

Preparing Students with Disabilities for Careers in Health Care

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Introduction

Individuals with disabilities can succeed in a wide variety of satisfying health care careers. In this handbook, we provide some of the tools and resources the health careers educator needs to help these students take a realistic look at their capabilities, evaluate career options, and select and prepare for appropriate careers. **All** students need guidance to select careers in which their talents, interests, and abilities will contribute to success. **All** students need individual attention and support as they proceed through classroom and workplace education. Students with disabilities need guidance and support geared to their specific capabilities and limitations. This handbook will assist you, the health careers educator, in providing that guidance and support.

According to Wehman:

[M]ost students with disabilities need to aspire to competitive employment in a career as their first option and work to achieve that before settling for less. If people with disabilities do not view themselves positively and have high vocational aspirations, then the expectations of advocates, family members, friends, and others working on their behalf will reflect that position. (191)

What Is a Disability?

In their book *Everybody's Different*, Miller and Sammons include an excellent section on defining disability, noting that as a society we have made considerable progress in changing our focus from defining a person by his or her disability to realizing that a disability is only one aspect of a person. Instead of saying “a retarded student,” we now say “a student with mental retardation.” They discuss three aspects that make up the description of a person with a disability: impairment, disability, and handicap.

An impairment is “a missing, damaged, deficient, or weakened body part or function (26),” such as poor vision or chronic pain. A disability is the result of an impairment, limiting the individual’s ability to perform one or more of the following important life activities: self-care, full range of movement, use of intact senses, communicating with others, learning, working, using mental processes, and developing relationships with other people (27). A handicap is any of a number of obstacles—social, personal, physical, resource—that stands in the way of an individual with a disability. According to Miller and Sammons, “These handicapping obstacles can shape a person’s quality of life as much as or more than the limitations of a specific medical, physical, or learning disability (28).”

An *impairment* is “a missing, damaged, deficient, or weakened body part or function,” such as poor vision or chronic pain. A *disability* is the result of an impairment, limiting the individual’s ability to perform one or more of the following important life activities: self-care, full range of movement, use of intact senses, communicating with others, learning, working, using mental processes, and developing relationships with other people. A *handicap* is any of a number of obstacles—social, personal, physical, resource—that stands in the way of an individual with a disability. “These handicapping obstacles can shape a person’s quality of life as much as or more than the limitations of a specific medical, physical, or learning disability.”
Miller and Sammons, Everybody's Different

Under terms of the Americans with Disabilities Act (ADA) of 1990, implemented in 1992, approximately one in seven Americans has a disability—ranging from alcoholism to HIV/AIDS to visual impairment. The Individuals with Disabilities Education Act (IDEA) defines “children with disabilities” as having any of the following types of disabilities: autism, deaf-blindness, hearing impairments (including deafness), mental retardation, multiple disabilities, orthopedic impairments, other health impairments, serious emotional disturbance, specific learning disabilities, speech or language impairments, traumatic brain injury, and visual impairments (including blindness). See Appendix 1 for definitions of these terms from the IDEA regulations. “The new IDEA sends a strong message about the school’s responsibility to include students with disabilities in the general education classroom and curriculum, with accommodations when necessary. . . . Schools may place children with disabilities in separate classrooms or schools only when supports and services are not enough to help the child learn in a regular classroom.” (Knoblauch and Sorenson)

Adolescence is a difficult time for most students, but is especially challenging for those with disabilities. “[Teachers and counselors] can be resources in helping adolescents with disabilities reject the images, stereotypes, and limitations of an ableist society. Supports that facilitate future educational, employment, and living options can provide a sense of hope for the future.” (Mackelprang and Salsgiver, 69)

Mackelprang and Salsgiver present six guiding principles for working with individuals with disabilities:

- ❶ People with disabilities are capable and have potential.
- ❷ Devaluation and the lack of resources, not individual pathology, are the primary obstacles facing persons with disabilities.
- ❸ Disability, like race and gender, is a social construct, and a primary emphasis of intervention with people with disabilities must be political in nature.
- ❹ There is a disability culture and history that professionals should be aware of in order to facilitate the empowerment of persons with disabilities.
- ❺ There is joy and vitality to be found in disability.
- ❻ Persons with disabilities have the right to self-determination and the right to guide professionals’ involvement in their lives.

Strategies for Successful Inclusion

The National Center for Learning Disabilities Web site (www.nclld.org) presents the following strategies for including students with disabilities in regular classrooms:

- Adopt a school-wide curriculum and make modifications for all children who need them.
- Employ experiential, interactive educational methods that facilitate learning for all students.
- Redeploy teaching and support personnel to meet the needs of the entire student population.
- Engage all staff in working to ensure the success of all students.
- Engage in collaborative planning with all of the stakeholders in the education of children with disabilities.
- Be sure to address issues of transition and to include parents in every stage of the process.

- Provide time for training, team-building, and planning so that staff and parents can work together for changes that will benefit students.
- To the extent possible, treat all students equally (for example, have all students begin school on the same day).
- Integrate students with disabilities and their non-disabled peers in educational programs as early as possible.
- With the provision of reasonable accommodations, include students with disabilities in all system-wide assessments of educational performance and in public reporting of test results.
- Identify and develop/acquire assistive technology for students in need, and make it available for use at home and in school.
- Prepare peers for the inclusion of students with disabilities; this may need to be done on an individual basis.
- Plan for the integration of support personnel in the classroom in ways that do not foster dependence or segregation; to the extent possible, assign service providers to classrooms or teachers, not to individual students.
- Engage the families of students with disabilities in planning to facilitate the social integration of their children inside and outside the classroom.
- Teach students with disabilities to self-advocate for their needs and to make use of the support services so they can achieve independence.

Combatting Stereotypes and Prejudice

It is no secret that individuals of all ages with disabilities are subject to stereotyping and prejudice on the part of those without such disabilities. Most of us, educators included, have accepted our culture's stereotypes without being aware that we have done so. Any or all of the following five assumptions are often the filters through which we view individuals with disabilities:

- ❶ We assume that disability is rooted in biological dysfunction and that biological dysfunction is the primary driving force in their lives; they are “confined” or “victimized” by their disability.
- ❷ We assume that the disability, rather than the world around them, is the cause of the problems people with disabilities face.
- ❸ We assume that individuals with disabilities are victims and that they see themselves as victims.
- ❹ We assume that the disability is central to the self-definition and life of the individual.
- ❺ We assume that disability is synonymous with helplessness, that persons with disabilities necessarily need help from others. (Fine and Asch, in Mackelprang and Salsgiver, 92–93)

Educators have the opportunity to contribute to improved student and public perception of individuals with disabilities. In our attitudes and actions, and through the words we choose, we can portray them in a positive light, emphasizing their dignity and worth and the possibilities rather than the limitations created by their individual differences. Helping other students appreciate their classmates with disabilities and refer to them positively is an important step in counteracting the negative stereotypes that plague individuals with disabilities. “Persons with disabilities have been defined by their differences, and their differences have always been perceived as pathological. . . . [We] must be knowledgeable of the language and history that make up [the disability] culture.” (Mackelprang and Salsgiver, 33–34)

As educators, we can inform, politely correct inaccurate use of language, seek positive media coverage for students with disabilities, and encourage a climate where only accurate words are acceptable.

The following lists of appropriate and outdated or inaccurate terms can guide our word choice:

Appropriate Terms

blind	mobility impaired
deaf	non-disabled
developmentally disabled	paralyzed/paralysis
differently abled	persons with cerebral palsy
disabled	persons with disabilities
hearing impaired	persons with paraplegia
learning disability	seizure
mental illness	small/short stature
mental retardation	speech disorder
mentally/emotionally disabled	visually impaired
mentally restored	wheelchair user

Outdated/Inaccurate Terms

afflicted	defective	paralytic
arthritic	deformed	poor unfortunate
cerebral-palsied	epileptic	retard
confined to a wheelchair	gimp	spastic
crazy	handicapped	spaz
cripple	insane	victim
crip	invalid	wheelchair-bound
deaf and dumb	lame	withered
deaf mute	maimed	

About This Handbook

This handbook provides information and resources to assist the health careers educator in meeting some of the special learning needs of students with disabilities in the career pathways classroom. Following a section with techniques for students with various disabilities, the handbook includes information that can help the educator identify educational and employment opportunities in the health care field available to individuals with disabilities. Sample employment opportunities and job descriptions for dental, nursing, hospital, and medical office jobs are included, along with job analysis sheets to help students evaluate the suitability of jobs to their particular abilities.

The flow chart on page 11 illustrates the progress of a student from entering the health careers class to job placement as follows:

Enrollment Flow Chart

Student Enrollment

Students may enroll in a health careers class in two ways:

Student Referral

The student probably has been assessed as to his or her physical and mental capabilities. If the student does not have assessment information, contact the referring agency.

