



## V. STUDENTS WITH DISABILITIES

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Like other U.Va. students, students with disabilities are generally industrious and motivated, although some must take longer than average to finish their degree. With reasonable understanding and accommodation on your part, these students can meet degree standards, enter professions, and achieve in graduate and professional programs with the same degree of success as nondisabled students. The following sections will help you identify characteristics of students with disabilities, know where and how to refer them to additional resources, and, most importantly, help you adapt your teaching methods to ensure equal opportunities for all your students. This chapter replicates and expands upon material found in *Teaching at the University of Virginia*.

### Constraints

Keep in mind that the task of managing any disability drains students of time and energy, and their health routines are critically important. Disabilities also interfere with daily living skills. Some

Students with disabilities at the University constitute a population as diverse as the total student body. As intelligent and academically prepared as other students at U.Va., they clearly have special needs that may require your knowledge and understanding as well as the support of the Learning Needs and Evaluation Center (LNEC) (243-5180). Disabilities include those related to chronic health conditions (for example, diabetes, HIV positive, sickle cell anemia), neurological conditions (such as seizure disorders and head injuries), and specific learning disabilities (for instance, dysgraphia, dyslexia, dyslogia). Some students have psychiatric disorders or emotional problems resulting from childhood sexual abuse, arrested addictions, and biochemical imbalances. Other students have vision or hearing deficits or mobility impairments, including temporary ones due to sports injuries.<sup>1</sup>



<sup>1</sup> For the information in this chapter, I rely on several sources, including LNEC staff members and works listed in Appendix II and on the Works Cited page. Because much of the information comes from a combination of sources, only direct quotes are cited in this chapter to promote readability.

students with disabilities cannot take notes while trying to listen; others cannot read at a rate commensurate with their general intelligence. Still others have great difficulty simply getting their work on paper because of trouble with eye-hand coordination, apraxia, or arthritis. Students with disabilities may have low self-concepts or be socially isolated. Or, they may repeatedly get lost or be unable to drive because they cannot coordinate information from several senses quickly enough. And, of course, students with disabilities also encounter generic student predicaments: perfectionism, pressures associated with family expectations, family responsibilities, and so on.

Reading what sounds like a litany of problems may provoke in you one of the common reactions to disabilities, reactions you need to recognize if only to spot them among your non-disabled students. Some people feel awkward or flustered when near a person with a physical disability: “Should I open the door, or would that be condescending?” Others feel an overwhelming sense of pity and a need to take care of the person. Fear is another common reaction, including the irrational fear of the same disability attacking you. Still others suspect that people with disabilities are receiving “special breaks” and aren’t pulling their own weight. Such negative feelings constitute one of the greatest constraints on people struggling to overcome disabilities.

**Feelings of discomfort and prejudice toward people with disabilities disappear, however, when people get to know them as individuals.**

### Accommodations

To succeed, students with disabilities require others to be creative and flexible to their special needs. Given a documented diagnosed disability (with information from the student’s Academic Dean or the LNEC), you may need to accommodate certain students by modifying accessibility to the classroom, your lecture, or course materials. The reasonable accommodations needed by each student will vary according to his/her disability. In general, these accommodations are not difficult for the instructor to carry out, nor should they change basic course requirements. Occasionally, students with disabilities who are qualified for special support choose not to seek it; you are not responsible for accommodating a disability that the student does not declare or that you cannot verify.

Encouraging your students to let you know of any disability early in the semester will ensure ample time to make any necessary adjustments. One way to signal your willingness to accommodate students with disabilities is to include a statement on your syllabus similar to the following one recommended by the LNEC:

All students with special needs requiring accommodations should present the appropriate paperwork from the Learning Needs and Evaluation Center (LNEC). It is the student’s responsibility to present this paperwork in a timely fashion and follow up with the instructor about the accommodations being offered. Accommodations for test-taking (e.g., extended time) should be arranged at least X days before an exam.

The confidential paperwork from the LNEC will typically include a short list of recommended accommodations. Many are obvious: your classroom must be accessible to students in wheelchairs, for instance, or you must allow guide dogs, interpreters, peer note-takers assigned, tape recorders, or flexibility with the number of excused absences. Others may seem less obvious but are easily accomplished. If, for example, meeting due dates is a problem for the student, you can negotiate reasonable schedules for completing work. In the following sections you’ll find other suggestions for accommodation grouped by type of disability. Please note that these lists of suggestions are not exhaustive—the options for reasonable accommodations are unlimited. The LNEC can provide additional ways to address specific disabilities and/or situations, and if special arrangements are required, you can contact your school’s Associate or Assistant Dean.

