. For appropriate teaching strategies, refer to the section on mobility impairment and the Overview.
**AIDS - Acquired Immune Deficiency Syndrome**

AIDS is caused by a virus that destroys the body's immune system. This condition leaves the person vulnerable to infections and cancers that can be avoided when the immune system is working normally. The virus is transmitted primarily through sexual contact or needle sharing with intravenous drug users. It is not transmitted through casual contact.

Manifestations of AIDS are varied, depending on the particular infections or diseases the individual develops. Extreme fatigue is a common symptom. Teaching strategies will likewise vary. Students with AIDS may be reluctant to reveal their condition because of social stigma, fear and misunderstanding surrounding this illness. It is therefore exceptionally important that confidentiality be strictly observed. In addition, if the issue should arise in class, it is important for academic staff to deal openly and non-judgmentally with it and to foster an atmosphere of understanding. For general teaching strategies, refer to the Overview section. If cancer is involved, see the section below. For particular impairments, see the applicable sections on disabilities.

**Cancer**

Because cancer can occur in almost any organ system of the body, the symptoms and particular disabling effects will vary greatly from one person to another. Some people experience visual problems, lack of balance and coordination, joint pains, backaches, headaches, abdominal pains, drowsiness, lethargy, difficulty in breathing and swallowing, weakness, bleeding or anaemia. The primary treatments for cancer - radiation therapy, chemotherapy and surgery - may induce additional effects. Therapy can cause violent nausea, drowsiness, and fatigue, affecting academic work or causing absences from lectures. Surgery can result in amputation, paralysis, sensory deficits, language and memory problems.

**Closed Head Injury**

Students with brain injury are becoming more common, mainly due to the high incidence of motor vehicle accidents. These students may exhibit communication problems, particularly in their speech (eg distorted or slurred speech, difficulty in finding words). Cognitive deficits include short-term memory problems, difficulty in planning and organising thoughts and actions, poor insight and low attention span. Personality problems are also common. These include impulsiveness, low frustration tolerance, inappropriate social behaviour (eg. offensive language), mood swings and a general inability to control emotions, particularly aggression and anxiety.

For teaching strategies, refer to the Overview and the sections on learning disabilities and epilepsy.
Students with epilepsy and other seizure disorders are sometimes reluctant to divulge their conditions because they fear being misunderstood or stigmatised. Misconceptions about these disorders - that they are forms of mental illness, contagious and untreatable, for example - have arisen because their ultimate causes remain uncertain. There is evidence that hereditary factors may be involved and that brain injuries and tumours, occurring at any age, may give rise to seizures. What is known is that seizures result from imbalances in the electrical activity in the brain.

THREE DISTINCT TYPES OF SEIZURE EXIST:

• Petit Mal means 'little' seizure and is characterised by eye blinking or staring. It begins abruptly with a dimming of consciousness and may last only a few seconds. Whatever the person is doing is suspended for a moment, but resumed again as soon as the seizure is over. Often, because of its briefness, the seizure may go unnoticed by the individual as well as by others.

• Psychomotor seizures range from mild to severe and may include staring, mental confusion, uncoordinated and random movement, incoherent speech and behaviour outbursts, followed by immediate recovery. They may last from two to 30 minutes. The person may have no recollection of what happened, but may experience fatigue.

• Grand Mal seizures may be moderate to severe and may be characterised by generalised contractions of muscles, twitching and limb jerking. A few minutes of such movements may be followed by unconsciousness, sleep or extreme fatigue.

Students with seizure disorders are often under preventive medication, which may cause drowsiness and temporary memory problems. Such medication makes it unlikely that a seizure will occur in class. In the event of a Grand Mal seizure, follow this procedure:

• Keep calm. Although its manifestations may be intense they are generally not painful to the individual.

• Remove nearby objects that may injure the student during the seizure.

• Help lower the person to the floor and place cushioning under his/her head.

• Turn the head to the side so that breathing is not obstructed.

• Loosen tight clothing.

• Do not try to restrain the bodily movement.