Student Direct Enrollment

When a student enrolls without counseling or assessment, the instructor must facilitate and/or carry out the necessary assessment procedures to determine the student's physical and mental capabilities.

Student Assessment

Whether the new student is referred to a class by an outside agency or enrolls directly, the instructor must evaluate the student's likelihood for success in a health career. The following information on job opportunities and requirements for various health care occupations should be used to assist the student in planning for the appropriate health career as well as the education/training to qualify for a career that meets his or her capabilities and interests. The instructor may seek assistance from community resources in completing the assessment process.

Student Education and Training

Each student with a disability is required by the Individuals with Disabilities Education Act to have an Individualized Education Program (IEP) that contains, at a minimum:

- current levels of student performance, including a statement of how the disability affects the student's involvement and progress in the general education curriculum
- measurable annual goals, including benchmarks or short-term objectives
- a statement of educational needs resulting from the child's disability
- a statement of all needed services and supports, including special education, related services, and program modifications and supports for school personnel

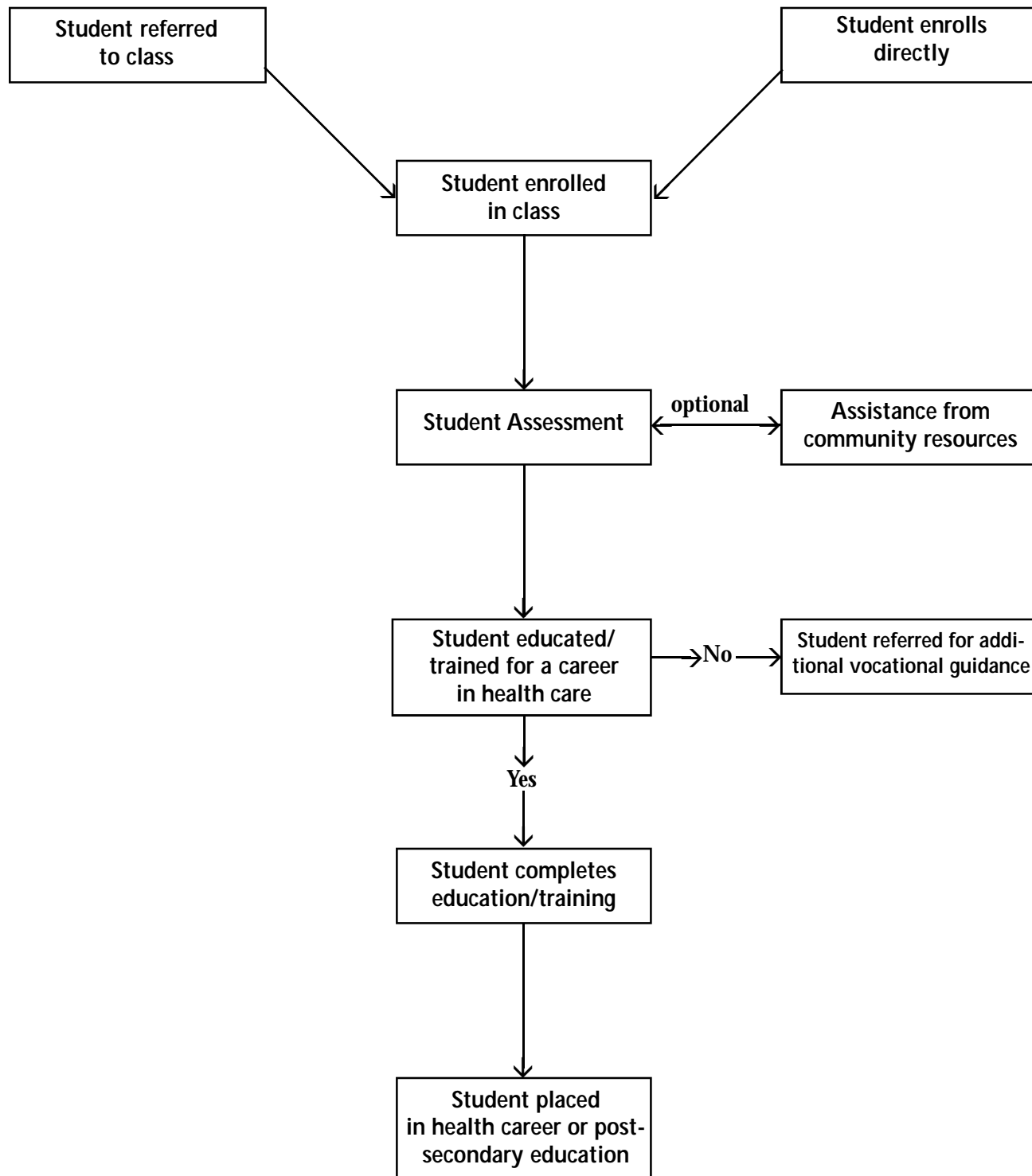
- extent of nonparticipation with nondisabled students
- progress reporting
- modifications needed for participation in statewide or district-wide assessments; or if it is determined that the child cannot participate, why the assessment is inappropriate for the child and how the child will be assessed
- transition needs for students age 14 and older

This handbook contains basic information on working with students who are hearing impaired and visually impaired as well as those with specific learning disabilities, mental retardation, communication disorders, physical disabilities, and other conditions such as epilepsy and brain injury. Resources for additional information are provided.

Student Placement

When the student with a disability completes the health careers coursework, instructors should do whatever they can do facilitate community training and job placement. This handbook includes information on evaluating job opportunities and work environments for students with disabilities.

Enrollment Flow Chart



Prospective Student Information Sheet

Name _____ DOB _____ Today's Date _____

Mailing Address _____ City _____ Zip _____

Phone _____ Emergency Phone _____ E-mail _____

Referred By _____ Agency _____

Other Contacts _____

Disability _____ Onset _____

Functional Limitations _____

Special Problems (behavior, language, family, etc.) _____

Previous Occupations _____

Previous Employers _____

Last Grade Completed _____ School _____

Special Classes Completed _____

ROP Classes Completed _____

Educational Ability Levels _____

Skills/Interests _____

Suggested Program _____ Referred To _____

Comments _____

Teaching and Training Techniques

General Teaching Techniques for Students with Disabilities

Students with Hearing Impairment

Students with Visual Impairment

Students with Mild Retardation

Students with Orthopedic Disabilities

Students with Learning Disabilities

Students with Communication Disorders

Students with Autism

Students with Other Health Impairments

Students with Traumatic Brain Injury

General Teaching Strategies and Techniques for Students with Disabilities

The Individualized Education Program (IEP)

As stated earlier, students with disabilities enrolling in your classes will have individualized education programs as required by the Individuals with Disabilities Education Act, as amended in 1997. According to the IDEA, each student who qualifies for special education services, by virtue of belonging to one of the groups listed in the IDEA definitions found in Appendix 1, must have an IEP containing information regarding the following:

- current levels of student performance, including a statement of how the disability affects the student's involvement and progress in the general education curriculum
- measurable annual goals, including benchmarks or short-term objectives
- a statement of educational needs resulting from the child's disability
- a statement of all needed services and supports, including special education, related services, and program modifications and supports for school personnel
- extent of nonparticipation with nondisabled students
- progress reporting
- modifications needed for participation in statewide or district-wide assessments; or, if it is determined that the child cannot participate, why the assessment is inappropriate for the child and how the child will be assessed
- transition needs for students age 14 and older

Suggestions for Including Students with Disabilities

In his book on transition strategies, Wehman includes tips on including students with disabilities. These were originally written for students with visual impairments, but they apply to students with other disabilities as well:

- ❶ Find out who is available to help you. Many students with disabilities have assistance from a variety of school and community resources such as interpreters, itinerant teachers, or physical therapists.
- ❷ Learn how to adapt and modify materials and instruction. Teachers face a wide variety of students with diverse abilities and learning styles as well as different cultures, languages, economic situations, and family structures. Teachers' efforts at individualizing instruction and materials for students with disabilities may result in adaptations that will benefit all students.
- ❸ Learn as much as you can, and encourage the professionals you work with to do the same. One of the key ingredients for successful inclusion of students with disabilities is adequate education and support of the professionals who work with the students.
- ❹ Find out about training opportunities and ask to attend.
- ❺ Help students and others to become informed. Find print and audiovisual materials to share.
- ❻ Call parents and ask questions when you don't understand terminology, equipment or the reasons for prescribed practices. Then, keep an open mind.