## Accommodating Students with Physical Disabilities

### General Principles

- Always talk directly *to* the student, not about the student to the interpreter or caretaker.
- Monitor small group work to make sure the student is included.
- Make a concerted effort to include the student in class discussion.
- Accommodate the student’s needs without lowering course requirements.

### Accommodating Deaf/Hearing Impaired Students

*Assignments and Instructions:*

**Put on the board or hand out written statements of all important dates, assignments, exams, instructions, or changes in location.** Consider providing a brief outline of the course as a handout or on-line.

**If you need to communicate with the student by telephone, use the General U.Va. TDD/TTY Relay (982-HEAR) or the Virginia Relay Center (1-800-828-1140/1120).**

**Set up a system to notify the student ahead of time if class is canceled** so that she/he can inform the interpreter.

**Be aware that students will not be able to lip-read films.** You will need to have the movie open-captioned (consult with the Deaf and Hard of Hearing Services Coordinator at the LNEC for assistance), or provide an interpreter, written summary, or screenplay.

*Discussion and Lecture:*

**When speaking, look directly at a student who relies on lip-reading.** Try not to pace or turn your back to the student while speaking (such as to write on the board). If you need to speak while writing on the board, have a student write while you dictate. If you tend to speak quickly, try to moderate your speed, and slow down when explaining important ideas and facts. Speak naturally, and don't over-enunciate or shout. If you have a beard or mustache, keep it trimmed so the student can see your mouth. Since even the best lip-readers may understand only 30-50% of what is said, don't consider it an indication of the student's intelligence or competence if she/he has trouble understanding you. Be patient about the need to repeat yourself sometimes.

**You can arrange moveable chairs to facilitate the student's ability to understand you.** Students can lip-read best when they have their backs to the light source and you face that source. In the second-best arrangement, the students and teacher have the light source to their side. Avoid having students face the light source (Blair 81).

**If the student uses a sign language interpreter, do not walk in front of the interpreter while speaking. Address the student directly, not the interpreter.** (Don't say, "Does he have the paper today?" or "Ask her if she has the paper today." Say instead, "Do you have the paper today?") Don't praise the interpreter's skill unless you are competent to judge this. If the student has trouble understanding a point or answering your question, consider that this difficulty may be due to problems with the interpreter's skill, rather than to the student's intelligence or preparation. Moderate your speaking pace so the interpreter can keep up, and allow a slightly greater response time for questions so the interpreter has time to relay questions.

**Repeat other students' questions before answering them and put their responses on the board.**

When necessary, identify the student asking

questions or contributing to discussion, so the hearing impaired student knows who is speaking.

**Hand out a written sheet of the questions or topics you will discuss in class that day or the following day.**

**Put technical or unfamiliar words and important new terms on the board or handout.** Consider providing these to the interpreter before class.

**Outline clearly your main ideas on handouts, overheads, or blackboard.**

**Control the noise level of the room.** Many hearing-impaired students rely on hearing aids, which magnify *all* sound, including background noise. A few students speaking in the background can thus make your lecture or comments very difficult to hear. Watch for such whispered conversations and stop them. It may also help to announce that you expect quiet when you lecture and when students speak. Keep the door closed. If the room has extremely high echo levels, you can contact the Associate Provost for Classroom Management and Academic Support (924-6313) to request a room change (carpeted rooms have lower echo levels than do rooms with hardwood floors). Do not, however, single out the hearing impaired student by announcing that you are making these changes so the hearing-impaired student is able to hear better.

Treat it as good general classroom policy instead.

**Encourage the student to sit in the first few rows.**

Hearing-impaired students may not be as aware as deaf students of how important distance is to understanding speech (Blair 71-73). If such students consistently arrive late, they may sit in the back, which may significantly affect their ability to comprehend. Request privately that they arrive early enough to sit in the first five rows, or allow the student a designated seat near the front.



Photo by Jim Carpenter

*Course Structure:*

**Consider letting the student communicate with you and/or the class through e-mail or an online discussion group.**

*Papers:*

**If the student communicates through American Sign Language (ASL) and his/her writing shows consistent patterns of grammatical errors similar to those of ESOL students consider the student to be an ESOL student** whose first language is ASL. Recommend or require that the student work regularly with Writing Center staff. See also the list of resources in Appendix I.

