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The Disability Rights Unit (DRU) provides various support services to registered students with disabilities and aims to work collaboratively with academic departments to ensure students with disabilities are provided with an enabling platform to promote academic success. This guide offers lecturers some helpful tips when teaching students with specific disabilities.

## 1. STUDENTS WITH A VISUAL DISABILITY

**Visual impairment** varies greatly. Persons are considered legally blind when visual acuity is 20/200 or less in the better eye with the use of corrective lenses. Most legally blind persons have some vision, others who are partially sighted may rely on residual vision with the use of assistive technology or other adaptive equipment. Totally blind persons may have visual memory, its strength depending on the age when vision was lost.

Whatever the degree of impairment, visually-impaired students should be expected to participate fully in classroom activities, such as discussions and group work. To record notes in class, some may use devices such as laptops, portable braille devices, and digital recorders. They may confront certain limitations in laboratory classes, field trips and internships, but their difficulties can be minimised with sufficient planning, reasonable accommodations, and the use of assistive technology and adaptive equipment.

### **Before or Early in the Semester:**

- Provide course material, reading lists, or syllabi well in advance to allow DRU time to convert the course material into an accessible format.
- In cooperation with the DRU, assist the student in finding note-takers, or tutors, as necessary, or team the students with a sighted classmate or laboratory assistant.
- Reserve front seats for visually-impaired students. If a guide dog is used, it will be highly disciplined and require little space.

- For online learning platforms and environments, the following can help ease some of the difficulties experienced by blind students:
  - Emailing any uploaded coursework (preferably in Word/PDF format) to students
  - Use of a file transfer service (e.g. WeTransfer) to send large video/audio lecture recordings directly to students.

### **During the Semester:**

- Convey in spoken words any content that is written or displayed, including visual cues or graphic materials that is used.
- Permit lectures to be recorded and/or provide copies of lecture notes, where appropriate.
- Provide enlarged A3 print copies of materials distributed to the class (for partially sighted students).
- Ensure text used in course documents, tests, etc. is clear and printed in dark print.
- Be flexible with assignment deadlines.
- Plan field trips and such special projects as internships well in advance and alert field supervisors to whatever adaptations may be needed.
- If a specific task is impossible for the student to carry out, consider an alternate assignment.

### **Tests, Examinations and Evaluations:**

- Students should not be exempt from tests and examinations or be expected to master less content or a lower level of scholastic skills because of a visual impairment.
- Alternative means of assessing their course achievements may be necessary. The students themselves, because of their experience in previous learning situations, and the DRU may offer suggestions on testing and evaluation strategies.

- The most expedient forms of alternative tests and examinations include: provision of the tests/exams in an accessible format (electronic Word/PDF format, enlarged A3 copy, Braille versions), the extension of time for tests/exams, and the use of various assistive technology such as screen readers and screen magnifiers.
- For online assessments, the following can help ease some of the difficulties experienced by blind students:
  - Arrange a test/exam/quiz/assessment time with students where an accessible Word/PDF version of the test/exam/quiz/assessment is emailed to the student. The student will then type their answers in Microsoft Word, and then email their answer document back to the lecturer within a specified time.
  - DRU can assist with converting any test/exam/quiz/assessment into an accessible format, and can also help oversee the testing procedure indicated above when requested.

## 2. STUDENTS WITH A HEARING DISABILITY

The age of onset generally determines the significance of this disability. Those who were born deaf or suffer a hearing loss at an early age, especially in the pre-lingual stage, bear the most severe disability. Because they do not hear language, their impairments generally extend beyond hearing to speaking and reading.

For the hearing-impaired who can speak, vocal control is often marred, distorting their tone, volume and/or articulation. For the many who use sign language, English is a "second" language and may therefore be deficient in all their communications. These secondary effects of hearing impairment need to be understood as physical disabilities rather than as mental or intellectual weaknesses.

Hearing-impaired people use a variety of devices to help them improve their aural capacity or substitute for it. Many use lip-reading but, by itself, they can comprehend only 30 to 40 percent of spoken English even when the skill is highly developed.