- 7 Teach other students to assist in social as well as academic settings. (from D. Viadero, *Teacher Magazine Reader*, November 1989, in Wehman, p. 322)

Teaching Career Skills

Teaching career skills to students with disabilities requires systematic instruction programs designed to meet the specific needs of particular students. According to Wehman, “It has been widely documented that students with more challenging learning disabilities and behavior problems . . . require more precise and intense systematic instruction techniques (p. 150).” Sowers and Powers present nine best practices for teachers charged with preparing students with disabilities for careers:

- 1 Identify and train jobs and tasks that reflect the local community job market.
- 2 Train work-related skills that are critical to job success.
- 3 Train students in community settings.
- 4 Use systematic instructional procedures to train students.
- 5 Identify adaptive strategies that will increase student independence.
- 6 Reconceptualize staff roles and organizational structures.
- 7 Involve parents in the vocational preparation of their children.
- 8 Establish paid employment for students before they leave school.
- 9 Coordinate and collaborate with adult service programs. (p. 3)

Gajar et al. discuss four stages that students must pass through to acquire what they call central work tasks: acquisition, fluency, maintenance, and generalization.

Acquisition

When a student is able to perform the task steps in correct sequence for three or more consecutive trials, the student can be said to have acquired the skill.

Determine a Performance Objective

This process begins with determining a performance objective, such as making a hospital bed correctly, a job that is performed by nursing aides. Performance objectives are determined by job analysis and the minimum performance standards set by an employer for the task.

Analyze the Task

Task analysis involves breaking down a skill into smaller components to facilitate learning. The severity of the student’s disability must be taken into account when deciding the number of steps into which a task should be divided. Breaking a task down into small steps enables the teacher and student to monitor progress. Gajar et al. note that each step should be a separate behavior from the preceding step. In the example of making a hospital bed, the step of tucking in each corner of the bottom sheet would be followed by unfolding the top sheet, then by placing the top sheet on the bottom sheet.

Choose Sequencing Strategies

According to Wehman: “Careful sequencing of skills greatly enhances the speed with which students with severe disabilities learn. Many teachers have begun to arrange the sequence of activities in a functional manner (i.e., one that makes sense in the context of a given environment) (p. 150).” Gajar et al. describe three different types of instructional sequencing (p. 295ff):

- ❶ **Forward Chaining:** learning the steps of the task in the order in which they are performed. In this method, the first step is taught until the student masters it, at which time the student proceeds to learn the second step, with each newly learned step being added to the chain until all steps have been acquired.
- ❷ **Backward Chaining:** learning the steps of the task in the reverse order in which they are performed. In this approach, the final step is taught first with each preceding step added to it until the entire task is completed.
- ❸ **Whole Task Instruction:** an approach where the student tries to perform each step of the task correctly and in the right sequence on each learning attempt, with the teacher providing assistance for steps with which the student has difficulty. Gajar et al. point out that this is the most effective method for students with mild disabilities, as it allows them to practice skills in the correct sequence and see how the steps are related to one another.

Use Cues and Prompts

To assist students in demonstrating correct answers, a variety of cues and prompts can be used. These include verbal instructions, gestures, models, and physical assists. Gajar et al. break down cues and prompts by the sense used to detect them: auditory, visual, and tactile. Auditory prompts can include verbal messages or sound signals. Visual cues include gestures, written directions, pictures, modeling, and color coding. Tactile cues or physical assists are appropriate when a student needs hands-on help. In making a hospital bed, for example, a teacher could place his or her hands on the student’s hands to help the student get the correct motion for tucking in a hospital corner.

Provide Consequences

Like non-disabled students, those with disabilities will be motivated by different kinds of reinforcement. Reinforcing strategies include praise for successful completion of a task, feedback on specifics (e.g., “You put that pillowcase on very straight today.”), points or tokens, recognition on a chart, and monetary reward. Wehman notes that the timing and delivery of reinforcement is important: “Continuous reinforcement schedules should be used during new skills training. . . . As students become more independent, an intermittent reinforcement schedule can be instituted (p. 154).” Suggestions for using consequences to aid learning are provided in Appendix 5.

Fluency

Once the steps of a task have been mastered, the student needs to learn fluency: the ability to perform the task at acceptable levels of speed and quality (Gajar, p. 304). Techniques to be employed in assisting students to improve the quality and speed of task achievement include incremental changes in goal setting (e.g., decreasing the time needed to perform the task by small amounts), prompting (e.g.,

reminding the student to work more quickly), systematic feedback (e.g., showing the student how his or her performance compares to a norm), and self-monitoring. When students fail to make progress in performing a task more quickly and efficiently, the instructor needs to make sure the task has been structured to facilitate performance, that the student has acquired all necessary component skills, and that all natural prompts have been employed to assist the student.

Maintenance

Researchers suggest a number of practices that can be used to assist students in maintaining an acceptable level of task performance, including:

- systematic withdrawal of prompts and other instructional assistance after acquisition and fluency are demonstrated
- using naturally occurring cues and reinforcers during training
- using self-monitoring, recording, and/or reinforcement
- gradually reducing artificial reinforcement
- using training cues that are transportable to the workplace
- using intermittent, variable reinforcement during training (Gajar et al., p. 307)

Generalization

The acid test of task acquisition is the ability to perform that task under conditions different from those in which the task was learned. When a student who has learned in a classroom how to make a hospital bed is able to follow the acquired steps to make a bed in an actual hospital, a nursing home, and a friend's apartment, the student has generalized the skill. To assist students in generalizing skills, researchers suggest such practices as training under various conditions in a variety of settings using different trainers, identifying common conditions under which various organizations perform a given job and training students using those conditions, and teaching the student to recognize environmental conditions under which the learned behavior should be used.

Analyzing an Instruction Plan

Wehman includes helpful information on analyzing the effectiveness of the teaching and training approach being used for students with disabilities:

Analyze the effectiveness of the training strategy.

- Does the training strategy match the learning style of the individual?
- Is the person responding to the type of prompt(s) selected?
- Is he or she attending to the task?
- Are too many skills being taught at the same time?

Has the task analysis been individualized to match the individual's abilities?

- Has the task been broken down into steps that are small enough?
- Have the physical limitations of the student been taken into consideration?
- Can the task be taught in sections rather than in the entire chain?

- Does the task analysis eliminate the need to make quality judgments (e.g., four times around the sink results in a clean sink by employer standards)?
- Would external cues or adaptive equipment help the student learn the task if they were added to the task analysis?

Have all the components of delivering reinforcement been considered?

- Is the reinforcement given immediately after the desired response?
- Does the reinforcement match the student's current abilities?
- Does the student have a behavior that is interfering with learning the task? Should a behavior program be developed in addition to the skills acquisition program? (Wehman, p. 157)

Teaching General Work Habits

In their chapter on teaching students with mild retardation and severe disabilities, Lewis and Doorlag have a section on improving general work habits that would be useful for students with a variety of disabilities—and with non-disabled students as well. They indicate three ways in which educators can help students improve their general work habits: (1) setting the acquisition of work habits as a valuable educational goal; (2) helping students learn and practice specific work behaviors; and (3) reinforcing good work performance. They discuss ways to help students develop the following three important work habits.

Attendance and Punctuality

To help students understand the importance of showing up on time every day for school or work, the teacher needs to begin by explaining why this is important, and by incorporating attendance and punctuality into the curriculum. When students understand that the teacher expects them to be punctual, several methods can be used to reinforce acceptable behavior:

- Keep a record of attendance and punctuality, and reward students at the end of each week.
- Have students keep a record of their own attendance and punctuality, using something like a journal, graph, or time clock.
- Present certificates or awards to students with good attendance, beginning with small increments such as a week.
- Encourage punctuality by scheduling a favorite activity at the beginning of the period.
- Use individual contracts for students who find attendance and punctuality particularly difficult. Acceptable performance should be followed by an activity that the student values.

Work Completion

In helping students with disabilities, as well as all students, to learn the importance of completing tasks, the teacher must ensure that tasks are appropriate for the students' varying abilities. Ways to encourage and reward the completion of tasks include:

- Make free-time activities contingent on completion of assigned work.
- Have students record the number of tasks they complete each day. They can graph the data to see their progress.

- If students are overwhelmed by complex tasks, break them down into segments and reward students as they complete each segment.
- For students who have serious difficulty completing their work, begin with low expectations and increase gradually.

Working with Others

One of the most important life and career skills for students to acquire is the ability to work with a variety of other people. Students who have the opportunity to participate in classes where their fellow students have disabilities are generally grateful for the valuable learning they gain through participating with students who are different from them. Projects are the most obvious place for students to learn how to work well with others—sharing resources, dividing up tasks, taking responsibility for a completed product. As students learn to perform tasks related to their future careers in health care, they can assist one another in understanding and completing assignments.