### **Accommodating Blind/Visually Impaired Students**

**Keep the physical room arrangement consistent.**

Warn the student ahead of time if you must change it (such as for small group work).

**No one should pet or distract the student's guide dog, if he/she uses one.**

*Assignments:*

**Assign readings and organize photocopy packets as soon as possible**, since some students with visual impairments use taped readings and books on CD. **Indicate clearly what material is required (and so must be taped), and what material is only recommended.** At the student's request, the LNEC will acquire, prepare, and/or tape reading materials. Preferably the student's request will come before the semester begins, and the sooner you are able to specify reading material, the more likely the student is to have that material by the time class starts.

*Discussion and Lecture:*

**Make written information available in another format** by describing what you write on the board or narrating demonstrations. Use precision when narrating; don't just say "this" or "that" when referring to notes on the board or parts of transparencies.

**Provide advance notice of meeting location changes** or meetings outside of the classroom so the student has adequate time to find the new location.

### **Accommodating Mobility/Coordination Impaired Students & Students with Medical Conditions**

*Course Structure and Location:*

**If the student is chronically late, meet with him/her privately to find a reasonable solution.** Because of the terrain and the distance between buildings at U.Va., a student with a mobility impairment may have to take an indirect route to get from class to class. Consider moving your classroom closer to the student's previous class to ameliorate this.

**If you schedule a meeting outside class, check to see if the location is accessible.** If you want your students to attend a lecture or even to meet you during office hours and the location is inaccessible (e.g., Jefferson Hall), other arrangements should be made. The University is responsible for rescheduling lectures; but you should request such a change from the Associate Provost for Classroom Management and Academic Support well ahead of time.

**Recognize that the student may be absent from class for medical reasons.** Generally, if a student knows in advance that he or she will need to be absent occasionally for medical reasons, he or she will have an accommodation called "unavoidable absence" approved by the LNEC. This signals the instructor that the student will sometimes need to miss class. The student still has to meet all requirements of the class, however, and should work out *in advance* with the instructor how he or she will make up work, and how soon it will be due.

*Classroom Dynamics:*

**A student who has been recently disabled may be reluctant to speak in class** though there may be no physical cause for this reluctance. In such a case, examine your course standards and goals to determine whether, how, and to what extent you need to require or encourage class participation. You might speak to the student privately and stress the importance of participation. If the student continues to feel extremely anxious about speaking in class, respect the student's needs; do not force vocal participation, as long as such a response does not seriously hinder your course standards. Allowing the student to participate via e-mail or in a computer-assisted discussion group may provide a viable alternative as well.

**When students work in small groups, make sure that all students, including students with disabilities are included.** You can assign groups logically or randomly. Once groups are formed, check that all students are equally involved and intervene if necessary by prompting students to ask each other questions.



Photo by Jim Carpenter

## Accommodating Students with Emotional or Psychiatric Disabilities

If a student confides in you about a personal problem that you suspect may be an undiagnosed emotional or psychiatric illness, refer the student to Counseling and Psychological Services (CAPS), Student Health, the Office of the Dean of Students, or the LNEC. Be sensitive about referrals. To some people, the suggestion that they see a professional counselor is stigmatizing. Demystify the process by emphasizing that recognizing one's need for help is a sign of strength, not weakness, and by explaining that many people seek counseling occasionally. If a student seems ambivalent about making an appointment, simplify the procedure by writing down the phone number of the Office of the Dean of Students, CAPS, LNEC, or by telephoning yourself for basic information.

If a student has been diagnosed with an emotional or psychiatric illness (e.g., clinical depression, eating disorders, anxiety disorder, arrested alcoholism, etc.), he or she needs special consideration, whether the illness is transitory, genetic, or chronic. A student with emotional disabilities may experience difficulties with fatigue, attention, organization, and cognitive processing, or other complications that affect his/her academic performance. Some students miss classes, forget deadlines, or become very withdrawn as a result of their illness. With appropriate documentation, the LNEC can approve accommodations for psychiatric disabilities. Such accommodations may include

- making reasonable allowances for unpredictable absences,
- negotiating an achievable timeline for missed assignments, or
- providing extended time for exams.

Contact the LNEC for other suggestions of reasonable accommodations. If you have any questions about working with a student with an emotional illness, contact CAPS, the LNEC, or Mental Health for assistance.