Those with a sufficient degree of residual hearing are helped by the amplification provided by hearing aids and other hearing assistive devices, which include loop

systems and other transmitter-receiver systems utilising external microphones. The main form of communication for the profoundly deaf is sign language.

Students who rely on sign language, need a sign language interpreter to translate spoken content into sign language.

The DRU may alert lecturers of a student with a hearing impairment in their class. In instances where a student has not disclosed their disability with DRU, lecturers should refer the student to DRU for further assistance and support. This can be difficult to detect as the disability is "hidden", and if the student is reluctant to acknowledge it. Some indications of hearing impairment may be the student's straining to hear, loud or distorted speech, and consistent failure to respond. Once the disability is properly identified and discussed, classroom strategies and adjustments may effectively help the student function successfully in the classroom.

Here are some general rules-of-thumb when teaching hearing-impaired students:

- Reserve a front-row seat for the student. If a sign language interpreter is necessary, the student should be positioned in such a way as to see both you and the interpreter.
- Face the student, keep your face within view whenever you speak, and speak in a natural tone of voice. If an interpreter is present, speak directly to the student and not to the interpreter.
- At the beginning of a classroom presentation and after intervals, draw the student's attention before speaking.
- Repeat the questions and remarks of other people in the room.
- Use visual cues/descriptions to reinforce spoken presentations where possible.
- Assist the student in identifying a note-taker and, if necessary, in the laboratory, a partner.
- When possible, provide the student with class outlines, lecture notes, lists of new technical terms and printed transcripts of audio and audio-visual materials.
- Facilitate independent viewing time for audio-visual materials.
- Do not hesitate to communicate with the student in writing when conveying important information.
- If the hearing impairment involves language difficulties, allow extended time for reading assignments, tests, and examinations.

- For online learning platforms and environments, the following can help ease some of the difficulties experienced by hearing impaired students:
  - Ensure spoken audio for uploaded lecture content is clear and audible by
    - Utilising an external microphone.
    - Speaking in a natural tone of voice.
    - Listening to your recording to see if it is easily audible at lower speaker volumes, if not increase your microphone recording level.
  - Ensure there is sufficient lighting so that your face and lips are easily seen.
  - Ensure that you always face the camera when speaking.
  - Make use of captions/subtitles in all video content.

### 3. STUDENTS WITH A LEARNING DISABILITY

A **learning disability (LD)** is any of a diverse group of conditions that cause significant difficulties in perception, which could be auditory, visual and/or spatial. Of presumed neurological origin, it covers disorders that impair such functions as reading (dyslexia), writing (dysgraphia) and mathematical calculations (dyscalculia). They vary widely within each category in the patterns they exhibit.

A learning disability may exist in the presence of average to superior intelligence and adequate sensory and motor systems, as evidenced by the extraordinary achievements of numerous LD people. But the condition has only recently been identified and it still often goes undiagnosed. That is why it is often misapprehended by the learning disabled themselves, as well as others as intellectual deficiency, which it emphatically is not.

In fact, the marked discrepancy between intellectual capacity and achievement is what characterises a learning disability. The LD diagnosis will emerge from a battery of aptitude and academic achievement tests. This documentation is required not only to establish the need for special services but also to determine the type of special services that are required. Students who are believed to have a learning disability that has not been previously or reliably identified, should be referred to the DRU.

While a learning disability cannot be cured, it can be circumvented through instructional intervention and compensatory strategies. In general, a variety of

instructional modes enhance learning for LD students, as for others, by allowing them to master material that may be inaccessible in one particular form.

When dealing with a LD student, it is important to identify the nature of the disability in order to determine the kind of strategies that might accommodate it. Drawing upon the student's own experience offers invaluable clues to the types of adaptation that work.

Once the nature of the disability are known, the following strategies may help:

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

- Provide students with a course syllabus at the start of the semester.
- Outline class presentations and write new terms and key points on the screen/board.
- Repeat and summarise segments of each presentation and review its entirety.
- In dealing with abstract concepts, paraphrase them in specific terms, and illustrate them with concrete examples, personal experiences, hands-on models and such visual structures as charts and graphs.