Preparing Students for Vocational Placement

The ultimate goal of education for all students, those with disabilities and those without, is for students to become productive citizens capable of supporting themselves and engaging in lifelong learning. Students with disabilities may not be able to support themselves entirely, but teachers need to help them see themselves as capable employees and promote skills and attitudes to help them succeed. Wehman includes some helpful guidelines for this process:

- ❶ Talk about the importance and value of work with students regularly in school and at as early an age as possible. Point out the merits of having a job and emphasize the opportunities available to people who work.
- ❷ Take students to jobsites where they can see other students or recent graduates working. Let them see firsthand what it is like to be employed in a real job. Talk about these visits repeatedly and emphasize the importance of work by showing models.
- ❸ Enlist the help of parents and family members in helping students to select jobs that are appropriate and in providing encouragement for students who are reluctant to work.
- ❹ Invite employers into the school and the classroom to talk about the importance of a work ethic, good work habits, and employment opportunities.
- ❺ Let students try different jobs for several days at a time.
- ❻ Do everything you can to help students become employed even on a part-time basis well before they leave school. It is essential that they have the experience of succeeding and also failing in real work environments.
- ❼ Teach work skills and social skills, such as going to the Social Security office, filling out job applications, and arranging interviews. Teach these skills in the context of real jobs, not workbooks.
- ❽ Encourage rehabilitation counselors, the local employment commission, and other adult agencies to visit and talk to students about the importance of getting work experience early.
- ❾ Make the daily curriculum as vocationally and career oriented as possible. Emphasize how this can affect vocational placement. (Wehman, p. 221)

Job Shadowing for Students with Disabilities

(adapted from a 1996 conference presentation by Karen Blessman of the Fort Zumwalt School District, O'Fallon, Missouri)

The Fort Zumwalt School District, 35 miles west of St. Louis, implemented a job shadowing program for its students with disabilities during the 1992–93 school year. Local businesses with a variety of training opportunities, including hospitals and health-care facilities, were recruited to participate in a job shadowing partnership. The district's human resource manager and vocational resource educator identified job sites within each business and established a schedule for students to be transported to their assigned businesses one day each week and individually paired with an employee to shadow.

Job shadowing terms last from six to eight weeks, with students shadowing two and one-half hours per day and rotating between jobs at their assigned site weekly. Hospital and health-care sites offer shadowing opportunities in housekeeping, dietary, purchasing and receiving, linens, and maintenance. Students are on the job site during lunch shifts, so they go to lunch with their employee partner. Program developers believe that going to lunch with their partner provides a good opportunity for students to observe and model appropriate social behavior.

The district provides parents with an information sheet describing the program and setting forth expectations and consequences of students' failure to meet those expectations. As part of this information, parents are asked for their permission for their students to be photographed or written about for publicity purposes.

Students with Hearing Impairment

Young people who have hearing impairments present a variety of challenges to educators, depending on the type and degree of their impairment and whether they were born with the impairment or acquired it later in life.

The unique educational needs of the hearing-impaired student have long been recognized. The educator must be aware of the degree of hearing that a student possesses in order to make proper adjustments in the curriculum and learning environment. It is estimated that one in six children has diminished hearing capacity, but that fewer than one in 100 have impairments serious enough to require special educational adaptations. Students with hearing impairments may have conductive loss, which refers to problems with the outer or middle ear that impede sound waves from being conducted to the inner ear; sensorineural loss, damage to the inner ear or auditory nerve that interferes with sound messages being transmitted to the brain; or a central auditory processing disorder in which the neural system interferes with the understanding of what is heard.

Students with mild hearing losses may be difficult to identify when they enroll in your class. Although these students have learned to compensate for their hearing difficulties in many situations, they are at a disadvantage when compared academically to their non-disabled classmates. For this reason it is important that teachers are aware of the following indicators of hearing problems:

Indicators of Hearing Problems

- persistent inattentiveness
- more awareness of movement or action than of sound
- extremely watchful of teacher (lip reading)
- turns head to one side in an effort to hear
- consistently asks that questions be repeated
- seems to confuse words that have similar sounds
- constantly interrupts conversations without awareness of interruption
- finds it difficult to follow verbal directions
- fails to locate source of sound
- has difficulty with articulation
- has a monotonous voice pitch
- mumbles without being aware of it
- speaks very quietly

(from School Health Problems, quoted in Lewis and Doorlag, p. 372)

Techniques to Use with the Hearing-Impaired Student

The hearing-impaired student has some degree of hearing loss—anywhere from slight to profound, depending on the individual. Because of the varying degrees of hearing loss, the individual's hearing impairment is unique. The educator should become familiar with the nature of the individual's impairment and use techniques suited to the individual student. Some of the techniques may seem simple and obvious and not necessarily different from the ways of communicating with students who do not have hearing loss, but they are very important and should not be overlooked.

Modifying the Classroom

- Seat the student with hearing loss away from noise and close to the area where instruction is taking place.
- Seat the student so he or she faces the teacher and other students, and allow hearing-impaired students to move around the room during discussions if necessary to see students who are speaking. It is difficult to lipread/speechread from a distance of greater than 10 feet.
- If the student has an interpreter, the interpreter should be seated near the student and the student and interpreter should be allowed to sit in the most advantageous location.
- When speaking to a student with hearing impairment, avoid standing in front of a light source.
- Keep classroom and background noise to a minimum. Hearing aids amplify all sound, and background noise interferes with hearing speech. (Lewis and Doorlag)

Teaching Techniques

- Speak naturally, use natural gestures, maintain face-to-face contact when speaking. Use complete sentences and rephrase the entire sentence if the student does not understand.
- Encourage students who use hearing aids to keep them in working order and have them on at all times.
- When possible, use an overhead projector rather than lecturing. Make sure the projector is quiet.
- Provide copies of teacher and/or student notes when material is presented in lecture format.
- Write assignments and lecture outlines on the board. Provide assignments to students in writing.
- Use captioned films whenever possible.
- Question students to determine whether they understand the material presented.
- Explain concepts clearly and simply, using visual aids when possible.
- When lecturing, begin with an outline and conclude by summarizing key points.
- Allow only one person to speak at a time during class discussion. Help the hearing-impaired student know where to look by pointing out the student who is talking.
- When possible, have another student assist with notetaking. It is difficult to lipread/speechread and take notes at the same time. (Lewis and Doorlag)

Techniques to Assist the Student in Lipreading or Speechreading

- Always face the student when speaking. Even a slight turn of the head can obscure his or her vision, making lipreading more difficult. Avoid holding your hands or books where they will hide your face.
- Articulate clearly and with normal speed, enunciating each word but without exaggerating or over-pronouncing. Exaggeration and over-emphasis distort lip movement, making lipreading more difficult. Try to enunciate each word, but without force or tension. Short sentences are easier to understand than long sentences.
- Speak in a natural tone of voice. Increasing the volume of your voice won't necessarily help the student.

- Stand still when talking and keep within close range of the student.
- Rephrase sentences if the student doesn't seem to understand; you may be using words he or she is not familiar with, or a particular combination of lip movements may be very difficult to lipread.
- Avoid standing with your back to a window or other light source. Looking at someone in front of a light source practically blinds a hearing-impaired person. Lipreading is difficult, if not impossible, because the speaker's face is left in shadow. Light should come from in front of the speaker and shine on him or her.
- Let your expressions and motions indicate emphasis and feeling. Make the most of body language—the hearing impaired are very responsive to it.
- Be sure that the student is paying attention when you assign him or her a task. The student may not hear the usual call to attention and may need a tap on the shoulder, a wave, or some other signal.
- Try to maintain eye contact with the student. Hearing-impaired people, like most people, prefer the feeling of direct communication. Eye contact establishes this feeling. Even in the presence of an interpreter, try to communicate directly with the student. The student can then turn to the interpreter as the need arises.
- Write on the board without speaking; then turn back to the class and speak. Similarly, turn when pointing out parts or demonstrating.
- Use many visual aids and written materials. Vision is the hearing-impaired student's primary means of receiving information. If large, complex visual displays are used, build them up in successive overlays rather than presenting the whole and identifying the parts.
- Provide outlines and vocabulary lists for any complicated topic being discussed. New vocabulary or complex topics are difficult, if not impossible, to lipread.
- Seat the student advantageously when he or she is participating in a group. The student should be able to see the lips of all the group members.
- Provide the student with a brief outline or scripted printouts to follow a lecture, movie, or filmstrip. Provide these in advance or accompanied with a special lighting arrangement.
- When presenting vital information, don't leave out the hearing-impaired student. Write out any change in class and meeting times, special assignments, or additional instructions. Allow extra time when pointing out the location of materials or referring to manuals or texts; the student must have time to look and then return his or her attention for further instruction.
- Repeat questions or statements from the back of the room. Hearing-impaired students are isolated from whatever happens that is not in their visual field. (Dahl)