## Teaching Students with Learning Disabilities and ADHD

The Association for Children and Adults with Learning Disabilities (ACLD) defines a learning disability as “a chronic condition of presumed neurological origin which selectively interferes with the development, integration, and/or demonstration of verbal or nonverbal abilities.” The LNEC website explains that these are “lifelong conditions, which affect learning in individuals with normal or above normal intelligence. These disorders affect learning processes, but not necessarily the capacity to learn.” We all have learning strengths and weaknesses, but for neurological reasons, students with learning disabilities may have difficulties with learning processes such as listening, time management, reading, writing, or mathematical reasoning.

If a student's performance or lack of progress seems unusual or puzzles you, you may wish to see if he/she exhibits a pattern of some of the characteristics described below. Checking the student's performance against this list will help you distinguish between a student who has poor or ineffective study habits and one who is potentially able and who studies very hard, but who happens to have a learning disability or Attention Deficit Hyperactivity Disorder (ADHD). Anyone may exhibit certain of these characteristics to some extent and at some time: On occasion, we all read more slowly, feel anxious when asked to perform orally, can't finish on time, or have problems remembering terms. A student who has a learning disability, however, will show an *unexplained, consistent, and unusual* pattern of discrepancy between specific types of learning, and learn or perform well in some situations and not in others (e.g., he/she may understand diagrams but not an oral presentation or vice versa).

### Specific Characteristics

*Discrepancies in Processing and Reproducing Information:*

**The student may understand ideas when presented one way but not another or may do much better at one type of assignment.** For example, a student may perform significantly better with short answer than with multiple-choice exam questions or better with numerical than with verbal math problems.

**The student may not recognize familiar information when it is presented in an unfamiliar form,** such as when switching from words to a chart or vice versa.

**The student may repeatedly ask questions that seem “stupid” or strange,** such as asking about an idea you just discussed, constantly asking you to

repeat information, or asking questions that indicate a major misunderstanding of an assigned reading.

**The student may have special difficulty understanding directions.** For instance, the student may be able to recite information with no difficulty but be unable to reproduce it on exams because she consistently misinterprets the questions or does not seem able to understand what specific information the questions are asking for. Similarly, the student may consistently and puzzlingly misunderstand the point of written instructions, or he may find it necessary to read every assignment two or three times to understand its main points.

**The student may show a consistent but puzzling pattern of errors in completing mathematical problems.** He or she may always add numbers in the wrong columns or consistently confuse symbols. Or, the student may understand the ideas and work the problems correctly, but may produce final incorrect answers by consistently transposing numbers or by treating all negative numbers as positive numbers. Even when such errors are pointed out, the student may seem unable to recognize that the answers are wrong in this way.

**The student may reverse ideas or consistently reverse words in explaining them.** For instance, the student may grasp the pattern of ideas but consistently understand them backwards, or the student may consistently write “not red” on an exam when he/she means or should write “red.”

**The student may understand the material, and may have no difficulty explaining it in class or in conference, but may not be able to complete timed tests and exams within the allotted time.** This may indicate a slower rate of reading or writing, memory problems, or difficulty sorting information.

*Unusual Difficulty Reading:*

**The student may read or write unusually slowly and may trace sentences with his/her finger or draw a line under them when reading.** (This may indicate the student has eye focusing problems.)

**The student may become unusually anxious and perform unusually poorly when asked to read aloud in class.** (This may indicate that the student has difficulty processing written information. Dyslexic students, for instance, see letters as transposed.)

*Unusual Difficulty Writing:*

**The student can explain ideas orally and ask good questions in class but cannot write these ideas coherently.**

**The student may hand in papers that seem conceptually unusual or strange.** Examples include papers with good ideas but with unusually disjointed arguments and illogical or strange conceptual connections.

**The student may hand in papers that seem stylistically unusual or strange** (as opposed to papers that simply are not very good). The student’s style may include the following:

- An extreme number of spelling errors. The same words may be misspelled inconsistently, words with initial vowels may be consistently misspelled, or the orientation of letters consistently switched within words (*b* for *d*, *etc.*).
- An extreme number of switched words. These kinds of errors may seem unusual for the college level; the order of letters may be switched (such as *on* for *no*).
- An unusual lack of punctuation, or a large amount of strangely applied punctuation.
- Extremely convoluted sentences with mismatched or unclear sentence structure.
- Extremely wordy sentences where the student seems to write around a word or idea.
- Grammar and mechanics that seem extremely careless, although the student insists that he/she has worked very hard on the paper and has proofread it carefully.
- Unusually immature or uncoordinated handwriting for the college level.