**Reading** may be slow and deliberate, and comprehension may be impaired for the LD student, particularly when dealing with a large amount of material. For such a student, comprehension and speed are expedited dramatically with the addition of auditory input.

- Make required book lists available prior to the first day of class to allow students to begin their reading early or to have tests put on tape.
- Provide students with chapter outlines or study guides that cue them to key points in their reading.
- Read aloud material that is written on the screen/board or that is given in handouts or notes.

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

- Keep oral instructions concise and reinforce them with brief cue words.
- Repeat or re-word complicated directions.

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

- Allow note-takers to accompany the student to class.
- Permit recording of lectures or make your notes available for material not found in texts or other accessible sources.

Assist the student, if necessary, in arranging to borrow classmates' notes.

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

**Specialised limitations:** Some LD students may have poor coordination or trouble judging distance or differentiating between left and right. Such devices as demonstrations from the student's right-left frame of reference and the use of colour codes or supplementary symbols may overcome the perceptual problem.

**The science laboratory:** can be especially overwhelming for LD students. New equipment, exact measurements and multi-step procedures may demand precisely those skills that are hardest for them to acquire.

- An individual orientation to the laboratory and equipment can minimise student anxiety.
- The labelling of equipment, tools and materials is helpful.
- The student's use of cue cards or labels designating the steps of a procedure may expedite the mastering of a sequence.
- Specialised adaptive equipment may help with exact measurements.

**Behaviour:** Because of perceptual deficiencies, some LD students are slow to grasp social cues and may respond inappropriately, 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 the DRU.

### Tests, Examinations and Evaluations:

- Allow students to take examinations in a separate, quiet room with an invigilator; alternatively allow them to take exams at DRU's exams venue. LD students are especially sensitive to distractions.
- Tests/exams should be clear and in dark print copy.
- Grant time extensions on tests, exams and other written assessments when there are significant demands on reading and writing skills.
- Avoid overly complicated language in exam questions, and clearly separate them in their spacing on the exam sheet. For a student with perceptual deficits who has difficulty in transferring answers, avoid using answer sheets, especially computer forms.
- Try not to test on material just presented since more time is generally required to assimilate new knowledge.
- Permit the use of a dictionary, computer spell checks, a proof-reader or, in mathematics and science, a calculator. In mathematics, the student may understand the concept, but may make errors by misaligning numbers or confusing arithmetical facts.
- When necessary, allow students to use a reader, scribe, computer, or other assistive device.
- Consider alternative test designs. Some LD students may find essay formats difficult, and a perceptually impaired student will always have trouble with matching tests.
- Consider alternative or supplementary assignments that may serve evaluation purposes, such as recorded interviews, slide presentations, photographic essays or hand-made models.

## 4. STUDENTS WITH ATTENTION-DEFICIT/HYPERACTIVITY DISORDER

**Attention-Deficit/Hyperactivity Disorder (ADHD)** is characterised by a persistent pattern of frequent and severe inattention, hyperactivity, and/or impulsiveness. People with ADHD have many problems in academic settings. Some of these problems are

similar to the problems of people with learning disabilities: slow and inefficient reading, slow essay-writing, and frequent errors in math calculation and the mechanics of writing. Other problems are especially characteristic of ADHD; students with ADHD often have serious problems with time-management, task-completion, organisation, and memory.

For suggestions on working effectively with students who have ADHD, please review our section on learning disabilities, as well as the following:

- Students with ADHD generally perform better if given a syllabus with clear explanations of tasks and specific due dates. As the semester progresses, keep reminding students of impending deadlines: "Remember, the problem sets are due on Friday."
- Whenever possible, start each lecture with a summary of material to be covered, or provide a written outline. If you use broad margins and triple-space, students will be able to take notes directly onto the outline: an aid to organisation. At the conclusion of each lecture, review major points.
- Students with ADHD may tend to "drift" mentally during class, especially during long lectures. They are better able to stay tuned-in when the class material is stimulating and the format varied (for example, lecture alternating with presentations and class discussion). If the class goes on for several hours, be sure to permit several breaks.
- Students with ADHD are often distractible, so you should invite them to sit near the front of the class, away from potential sources of distraction (for example, doors, windows, and noisy heaters).
- Avoid dictating assignments orally, since ADHD students may miss them. Always write assignments on the screen/board, or (even better) pass them out in written form.
- Provide a examination venue that is relatively distraction-free, or where the student can write on their own; DRU has a suitable test/exam venue with thorough invigilation.