Things to Do When Providing Instruction

- Provide an introduction to each lesson, describing the content to be covered and how the lesson will unfold; provide a separate introduction to each step in the lesson.
- Be as concrete as possible in discussions and explanations, and include activities for the students to carry out as often as possible.
- Present information in small chunks, allowing students time to assimilate the information. Frequent pauses are necessary for assimilation.
- Pause frequently to allow notes to be taken. Hearing-impaired students cannot take notes while you are talking—they have to be watching.
- A question-and-answer format is useful; it keeps students involved and lets you know if the message is getting through. (Dahl)

Techniques to Use When an Interpreter Is Present

- Stand close to the interpreter to minimize the amount of shifting back and forth the hearing-impaired student has to do.
- Pause frequently to allow the interpreter to translate; this is especially important when the discussion involves visual information. For example, in a presentation about the process of making a hospital bed, give a brief portion of the lesson, pause, allow the translator to sign the information, pointing to key portions of the display or diagram as the translator goes along. (The translator should pause to give the instructor time to point.) If hearing students are in the class, you can repeat the material as the translator signs.
- You should know something about signing, and the interpreter should be knowledgeable in the subject matter. At the very least, you should get together with the translator before class and discuss the lesson. English and signing are different languages. The problems that arise in translating between any two languages arise in signing something that is spoken in English. For example, the word “call” has at least three signs, depending on its use—“call” as in to “call out”, “call” as in “to call on the telephone”, and “call” as in to “call attention to.” Thus, you should inform the translator of the sense of terms that will be used when this is not clear from the context. Likewise, you should be aware of cases in which the translation of a single word may require several signs.
- Determine with the interpreter whether he or she is to try to preserve feeling and intonation in the translation or to give a “cold” translation. (Dahl)

Students with Visual Impairment

Students with visual impairments may be blind or have varying degrees of vision. The legal definition of blindness is visual acuity of 20/200 or less in the better eye with the best possible correction, or a field of vision restricted to an angle subtending an arc of 20 degrees or less. Partially sighted students are those whose corrected vision in the best eye is between 20/70 and 20/200. For the educator, the important thing is knowing how the visually impaired student is able to learn—to determine what combination of visual and other sensory kinds of material will best meet the needs of a particular student. Some students who are legally blind can nonetheless read print that is enlarged or viewed through a magnifying device.

Wehman cautions educators to remember that no two blind people are alike. “Two students may share similar degrees of blindness, but one may have congenital blindness while the other’s is the result of an accident. One student may prefer to tape instructional information, while the other student relies on braille material or a reader plus tactile instruction. These individual preferences must be assessed and discussed (p. 308).”

Indicators of Vision Problems

The National Society to Prevent Blindness provides these indicators of vision problems:

- excessive rubbing of eyes
- shutting or covering one eye, tilting head or thrusting it forward
- difficulty reading or doing other work requiring close use of eyes
- blinking frequently or becoming irritable when doing close work
- inability to see things clearly at a distance
- squinting or frowning
- crossed eyes
- inflamed or watery eyes
- dizziness, headaches, or nausea following close work
- blurred or double vision

Modifying the Classroom

- Help students move safely by eliminating obstacles. Inform students of changes in room arrangement.
- Keep doors either completely closed or completely open to guard against a student with impaired vision running into a door.
- At the beginning of the year or semester, allow the student to become acquainted with frequently used rooms with a companion. Allow the student to move about freely until he or she is familiar with the room. Once the student is familiar with the physical setting, encourage him or her to navigate independently.
- Make provisions for a sighted guide in cases where things will be different from the norm: fire drills, field trips, assemblies, etc.
- Provide tables or desks that can accommodate braillewriters and other equipment.
- Adjust student desks and provide accessories that help students maintain good posture for close work.
- Do not place students facing the glare of a primary light source. Some students may need additional light such as a desk lamp.

- Allow students to move about the room and change seating for optimal light for various classroom activities.
- Use copy machines to enlarge printed materials. (Lewis and Doorlag)

Techniques to Use with the Visually Impaired Student

The educator should become familiar with the nature of the individual's impairment and use the techniques that follow in consideration of the specific student. The visually impaired student has various methods to compensate for reduced vision. A student may choose to read braille materials, large type materials, or listen to a recorded book or lecture. He or she may choose to write by using a braillewriter or metal slate or may tape record information. Keep in mind these common-sense guidelines when communicating with the visually impaired:

- Change instructional procedures only when necessary.
- Work with special education teachers to locate large-print, braille, or tape-recorded texts.
- Try to use descriptive language.
- Allow extra time for students to complete reading assignments.
- Encourage students to use a word processor for things that will be read by sighted individuals, such as homework and reports.
- When writing on the board or using an overhead projector, say the material aloud.
- Provide students with experiences that develop their listening skills.
- Use a heavy black marking pen on worksheets.
- Record reading materials or have an assistant read to the student with vision impairment.
- Do not raise your voice. Most blind students are not also hearing impaired.
- Address a student by name so that the student knows you are talking to him or her. Talk directly to the student.
- Do not try to avoid words like *see* and *look* which are part of the vocabulary of those who with vision impairment.
- If discussing a form or passing out materials, describe them to the visually impaired student.
- When teaching or explaining something to a visually impaired person, be consistent in your directions since he or she cannot watch what you are doing. Explain fully, and, whenever possible, let the sense of touch substitute for vision.
- Say what you are doing when you demonstrate. Check your terms to avoid abstractness (e.g., "This fastens on there.").
- Make clear how similar parts or processes can be distinguished by touch or sound.
- Encourage sighted classmates to be helpful but not to do the student's work.
- When walking with a visually impaired person, ask if he/she would like to take your arm. Extend your arm so that he/she may take it at the elbow.
- When walking with a visually impaired person, walk slightly ahead of him/her.
- When introducing someone to a visually impaired person, indicate the location of the other person so that the visually impaired person may face in the proper position. You should say, "Seated next to you on your left is John Smith," or "At your right is Jane Doe." The same procedure should be used when commenting on the approach of another person. Tell the person when you are approaching and/or leaving him or her.
- Encourage the student to use such adaptive aids as braillewriters and slates, and explain their use to other students. (from Lewis and Doorlag, Dahl)

Students with Mild Retardation

In 1995–96, 12 percent of students served in special education programs in the United States were identified as mentally retarded. Of these, 85 to 90 percent were identified as having mild retardation. Students with mild retardation are identified by their failure to meet age expectations in intellectual and language development, academic achievement, social competence, and prevocational skills. These students benefit from academic instruction, but they learn slowly, perform at a level appropriate for younger individuals, and show consistent delays in several developmental areas. Students with mild retardation are able to learn many skills, but their rate of learning is slow. According to Lewis and Doorlag, educators working with students with mild retardation should focus on areas that will help them become self-supporting adults: “Throughout the school years, instruction for youngsters with mild retardation focuses on the development of basic academic skills and the application of these and other skills to career preparation (p. 268).”

Techniques to Use with Students with Mild Retardation

The student with mild retardation can be trained in essentially the same manner as students with normal intelligence. Training will generally take longer, but a lot is known about how persons with mental retardation learn. Interest and motivation are critical factors. Try to involve the student in class activity from the beginning. Be sure he or she understands what is happening and becomes familiar with the work area, tools, and other students. In the very beginning, provide tasks that are simple and concise. If the student has an expectation of failing, initial success will start him or her off in a more positive direction. Encouragement and positive reinforcement are essential at all stages of training, but are particularly important in the beginning.

According to Lewis and Doorlag, habilitation is the major approach to educating students with mild retardation in regular classrooms. Habilitation for the student with mild retardation means acquiring skills necessary for successful adulthood, including daily life, a career, and citizenship.

Instruction for the student with mild retardation should be:

- **Organized.** Look over your instructional plan. Steps of instruction should be logical and clearly follow each other. Later instruction should be based on competencies already observed or shown by the learner.
- **Specific.** The student needs to know exactly what he or she must do. She or he may not be able to see obvious connections unless they are pointed out.
- **Visual.** Whenever possible, demonstrate what must be done. Use films, slides, drawings, and simple charts and diagrams.
- **Broken into short segments.** Instruction should be presented in small segments, units or modules, but not so small that they lose meaning.
- **Repeated and checked.** Instruction should be repeated at spaced intervals. Check often to see if the student can demonstrate that she or he understands. Develop a skill inventory sheet, which indicates the student’s present level and ultimate goal.