*Puzzling Lack of Progress:*

**Despite his/her ability and effort, the student may show a puzzling lack of progress or may start out well in the course but then seem to lose initial learning.** (This may indicate problems with short- or long-term memory or with sorting information.)



## CHARACTERISTICS OF STUDENTS WITH CERTAIN TYPES OF LEARNING DISABILITIES

NOTE: This chart is not complete. There are many specific types of learning disabilities, and each type will produce particular kinds of learning difficulties.

Disability	Dyslexia/Dysgraphia	Difficulty in Processing Auditory or Visual Information	Memory Problems	Additional Possible Disabilities (Dyslogia)
<b>Manifestation</b>				
<b>Writing</b>	<ul style="list-style-type: none"> <li>• Unusual or inconsistent spelling.</li> <li>• Orientation or order of letters switched (<i>no/on</i>, <i>b/d</i>).</li> <li>• Punctuation missing or atypical.</li> <li>• Substitution of words or vowels.</li> <li>• Ideas or words transposed.</li> <li>• Poor handwriting.</li> </ul>		<ul style="list-style-type: none"> <li>• Papers contain extremely wordy or convoluted sections.</li> </ul>	<ul style="list-style-type: none"> <li>• Papers seem conceptually unusual.</li> <li>• Logical connections are misused or missing.</li> </ul>
<b>Reading</b>	<ul style="list-style-type: none"> <li>• Difficulty reading aloud.</li> <li>• Unexplained difficulty in reading comprehension.</li> </ul>	<ul style="list-style-type: none"> <li>• Difficulty processing written instructions, charts, diagrams, slides.</li> </ul>	<ul style="list-style-type: none"> <li>• Difficulty retaining what is read.</li> <li>• Unusual errors.</li> </ul>	<ul style="list-style-type: none"> <li>• Draws unusual and/or inappropriate inferences.</li> </ul>
<b>Instructions/ Information</b>	<ul style="list-style-type: none"> <li>• Consistent pattern of errors in computing mathematical problems.</li> </ul>	<ul style="list-style-type: none"> <li>• Cannot understand or recognize information when presentation is switched (e.g., visual to auditory or vice versa.)</li> </ul>	<ul style="list-style-type: none"> <li>• Constantly asks for repetition or asks "stupid" questions.</li> <li>• Puzzling lack of progress.</li> <li>• Unable to build on ideas, forgets due dates, etc.</li> </ul>	
<b>Papers/ Exams</b>	<ul style="list-style-type: none"> <li>• Difficulty organizing written work.</li> <li>• Cannot complete in-class papers or exams in the time allowed.</li> <li>• Can explain ideas orally but not in written form.</li> <li>• Misinterprets exam questions.</li> </ul>	<ul style="list-style-type: none"> <li>• Same as for dyslexia. (see column to left.)</li> </ul>	<ul style="list-style-type: none"> <li>• Understands the important ideas of the course, but cannot remember basic facts</li> </ul>	

### Identification and Referral

Once you notice a student in your class who might have a learning disability, you can use the following techniques to refine your identification and distinguish between students with disabilities and those who do not work hard enough or have poor study or writing skills:

**Give an in-class timed assignment.** As the students work, check to see if the student in question seems to have unusual trouble getting started. Examine students' responses for these signs:

- unusually poor handwriting
- large numbers of spelling or punctuation errors or confusing sentences
- unusual lack of organization or strange conceptual connections

- inability to address correctly the initial question
- difficulty in finishing in the allotted time.

**If your course does not include writing, announce a brief in-class timed test.** Examine whether and how the student answers your questions, if there are unusual and consistent patterns of mathematical or conceptual errors, and whether he/she can finish the test in time.

**Talk to the student privately to find out how much he/she is studying.** A student with a learning disability may be working long hours and may say that he/she works very hard without results. If the student is not studying enough, point out the need to work harder, and make sure the student knows how to study for your course.

**Ask the student to explain how he/she is studying.** A student with special difficulties may study hard

but misapply study time because he/she misunderstands your instructions; this misunderstanding may imply a problem with processing certain types of information. *If the student exhibits poor study skills, recommend or require departmental small-group tutoring*, available free for most large introductory courses.

**Question the student about his/her note-taking strategies**, and, if you feel the student will not resent it, ask to look at the notes. See whether the notes differ markedly but consistently from class presentations.