If the seizure continues for more than 10 minutes, get medical help or call an ambulance. Make sure someone stays with the student after the seizure, who should then be taken to a quiet place to rest. After a seizure, academic staff should deal forthrightly with the concerns of the class in an effort to forestall whatever negative attitudes may develop toward the student.

Chronic Fatigue Syndrome (CFS), formerly known as ME (myalgic encephalomyelitis) is believed to be caused by an abnormal response to a virus or some other ‘trigger’ factor. CFS is a chronic condition lasting months or years.

People with CFS are prone to relapse if they exceed the limits of physical or mental exertion which their illness imposes. Symptoms may vary in severity from day to day, and even from hour to hour. There may be profound physical and mental exhaustion, persistent pain in muscles and joints, headaches varying from dull to intense, dizziness, nausea, fainting, poor concentration and memory, pallor or flushing of face, an inability to tolerate extremes of heat, light or sound, for example a noisy lecture room and a sensitivity to various agents and chemicals. As a consequence of this
illness, the student may feel a great sense of isolation and loneliness with a serious loss of self-confidence. It is important that the student be trusted and treated sympathetically. Difficulties should be discussed as they arise. Good communication between the staff member and the student is essential and the student's ability to cope will be assisted by such empathy.

The student will need to avoid prolonged standing, extremes of heat and cold, exposure to fumes from science laboratories and gas heating, and mental or physical exertion beyond the limits imposed by their medical condition.

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**manual dexterity disabilities**

A not uncommon disability that lecturers will encounter with students who may for example have arthritis, occupational overuse syndrome, fractures, multiple sclerosis or cerebral palsy. Occupational Overuse Syndrome, also known as Repetitive Strain Injury, may include diseases such as tenosynovitis and carpal tunnel syndrome.

The symptoms are usually pain, swelling, stiffness of wrist, elbow or the small joints in the hand. It also commonly causes pain in the neck and shoulders. It tends to occur in people as a result of doing repetitive tasks such as typing, writing or playing musical instruments and may result in long term stiffness, pain and limited joint movement.

Rest and a variety of treatment approaches may improve the situation but it is vulnerable to recurrence under conditions of stress and overuse. Writing may be difficult and slow necessitating the provision of notetakers and alternative assessment techniques. These may include extra time for rest breaks, a combination of notes and oral or tape assessment (see guide to these techniques) or an amanuensis. For some students with manual dexterity problems the use of a computer in examinations may be necessary.

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**diabetes**

Diabetes means too much sugar (or glucose) in the blood. The reason for this is lack of insulin, a substance the body needs to use sugar.

People with diabetes are treated with insulin injections, some modifications of their diet and exercise. To balance the injected insulin, meals need to be evenly spaced throughout the day, with extra food given before exercise. It may be necessary for the student to eat in class or in examinations. Instability of the diabetes may mean absences or delayed assignments. Consideration is required (and flexibility).

Hypoglycaemia - sometimes the blood sugar level will fall below normal and the person may experience a 'hypo' or hypoglycaemic reaction. A 'hypo' can occur if a student misses a meal entirely, runs late for a meal, fails to eat extra carbohydrate before exercise or inadvertently takes too much insulin.

The symptoms of hypoglycaemia vary from one person to another and include sweating, pallor, day dreaming, slurred speech, shakiness, crying, confusion and bad temper. If a 'hypo' is untreated, unconsciousness can follow and urgent medical attention should be sought. Never attempt to give an unconscious person any food or drink.

High blood sugar levels, hyperglycaemia, can result when a person with diabetes eats too much, eats the wrong kinds of food, or does not have enough insulin to meet body requirements, such as during examinations or other times of stress.

The classic symptoms of hyperglycaemia are increased thirst, increased urination, increased appetite and signs of dehydration (cracked lips, dry skin, sunken eyes).
This booklet was prepared on the basis of the current experience of study skills advisers who have worked with university students with disabilities. Disability Advisers would welcome suggestions and additional information from both staff and students who have experience of oral examinations. The Disability Advisers at the universities can be contacted on the following telephone numbers:

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