- **Overtaught.** Allow time for the student to practice each skill even after he or she appears to have mastered it. Check periodically to see if the student remembers important operations, and encourage him or her to practice them. Instruction should be revised on the basis of feedback from the learner.
- **Reinforced.** Praise the student for work accomplished, no matter how small the task. Make it clear that new assignments are the result of satisfactory performance.
- **Frequently assessed.** Instruction should always be assessed and redesigned to lead to the intended outcome.

Basic Techniques for Communicating with the Student with Mild Retardation

- Talk with the student on a person-to-person level, as you would with anyone else, but try to be more specific, more precise, and crystal clear. Don't "talk down" to the student as though she or he were a small child.
- Speak in concrete terms, not abstractions. If, for example, you want the student to put a tool away, show exactly where "away" is.
- Ask a question now and then to be sure that the student is keeping up with you.
- Demonstrate what you want the student to do; don't just tell him or her.
- Take your time, don't rush, and be sure the student understands. (Dahl)

Skill Training Suggestions

Individuals with mild retardation learned hospital work skills using the following four-step approach:

- ❶ **Modeling.** Students imitate the way the instructor performs the task.
- ❷ **Behavioral Rehearsal.** Students rehearse the performance repeatedly in simulated conditions with instructor assistance to limit errors of sequence, before practicing the skill in the actual job conditions.
- ❸ **Verbal Rehearsal.** Students talk themselves through the task by stating what they have just finished doing and what they need to do next.
- ❹ **Corrective Feedback and Praise.** The instructor praises students for elements completed correctly and assists them in correcting other elements as needed. (Gajar, p. 303)

Students with Orthopedic Disabilities

According to the 1990 U.S. Census, 1.8 million people use wheelchairs, and approximately 5.2 million people use a cane, crutches, or a walker for at least six months. The number of students with orthopedic and mobility disabilities in regular classrooms is increasing as medical, educational, and technological advancements make possible the integration of students with severe difficulties. Miller and Sammons note that mobility disabilities, or movement differences, are related to motor impairment, injury, or illness. They state: “If you have experienced impaired movement, you learned how much of your daily living environment you take for granted and how much you need your environment to support you (p. 126).”

Orthopedic disabilities may be either congenital or acquired. The process of learning to live with such a disability differs between those who are born with a disability and those who acquire one later in life as the result of injury or illness. For those born with an orthopedic—or any other—disability, that disability is part of their self-concept. Those who acquire a disability have varying degrees of difficulty incorporating their disability into the definition of who they are. People born without arms, for example, can learn to do virtually everything with their feet, whereas a person who loses an arm later in life has a different set of problems. This is an important point for the educator to keep in mind when working with students with orthopedic and mobility disabilities.

The types of orthopedic impairment most likely to be found in high school students include the following:

Cerebral Palsy. This condition, which affects more than 700,000 Americans, is caused by injury to the brain during development or at birth. The injury usually results in some degree of loss of voluntary muscle control. Symptoms of cerebral palsy vary from one individual to another due to the part(s) of the brain affected, and can include spasticity (tense, contracting muscles), ataxia (poor muscle control, balance, and coordination), tremor, and rigidity.

Spina Bifada. Spina bifada is the most frequently occurring permanently disabling birth defect, affecting approximately one of every 1,000 newborns in the United States. It results from the failure of the neural tube to close completely during the first month of pregnancy. Because of paralysis resulting from damage to the spinal cord, people born with spina bifada may need surgeries and other medical care. The condition often causes bowel and bladder problems. The most common learning difficulties associated with spina bifada are in the areas of motor, perceptual-motor, and visual-spatial skills.

Amputation or Absence of Limb

Muscular Dystrophy. The variety of neuromuscular conditions covered by this term have in common the progressive and irreversible change in the structure and strength of muscle tissue.

Rheumatoid Arthritis. This autoimmune disease causes inflammation of the joints and can affect other body systems.

Spinal Cord Injury. Injury to the spinal cord results from such things as automobile or athletic accidents, gunshot wounds, and falls, causing varying degrees of paralysis and disability depending on the location of the injury. Males between the ages of 16 and 30 are the most frequent victims of spinal cord injury. Lower body paralysis, known as paraplegia, results from injury to the back. Quadraplegia, arm and leg paralysis, is the result of injury to the neck. Spinal cord injury of any kind affects bowel, bladder, and sexual function.

Techniques to Use with Students with Orthopedic Impairments

The student with an orthopedic impairment has some degree of restriction on the kinds of things he or she can do and the places he or she can go. These limitations vary from student to student depending on the specific condition, the severity of the condition, the length of time the individual has had the condition, and the stability of the condition. Because of these variations, the educator must be informed about a student's particular physical condition.

Students with orthopedic impairments and mobility disabilities differ widely in physical and health status and, accordingly, in their capacity to engage in particular programs. Like people who do not have disabilities, individuals with these disabilities have differing needs for affection and recognition, for self-realization, and for security. They also have different levels of intellectual ability. Finally, they have different levels of frustration tolerance and different ways of reacting to frustrating circumstances.

Modifying the Classroom Environment

For many students with orthopedic impairments, modifying the physical setting may be the most important and perhaps the only major change needed to facilitate the educational process. Use these guidelines to make your classroom accessible to students with mobility disabilities:

- Evaluate the classroom for architectural barriers that impede the movement of students using wheelchairs, crutches, or other mobility aids. Be sure there is adequate space for these students to move from one work area to another.
- Make all areas and activities accessible to students with mobility disabilities.
- Students may need a variety of seating arrangements to enable them to participate in classroom activities. These include such things as special tables or lapboards for writing, special chairs with supportive devices such as footrests or armrests.
- Provide storage space for the special equipment needed by these students, such as crutch holders on the back of the student's chair.
- Make sure work materials are easily accessible. (Lewis and Doorlag)

Modifying Instruction

Typically, relatively little modification of instructional techniques will be necessary for the student with an orthopedic disability, provided the physical barriers to learning have been removed. The following general guidelines will be useful in working with these students:

- Develop a positive attitude toward the student. Be prepared to maintain a positive reinforcement style when confronted with problems. Closely observe the personal and educational progress of the student.
- Be sure the presentation methods allow the student to see and hear what is being demonstrated.
- Be sure the student has access to personal assistance, perhaps through a buddy system, when he or she needs to accomplish some intermediate level task.
- Emphasize individualization to the extent possible.
- If handwriting is poor, allow the student to type responses or to respond verbally until writing becomes legible. Allow the student to dictate reports. If it is necessary for the student to write responses to tests, allow extra time. At first, don't ask the student to write a whole page or paragraph. Begin with small units. (Dahl et al.)

Students with Learning Disabilities

The Learning Disabilities Association Web site (www.ldanatl.org) states that at least 10 percent of the population has learning disabilities, which are called “specific” learning disabilities in the IDEA. They define learning disability as “a lifelong disorder which affects the manner in which individuals with normal or above average intelligence select, retain, and express information.” In a learning disability, incoming or outgoing information may become scrambled as it travels between the sensory receptors and the brain. They indicate that learning disabilities should be considered as a possible cause if a child is often confused, clumsy, impulsive, hyperactive, or disoriented; if he or she becomes frustrated and rebellious, depressed, withdrawn, or aggressive; or if he or she has trouble with one or more of these activities:

- thinking clearly
- writing legibly
- spelling accurately
- learning to read
- learning to compute
- copying forms
- remembering facts
- following directions
- putting things in sequence

They suggest that the student in high school, college, or vocational education may require a variety of services including such things as tutorial services, special academic advisement, basic skill remediation, assisting in developing study skills and learning to be organized, and program accommodation or modification.

Techniques to Use with Students with Learning Disabilities

(adapted from the National Center for Learning Disabilities and Root, “A Guide to Learning Disabilities for the ESL Classroom Practitioner”)

- Seat students with learning differences as near the teacher as possible, but include them as part of the regular classroom. The front row is ideal, away from distractions like windows.
- Surround students with learning differences with good role models. Encourage peer tutoring and cooperative learning. Consider allowing peer note-taking if writing rapidly is difficult for the LD student.
- Call students’ names before addressing them, and maintain eye contact while speaking with them.
- Praise their correct and acceptable work; do not focus on their mistakes.
- Recognize and give credit for their oral participation in class.
- If grades on written material are given, consider designating one grade for content, thought, and effort and another grade for spelling, punctuation, and handwriting.
- Allow the opportunity for oral or computer-based tests if it will help demonstrate their learning.
- Help your students get organized.
- Give students the opportunity for extra time on tests and assignments.