**Require or recommend that a student who exhibits problems in his/her writing attend the Writing Center.** Encourage the student to meet regularly with a tutor he/she finds helpful.

If, after eliminating other types of problems, you suspect the student may have a learning disability or ADHD, refer him/her privately to the LNEC, located in Elson Student Health Center (400 Brandon Avenue). The best approach is to be supportive and non-directive. Do not say that you think the student has a learning (or other) disability or imply that there is something “wrong.” Instead, tell them what the LNEC is, where it can be found, and the academic services it offers. You might explain that the LNEC offers time management/study strategy workshops every semester or that someone there can help determine whether the student has appropriate study habits, etc. If you feel concerned about how to broach this subject, call the LNEC for help in referral. If the student resists the idea of going to the LNEC, but you feel such a determination is crucial to his/her future success, you can contact the student’s dean.

Once you refer a student to the Learning Needs and Evaluation Center, staff members will consult with the student to determine whether a learning disability exists, and, if so, what kind. All LNEC services are free to the student, unless the student requires a full battery of diagnostic tests from outside the center. If the student or his/her insurance carrier cannot or will not pay for the outside testing fee, the LNEC staff can help find a resource to cover them. After the LNEC has determined that the student has a specific disability that requires accommodations, and if the student requests them, the LNEC will send you a form outlining some basic accommodations. To ensure confidentiality, the LNEC will not give you a specific diagnosis of the student’s disability. If you need further information about the nature of the disability to determine specific accommodations, speak to the student and, with his/her permission, with the LNEC.

## Accommodating Students with Learning Disabilities and ADHD

Allowing specific accommodations gives all students a level “playing field,” and allows the student with disabilities an equal opportunity to prosper academically and contribute to society. The careers of Albert Einstein, Thomas Edison, and Niels Bohr, for instance, show what persons with learning disabilities can accomplish despite initial difficulties. Although not all accommodations or techniques will work for every individual, below are some time-tested recommendations.

### General Principles

- Recognize that students may need to learn and demonstrate information in different ways.
- Maintain your course standards.
- Vary your classroom structure and your methods of presenting material.

### Specific Teaching Strategies

*Spelling and Punctuation:*

**Consider not lowering the student’s grade for spelling or punctuation errors on timed exams.**

Focus on content. Students’ difficulty with spelling and punctuation increases drastically under timed conditions. Thus asking for a focus on spelling or punctuation under these circumstances can deflect the student’s attention from the main exam goal—demonstrating an understanding of course material. Such students often do markedly better when taking exams on a computer and using the spell-check function.

**When correcting a students’ spelling, punctuation, or misused words, don’t simply mark what is wrong, but help the student see the correct version.** For repeated spelling errors and word substitutions, it may help to provide the correct spelling for the word above or to the side of the incorrect word, and to underline or circle the letters that are different, particularly if they are transposed. You can also ask the Writing Center tutors to look for and go over such spelling issues with the student (send a written note with the student for the tutor). For patterns of substituted words, you might mention the word the student needs or indicate a dictionary or a grammar handbook chapter that will explain the differences. Many grammar handbooks list the most commonly misspelled and confused or misunderstood

words. Such lists can be valuable references for students with learning disabilities.

*Assessment and Exams:*

**Consider modifying exam procedures.** Computer-scored or “bubble” answer sheets present a problem for some students. Other students might need to type exams on a computer with spell-check, or to use a spelling dictionary, a calculator, or scratch paper (for students with handwriting problems). Certain students (for instance, students with a slower reading rate) might also need extra time for the exam and/or a separate room to filter out distraction or allow for oral rather than written questions (LNEC can provide a proctor).

**Consider allowing specific modifications that clarify the background information needed for the exam.** For students who cannot recognize negative symbols, and so perform mathematical problems perfectly except for treating negative numbers as positive numbers, all you might need to do is highlight or circle the negative symbols on exams, thus allowing such students to “see” the symbols. Or you might allow memory-impaired students a card for exams that lists the names of characters or other basic information. NB: Allowing one student but not others to bring in a card immediately identifies the student as learning-disabled and may create resentment among the other students for this “special treatment.” You can either allow all