For large projects or long papers, help the student break down the task into its component parts. Set deadlines for each part; for example, there might be deadlines for the proposal of an essay topic, for a research plan, for the completion of research,

for pre-writing to find the essay's thesis, for a writing-plan or outline, for a first draft, and for a final edited manuscript.

## 5. STUDENTS WITH A PSYCHOLOGICAL DISABILITY

Some students have psychological disabilities such as depression, bipolar disorder, or severe anxiety. Psychological disabilities complicate many areas of life, including education.

Every case is different, but there are some commonalities in the academic experiences of students with psychological disabilities. These students report difficulties with focusing, concentrating, and completing work in a timely fashion. Reading, writing, and math may require extra effort and more time. Ability to function effectively may vary from day to day; in response to stress, students may experience an increase in symptoms. Medications help with some symptoms of psychological disability, but medication side-effects (for example, drowsiness or headaches) can contribute to a student's academic problems.

We suggest that you review our suggestions for learning disabilities and Attention-Deficit/Hyperactivity Disorder; a number of these suggestions will also be appropriate for students with psychological disabilities. Following are some suggestions specifically addressed to the needs of students who have psychological disabilities:

- Psychological disabilities are not well understood and accepted in our society, and many students with psychological disabilities have good reason to fear the reactions of others.
- Please make every effort to make students feel comfortable if they disclose their psychological disabilities to you. Do not press students to explain their disabilities if they do not wish to do so; with the consent of the student, DRU can provide you with further information.

Understand that for disability-related reasons, these students may sometimes have to miss class, or even leave the venue in the middle of a class. The students will be responsible for the content of any lectures missed, but they will appreciate you helping them to fill in the gaps.

## 6. STUDENTS WITH A PHYSICAL DISABILITY

A wide range of conditions may limit mobility and/or hand function. Among the most common permanent disorders are such musculoskeletal disabilities as partial or total paralysis, amputation or severe injury, arthritis, active sickle cell disease, muscular dystrophy, multiple sclerosis 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 class, performing in class, and managing out-of-class assignments and tests.

**Getting to and from class:** Physical access to classrooms is a major concern of students with mobility limitations. Students who use wheelchairs, braces, crutches, canes, prostheses, or who fatigue easily, may find it difficult moving about, especially within the time constraints imposed by class schedules. Occasional lateness may be unavoidable. Tardiness or absence may be caused by transportation problems, inclement weather or elevator or wheelchair breakdowns. Getting from class may pose similar problems, especially in cases of emergency.

- Consider the accessibility factor before or early in the semester and discuss it with the student and, if necessary, the DRU.
- Be prepared to arrange for a change of classroom or building if no other solution is possible.
- Familiarise yourself with the University's emergency evacuation plan and ensure that it is manageable for the mobility-impaired student.

**In class:** Some courses and classrooms present obstacles to the full participation of mobility-impaired students. In seating such students, every effort ought to be made to integrate them into the class. Relegating them to a doorway, a side aisle or the back of the room should be avoided. Even such insurmountable barriers such as fixed seating may be overcome by arranging for a chair to be unbolted and removed to make room for a wheelchair.

Laboratory stations too high for wheelchair users to reach or transfer to, or with insufficient under-counter knee clearance, may be modified or portable stations may

replace them. Otherwise, the assistance of an aide to follow the student's lab instructions may be necessary.

Students with hand-function limitations may have similar difficulties both in the laboratory and in the classroom doing in-class writing assignments and taking written tests. For such a student:

- Permit the use of a note taker or digital recorder.
- Team the student with a laboratory partner or assistant.
- Allow in-class written assignments to be completed out of class with the use of a computer, or scribe if necessary.
- Conduct oral or recorded tests or allow extended time.