- Allow students to record lecture materials for studying.
- Do not put students under the pressure of time or competition if either can be avoided.
- Do not ask students to read aloud without giving them time to prepare.
- Write neatly and in large letters on the blackboard.
- Speak slowly and clearly. Make it easy for students to ask for repetition. When repeating information, be sure to use the same language.
- Use visual aids whenever possible.
- Follow as structured a schedule as possible. When changes are necessary, try to make transitions between activities smooth.
- Provide clear and concise instructions; repeat when necessary. Don't issue too many instructions at the same time. Try breaking tasks down into component parts and giving instructions one part at a time.
- Convey a positive attitude, and praise all your students whenever possible.
- Frame material by relating it to past classroom or personal experience and highlighting new material.
- Allow time in advance for students to think about items to be covered in class. Provide pre-teaching activities such as pre-reading and pre-writing.

Shelton and Pollingue suggest that peers can assist students with learning disabilities in the following ways:

- Make certain they understand directions and assignments.
- Read important directions and essential material to them.
- Drill them orally on what they need to know.
- Orally summarize important textbook passages.
- Work with them on joint assignments.
- Critique the student's work and make suggestions for improvement. (p. 56)

Techniques to Use with Students with Nonverbal Learning Disabilities

While most learning disabilities have to do with acquiring skills in reading, writing, and verbal expression, researchers have identified a set of nonverbal learning disabilities or NLDs described as neuropsychological, academic, and social-emotional characteristics that reflect deficiencies in nonverbal reasoning. Rourke explains that these deficiencies include weak visual-spatial and visual discrimination abilities, poorly developed organizational skills, difficulty making inferences and reasoning abstractly, significant problems with mathematical reasoning, and problems with social competence. Researchers have found that many students with spina bifida have NLDs. ("Helping Students with NLDs Achieve Academic and Social Success")

According to one expert, a nonverbal learning disability generally includes the following behaviors: (1) failure to interpret nonverbal clues, including failure to adapt behavior to circumstances, difficulty interpreting the emotions of others, failure to understand socially acceptable behavior; (2) having few or no friends because the individual does not know how to be a friend, cannot recognize his

or her behavior as a hindrance to other people; and (3) difficulty in holding a job due to inability to interact appropriately with others.

Students with NLDs do best in a structured environment with clear and consistent expectations.

Teachers can use these classroom techniques:

- Break tasks into manageable parts and provide explicit, step-by-step directions.
- Teach strategies to help comprehension, such as identifying topic sentences and highlighting important information.
- Capitalize on the student's verbal strengths.
- Provide clear, visually simple outlines. Help students learn to write their own outlines.
- Provide direct instruction in social skills, including how to recognize and understand facial expressions, body language, and emotions.
- Use role-playing to develop interaction skills such as taking turns, handling awkward situations.
- Teach keyboarding skills early and investigate other assistive technologies if the student has difficulty writing.

Students with Communication Disorders

Most students with communication disorders remain in the regular school program except for special assistance from speech-language pathologists. According to the American Speech-Language-Hearing Association, students may have a language disorder, which is characterized by an inability to use the symbols of language through proper use of words and their meanings, appropriate grammatical patterns, and proper use of speech sounds. Or they may have a speech disorder, characterized by difficulty in producing speech sounds (articulation), maintaining speech rhythm (fluent speech), and controlling vocal production (voice).

Lewis and Doorlag include a listing of things for educators to keep in mind about students with communication disorders:

- The primary areas of need for students with communication disorders are speech and language; because of their communication difficulties these students may also require assistance in social interactions.
- Major instructional adaptations are usually not necessary to accommodate the needs of students with communication disorders in the general education classroom.
- For students with speech impairments, the general education teacher provides an accepting classroom environment in which students can feel comfortable practicing newly acquired communication skills.
- For students with language impairments, the classroom teacher assists their acquisition of language skills by modeling appropriate grammar and helping them expand their listening and speaking vocabularies. Classroom activities and assignments that require language skills may need to be modified. (p. 340)

Techniques for Students with Language Disorders

Aphasia

Aphasia refers to partial or complete loss of the ability to speak and/or comprehend the spoken words due to traumatic injury, disease, or maldevelopment of the brain. A person with aphasia is characterized by the following, depending on the severity of the brain damage:

- Frustrates easily
- Demonstrates erratic behavior
- Is depressed or displays inappropriate laughter
- Has difficulty with word retrieval (thinking of appropriate words)
- Is unable to formulate meaningful sentences; substitutes words
- Produces non-meaningful words
- May be slow to understand what others say
- May have difficulty understanding what is said

Teaching Techniques

- Ask the student to repeat what he or she has said.
- Ask questions that help establish the main topic of what was said.
- Ask the person to use gestures or point to indicate what he or she is trying to say.
- Make sure you have the person's attention.
- Avoid unnecessary conversation.

- Present one idea at a time.
- Pause between points of information.
- Stand still while you are speaking.
- Use gestures.

Techniques for Students with Speech Disorders

Cleft Palate

A cleft palate is an opening in the hard or soft palate that allows air to pass between the nose and the mouth, resulting in an impaired ability to produce consonants that require a buildup of air and gives speech a nasal quality. The degree of speech impairment depends upon the severity of the cleft. Some individuals may have no difficulty in making themselves understood.

Teaching Techniques

- Be patient with yourself and with the student.
- Maintain good eye contact.
- Give the student your full attention.
- If possible, listen to the individual in a quiet environment.
- Allow the student to speak at his or her own pace. Stress often makes communicating more difficult.
- Make sure you understand what the student has said. If necessary, repeat back what you think you heard.
- Don't try to speak for the student.
- Sometimes speech is not the best way to communicate. Let the student guide you in alternative methods of communication such as notes, hand signals, pointing, and body language.

Stuttering

Stuttering, sometimes called dysfluency, is characterized by involuntary stopping, the rapid repetition of certain sounds, or the prolongation of a sound. Stuttering varies in its frequency of occurrence and in its debilitating effects. The techniques outlined above for use with students with cleft palate are appropriate for use with the student who stutters.

(Portions of the teaching techniques for cleft palate and stuttering were taken from "Information for Epilepsy and Speech Disorders" by Catie Simpson, Mobility Training Project Coordinator.)

Dysarthria

Dysarthria is a term given to a group of disorders of articulation that result from impairment of the central nervous system which directly controls the muscles needed for articulation. It designates problems in oral communication due to paralysis, weakness, or lack of coordination of lips, tongue, and other body parts used for speech. This disorder is characterized by slurred-sounding speech, drooling, talking rapidly, and /or speaking softly.

Teaching Techniques

- Ask the person to speak more slowly using short pauses.
- Ask the person to speak louder.
- Ask the person to exaggerate the movement of mouth and tongue.
- Encourage the person to swallow first and then speak.

Apraxia of Speech

Apraxia is a nervous system disorder that affects the ability to sequence and say sounds, syllables, and words due to a failure of the brain to communicate with the body parts necessary for speech. The person with apraxia of speech knows what he or she wants to say, but the brain does not send the correct message to speech-producing structures.

Teaching Techniques

- Encourage student to gesture or point to things he or she wants or needs.
- Ask questions that can be answered with a yes or no.
- When the person is having difficulty, assist by guessing what he or she is trying to tell you.
- Encourage the student to write what he or she is trying to say if speech is not working.

Students with Autism

Although it affects a very small percentage of students, autism was recognized as a separate disability in the 1990 Individuals with Disabilities Education Act, which defines autism as “a developmental disability significantly affecting verbal and nonverbal communication and social interaction, generally evident before age three, that adversely affects a child’s educational performance.” The Autism Society of America notes that autism may affect communication, social interaction, sensory reactions, play, and various behaviors.

At a 1993 presentation to the Autism Society, Kathleen Quill discussed methods to enhance the learning experience of individuals with autism. In the presentation, she noted that individuals with autism are likely to:

- think in pictures, not words
- play a video in their mind that takes time to retrieve
- have difficulty with long sequences or strings of verbal information
- be unable to hold one piece of information in their mind while manipulating another
- use or attend to only one sensory channel at a time
- have difficulty with generalizing
- experience inconsistencies in perceptions

In relating to others, individuals with autism are likely to have difficulty understanding the motives and perceptions of others, experience sensory overload, and use intellect instead of emotion to guide social interaction.

Teaching Techniques

Structure is crucial in teaching students with autism. According to Quill, structure is enhanced by routines and visual aids that do not depend on language. Activities should be structured with organized materials, clear instructions, and a hierarchical system of prompts. Establishing routines allows for students with autism to anticipate events and establish self-control and independence. A known sequence of tasks provides consistency and predictability, establishes patterns, provides stability and simplicity, enables the individual to anticipate, and increases independence.