**CORRELATION OF SPECIFIC STRATEGIES WITH SPECIFIC LEARNING DISABILITIES**

Disability Situation	Memory Problems	Dyslexia / Dysgraphia	Difficulty in Processing Auditory or Visual Information	Other Possible Disabilities (Dyslogia)
<b>Assignments</b>	<ul style="list-style-type: none"> <li>Use a clear syllabus with all due dates.</li> </ul>	<ul style="list-style-type: none"> <li>Give assignments aloud and in writing.</li> <li>Solicit questions to check comprehension.</li> </ul>		
<b>Discussion/Lecture</b>	<ul style="list-style-type: none"> <li>Supplement lectures by writing terms on the blackboard, overheads, or handouts.</li> <li>Allow note-takers from LNEC or set up a note-taking system.</li> </ul>		<ul style="list-style-type: none"> <li>Supplement oral with visual presentation, and vice versa.</li> <li>Encourage the student to sit in front.</li> <li>Pair students to discuss ideas for comprehension.</li> <li>Recommend a tutor.</li> </ul>	
<b>Papers</b>	<ul style="list-style-type: none"> <li>Recommend a thesaurus if the student consistently writes around a forgotten word.</li> <li>Recommend the student put a similar word in brackets.</li> </ul>	<ul style="list-style-type: none"> <li>Require students to type and spell-check assignments.</li> <li>Encourage or require drafts.</li> <li>Require work with Writing Center staff.</li> <li>When correcting, focus on important errors, and correct spelling or structure.</li> </ul>	<ul style="list-style-type: none"> <li>Check to see that the student understands each assignment.</li> <li>Have the student read the assignment in class and solicit questions.</li> </ul>	<ul style="list-style-type: none"> <li>Require Writing Center help.</li> </ul>
<b>Exams</b> NB: It is always possible consult with the LNEC to see if a specific accommodation is necessary.	<ul style="list-style-type: none"> <li>Consider allowing index cards with names of characters or other background information.</li> </ul>	<ul style="list-style-type: none"> <li>Don't penalize spelling or punctuation on timed exams.</li> <li>Consider allowing use of a spelling dictionary or computer for exams.</li> <li>Consider allowing more time for exams.</li> </ul>	<ul style="list-style-type: none"> <li>Provide instructions in writing as well as orally.</li> <li>Emphasize instructions by highlighting, underlining, using asterisks, and so on. to</li> <li>Answer questions at the beginning of the exam, and provide a knowledgeable proctor if you're not there.</li> <li>You may need to allow extended time for exams or allow the student to take exams at the LNEC.</li> </ul>	

students such cards, modifying the exam accordingly, or give the special student the exam in a separate room or at another time. Such accommodations do not allow students to cheat when the purpose of the exam is not memory recall because they test whether students can use this information to demonstrate their competence at statistics, economics, or literature. Such an accommodation becomes more problematic, of course, when you must test recall, as in foreign-language courses.

**Consider having your students demonstrate their knowledge with modes other than final timed multiple-choice or essay exams.** You might substitute short-answer questions or a combination of written and oral examinations.

### Teaching Strategies Effective for All Students

While the term “learning-disabled” applies legally only to a few students, many accommodation strategies can help all students learn better. All students have learning strengths and weaknesses, and some types of teaching allow them to process information more effectively than do other types. Moreover, psychological studies have shown that people process information more effectively when it is initially presented in a clear framework, when it is broken into parts, and when these parts are clearly related to each other. Many techniques often recommended for teaching students with learning disabilities will be helpful even if you do not have a single formally diagnosed student in your course. Making your expectations explicit, highlighting the most important information in the course, and varying your presentation will benefit *all* your students. The following principles and techniques aim to promote clear teaching and help all students learn and demonstrate understanding of our course material.

#### General Principles

- Place your ideas in context.
- Make available a written summary of key facts, terms, and ideas.
- Make your criteria explicit, explaining clearly what students are to do, and why the work is important.

#### Specific Teaching Strategies

*Syllabus:*

**Make your syllabus clear and specific. Specify the due dates for each assignment and test and discuss the requirements, necessary study skills,**

**and final course objectives.** Make it clear what the students need to do for each assignment and why they need to do it. Hand out the syllabus at the beginning of the course or post it online using Instructional Toolkit and make sure students understand it.

*Assignments:*

**Provide sufficient time for students to ask questions about individual or group assignments.**

**If you give semester-long assignments, show how and when these assignments divide into smaller parts.** Give students guidelines for how long the project should take, and give feedback (and grades if you like) on component parts.

**Present assignments both orally and in writing.**

**Provide study questions or lists of key terms to help students focus on the most important elements of assigned readings.** Or use a textbook with a study guide that provides such questions.