**Out-of-class assignments:** For mobility-impaired and hand function-impaired students, acquiring the resources for reading or research assignments may present obstacles. Off-campus assignments and fieldwork may pose similar problems of access to resources. Lecturers should consider such measures as advance notice to students who rely on special transportation, the extension of deadlines, and alternative assignments. As the completion of required work may thus be delayed, the extension of deadlines may be appropriate where necessary.

## 7. STUDENTS WITH A SPEECH IMPAIRMENT

**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 impediments can be managed by using assistive devices such as electronic speaking devices or computerised voice synthesisers. Others may be treated through speech therapy. All of them can be aggravated by the anxiety inherent in oral communication in a group.

**Patience** is therefore the most effective strategy in dealing with speech-impaired students:

- Give them opportunity but do not compel them to speak in class.
- Permit them the time they require to express themselves, without unsolicited aid in filling in gaps in their speech. Do not be reluctant to ask the student to repeat a statement.
- Address them naturally. Do not assume the *spread phenomenon* i.e., that they cannot hear or comprehend.
- Consider course modifications, such as one-to-one presentations and the use of a device with a voice synthesiser.

## 8. STUDENTS WITH A CHRONIC ILLNESS

Some students have medical conditions that are hidden and not easy to see, but cause serious problems in an educational setting. Students can be disabled by chronic illnesses such as asthma, arthritis, diabetes, cardiopulmonary disease, cancer, chronic fatigue immune deficiency syndrome, and seizure disorders. They can also be disabled by medical conditions that cause intense and continual pain: for example, fibromyalgia, repetitive stress injury, post-surgery, and back problems.

Symptoms of all these conditions can be unpredictable and fluctuating. Students with chronic illness or pain may have limited energy and difficulty walking, standing, or sitting for a long time. Their pain, or the side-effects of medications, may cause them to become dizzy or confused, making it hard for them to pay attention in classes, complete out-of-class assignments, do research, and stay focused during tests/exams.

The following suggestions may help you to work effectively with students who have disabling medical conditions.

- Medical conditions, including medication side-effects, can cause problems with fatigue and stamina which adversely affect attention and concentration. For these reasons, students with medical conditions may need extended time on tests and exams.

- Students with some medical conditions may become dizzy and disoriented or may lack physical stamina. Thus, they may be unable to quickly get from one location on campus to another. For these reasons, a student may be late getting to class. Please be patient when this happens.
- Lecturers in courses requiring field trips or internships need to work with their students and the DRU to ensure that students' are supported. For example, students may need assistance with transportation, special seating, or frequent rest-breaks.

Some students experience recurrence of a chronic condition requiring bed rest and/or hospitalisation. In most situations, students can make up the incomplete work, but they may need extra time.

## 9. STUDENTS WITH SEIZURE DISORDERS

Students with epilepsy and other seizure disorders are extremely reluctant to divulge their condition 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 true 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 of the brain.

### The three distinct types of seizures:

**Petit mal** means "little" seizure and is characterised by eye blinking or staring. It begins abruptly with a sudden dimming of consciousness and may last only a few seconds. Whatever the person is doing is suspended for a moment but resumed 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 minutes to half an

hour. The person may have no recollection of what happened and 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 their head.
- Turn the head to the side so that breathing is not obstructed.
- Loosen tight clothing.
- Do not force anything between the teeth.
- Do not try to restrain bodily movement.
- Call the Campus Health and Wellness Centre or other appropriate medical authority, or ask someone else to do so.
- If the student suffers a seizure during class, the lecturer/school should deal directly with the concerns of the class, in an effort to pre-empt any negative attitudes that may develop toward the disabled student.

## 10. CONTACTING DRU FOR FURTHER ASSISTANCE

The DRU will gladly assist any academic staff with additional queries on specific disabilities and the needs of students who have them. The DRU can also meet to discuss the academic issues of postsecondary students with disabilities and effective instructional methods for these students. Academic staff can visit our offices to experience first-hand the processes involved in supporting students with disabilities. For more information, please visit: [www.wits.ac.za/disability-rights-unit](http://www.wits.ac.za/disability-rights-unit)