Identify the most important parts of the readings, those that must be read especially carefully, and those that can be read more quickly or skimmed.

**Emphasize the study skills necessary for each assignment.** Tell students what they need to do (such as analyze a graph or a text) and what they should not do (such as recapitulate the plot of a book).

**When possible, give examples of the kind of product you expect.** Distribute (or post on Instructional Toolkit) anonymous copies of a model student paper, lab report, or case study from an earlier term.

**Reinforce oral information by providing written handouts. Emphasize key instructions or information.** Use italics, underlining, bolding, or capitalization to highlight key words and dates for assignments. Stress particularly important ideas, outlines, or instructions by using a textbox or different font or use colored handouts to distinguish important outlines or assignments. If you use transparencies (or slides), use color to emphasize important ideas and instructions.

*Discussion and Lecture:*

**Look at students when you speak. When you emphasize key ideas or complicated points, pause long enough for students to write them down.** Studies show many teachers speak too quickly for their students—whether learning-disabled or not—to be able to take effective notes.

**Emphasize key ideas, making sure that the students understand that these are the most important points.** Writing important definitions and ideas on the board provides visual emphasis and helps the student with a learning disability affecting

spelling to spell better. Remember that students will write in their notes whatever you put on the board. Write clearly in letters large enough to be seen from the back of the room and space out the ideas on the board. When videotaped, many teachers are astonished to discover how small or illegible their writing actually appears to students in the back of the room.

**Place new or important ideas in context to explain how they are used and why.** Use concrete examples to show how theories work. Stress the relationship between new ideas and previous ones.

**Periodically review main ideas.**

**Provide structural cues that help students organize their lecture notes:** When you lecture, briefly REVIEW relevant material from previous classes, PREVIEW the day's lecture by explaining what you will be talking about, EXPLAIN your material, and then SUMMARIZE briefly what you said. Outline the main parts of your lecture on the board, in handouts, or through overheads.

**At key points in discussions, outline and review the material covered.** End the class and/or begin the next one by restating or having students restate the main points previously discussed.

**Supplement oral presentations with other types of information, such as visual diagrams.** Help students see what you are talking about, as well as hear about it. Also explain orally any visual charts, graphs, and so on. For fields such as engineering, physics, chemistry, you can also provide tactile models.



Photo by Dorothe Bach

*Papers:*

**Encourage students to go to the Writing Center.** You may require a student to attend the Center regularly if you think it is necessary for success in the course.

**Encourage your students to use spell-check when typing an assignment.** Studies indicate that students with learning disabilities often improve significantly once they start writing on a computer, for a variety of reasons. The spell-check function, for instance, makes them aware of misspelled words and working on a computer also helps all students revise, thus improving their final drafts.

**Encourage, or require, students to consult about early paper drafts** with you or with course TAs or graders.

*Assessment and Exams:*

**Avoid extremely complicated wording on exams,** particularly double negatives, convoluted phrases, and series of parenthetical remarks or questions embedded within one another.

If a student has trouble understanding an exam question, **encourage the student to rephrase it using his/her own words and clarify or correct the paraphrase as necessary.** Note that you do not give students the answers, but rather allow them to make sure they understand the questions.

**Provide frequent evaluations of the students' progress.** Instead of one or two large exams or assignments due at the middle and end of the semester, consider providing more frequent quizzes or brief written assignments that weigh less heavily toward the final grade but show you and the students how they are doing. Evaluate your students' progress well before midterm, and inform any student who is not progressing sufficiently about specific weaknesses and remedies.

**Include midterm and final review sessions. Discuss sample questions when appropriate, and explain what a good response is and why.** Clarify what different kinds of questions ask students to do (describe, analyze, synthesize, compare and contrast, and so on). Connect the information required for exam questions to the information presented in class.

*Classroom Structure:*

**Provide group work opportunities, such as for review or problem solving.** Such group interaction can help students with learning disabilities see how others address the problems.

**Depending on course content, class size, and structure, consider having students collaborate**

**on a formal note-taking system.** Students could sign up to take notes for each day and distribute them electronically or on paper by the beginning of the next class. These notes would not be a substitute for being in class, but would be a clear, organized, one-page distillation of the key points and their interrelations. Such an assignment can help students take responsibility for their learning and learn how to sort information. This technique, however, may not be appropriate for all courses, since it depends on a small class with strict attendance rules, and close supervision by the teacher (you may need to coach the first few sets of notes until the class understands what you want).