According to Quill, three kinds of routines can be used:

- ❶ Spatial Routines: associate specific locations with specific activities; can take the form of a chart used as a daily schedule
- ❷ Temporal Routines: associate time with an activity, making the beginning and ending of an activity evident
- ❸ Instructional Routines: associate specific social and communicative behaviors

Teaching Social Interaction Skills

Quill suggests using the following when teaching students with autism to interact with others:

- a predictable sequence of interactions
- a planned set of conversational scripts

- messages mixed with ongoing activity
- messages linked to what the student is doing
- a high degree of repetition
- complexity of messages that match the student's level of comprehension
- simultaneous use of speech and visual cues
- a pause technique
- exaggeration

(from Web page of Autism Society of America: www.autism-society.org)

Students with Other Health Impairments

According to the Individuals with Disabilities Education Act, other health impairments include a wide variety of conditions that adversely affect a child's educational performance. While none of these conditions require the classroom teacher to utilize different teaching techniques, teachers may need information about the impairment in order to understand the student's physical condition and challenges.

Epilepsy

(material adapted from the Epilepsy Foundation of America, at www.efa.org)

While most students with epilepsy have normal intelligence and are able to keep up with others in the classroom, studies have shown that a number of students with epilepsy achieve at a lower-than-expected level. According to the Epilepsy Foundation, there may be several reasons for this:

- Medications taken to prevent seizures may interfere with learning. This might be remedied with a change in medication.
- Unrecognized seizure activity, as well as anxiety about having a seizure, may interfere with paying attention.
- An underlying condition in the brain may interfere with learning, memory, or the way the brain processes information.
- When a child misses a good deal of school for medical tests and treatment, learning is interrupted.

The teacher will not need to make any significant modifications in teaching techniques to reach students with epilepsy, but he or she will need to know how to deal with seizures that occur during class. There are five different kinds of seizures with corresponding management methods:

Absence Seizures

These seizures, previously known as petit mal seizures, produce momentary loss of awareness, sometimes accompanied by blinking or movements of the face or arms. These seizures may be frequent, but the student returns immediately to full awareness after each episode. The teacher needs to make sure the student did not miss any important parts of the lesson during an absence seizure.

Simple Partial Seizures

These seizures, which are limited to one part of the brain, do not cause loss of consciousness. The student may not be able to control body movements, and he or she may see, hear, smell, or experience feelings that are not related to reality. If the student seems confused or frightened following a simple partial seizure, the teacher should comfort and reassure him or her.

Complex Partial Seizures

These seizures, sometimes called psychomotor or temporal lobe epilepsy, last only a minute or two and produce a variety of automatic behavior in which consciousness is clouded. The student may get up and walk around, be unresponsive, respond inappropriately, or appear to be drugged or sleepwalking. The student may experience fear and try to leave the room. Following the seizure, feelings of confusion may

be prolonged. The student will not remember what he or she did during the seizure. When a student has this kind of seizure in the classroom and seems dazed or oblivious to his or her surroundings, the teacher should speak to the student calmly and help him or her to regain orientation when the seizure has passed.

Generalized Tonic Clonic Seizures

These seizures, previously called grand mal, are convulsions during which the body stiffens and/or jerks. The student may cry out, lose consciousness and continue massive jerking movements. During these seizures, which last for a minute or two, bowel and bladder control may be lost, and breathing is shallow or may stop briefly. The student may be confused, exhausted, or belligerent when he or she regains consciousness.

When a student suffers this kind of seizure in the classroom, the teacher should use the following first aid measures to protect the student from injury while the seizure runs its course:

- Keep calm. Reassure other students that the student will be fine very soon.
- Ease the student gently to the floor and clear the area of anything that could hurt him or her.
- Put something flat and soft, such as a folded jacket, under the student's head to keep it from banging on the floor.
- Turn the student gently on his or her side to keep airways clear and allow fluid in the mouth to drain out. Do not try to force the student's mouth open. Do not try to hold onto the student's tongue. Do not put anything into the student's mouth. Do not try to restrain the student's movements.
- When the jerking movements have stopped, let the student rest until full consciousness returns.
- Breathing may have been shallow during the seizure, which can give the lips or skin a bluish tinge. This corrects naturally as the seizure ends. In the event that breathing does not resume, check the student's airway for obstruction. Artificial respiration is rarely necessary.
- Allow the student to rest for a short period following the seizure. If bowel or bladder control has been lost, the student will need to clean up appropriately. If the student is able to remain in the classroom, he or she should be encouraged to do so to allow continuing participation in classroom activities.

Other Generalized Seizures

Several other types of seizures—akinetic, atonic, myoclonic—produce sudden changes in muscle tone that may cause the student to fall suddenly or cause his or her body to jerk. A student with this kind of seizure may need to wear a helmet to protect the head. This kind of seizure is more difficult to control than some other kinds, and may be accompanied by developmental delay. When a student experiences this kind of seizure in the classroom, he or she should be helped up, examined for injury, reassured, and allowed to sit quietly until recovered.

Students with Traumatic Brain Injury

Traumatic brain injury (TBI) is defined as “damage to living brain tissue that is caused by an external, mechanical force” (Wehman, p. 446, quoting Vogenthaler). TBI is usually followed by a period of altered consciousness. Injury to the brain causes tears and bruises in the nerve fibers and secondary damage from increased intracranial pressure. Open brain injuries involve penetration of the brain by foreign objects such as bullets; they generally result in somewhat predictable disabilities based on the location and extent of the injury. Closed brain injuries, which result from some kind of blow to the brain, produce variable and unpredictable disabilities due to the more diffuse brain damage resulting from the blow. (Wehman)

Some researchers have concluded that the incidence of TBI is greater than that of epilepsy, Parkinson disease, multiple sclerosis, Huntington disease, and ALS combined, and that its incidence is 34 times that of mental retardation. (Wehman, p. 449) Students with TBI have a wide variety of physical and cognitive disabilities depending upon the nature and extent of their injury. Physical impairments include epilepsy, spasticity, speech impairments, and loss or limitation of sensory functions. Cognitive impairments include short-term memory loss, distractibility, loss of intellectual functioning, loss of language skills, and visual/auditory perception deficits. In addition, students with TBI may have a wide range of behavioral and emotional impairments including impulsivity, aggressiveness, anxiety, depression, and inappropriate social behaviors.

Teaching Techniques

Mira et al. provide the following tips for including students with traumatic brain injury in the general education classroom, divided by areas in which the student is experiencing difficulty (Wehman, p. 466):

Receptive Language

- Limit the amount of information presented at one time.
- Provide simple instructions for only one activity at a time.
- Have the student repeat instructions.
- Use concrete language.

Expressive Language

- Teach the student to rehearse silently before verbally replying.
- Teach the student to look for cues from listeners to ascertain that he or she is being understood.
- Teach the student to directly ask if he or she is being understood.

Maintaining Attention

- Provide a study carrel or preferential seating.
- After giving instructions, check for proper attention and understanding by having the student repeat the instructions.
- Teach the student to use self-regulating techniques to maintain attention (e.g., asking “Am I paying attention? What is the required task?”).

Impulsiveness

- Teach the student to mentally rehearse steps before beginning an activity.
- Reduce potential distractions.
- Frequently restate and reinforce rules.

Memory

- Teach the student to use external aids such as notes, memos, daily schedule sheets, and assignment sheets.
- Use visual imagery, when possible, to supplement oral content.
- Teach visual imaging techniques for information presented.
- Provide repetition and frequent review of instruction materials.
- Provide immediate and frequent feedback to enable the student to interpret success or failure.

Following Directions

- Provide the student with both visual and auditory directions.
- Model tasks, whenever possible.
- Break multistep directions into small parts and list them so that the student can refer back when needed.

Motor Skills

- Allow the student to complete a project rather than turn in a written assignment.
- Have the student use a typewriter or a word processor to complete assignments.
- Allow extra time for completing tasks requiring fine motor skills.
- Assign someone to take notes for the student during lectures.

**Sample
Health Care
Employment Opportunities
for
Students with Disabilities**

Sample Employment Opportunities in Dental Services

**Dental Office Receptionist
Dental Assistant
Dental Laboratory Technician**

Guide to Placement for Dental Occupations

Job Title	Limited Lifting	Wheelchair User	Reading Impaired	Speech Impaired	Visually Impaired	Epilepsy/ Mild CP	Mild M R	Hearing Impaired
Dental Receptionist (Large Practice or Clinic)	Excellent	Good to Fair	Poor to None	Poor to None	Poor	Good	None	Fair to Poor
Dental Receptionist (Small Practice)	Excellent to Good	Poor to None	Poor to None	Poor to None	Poor to None	Good	None	Fair to Poor
Dental Assistant (Large Practice or Clinic)	Good to Poor	Fair to Poor	Fair to Poor	Good	Poor to None	Good	Poor	Fair to Poor
Dental Assistant (Small Practice)	Fair	None	Fair to Poor	Good	Poor to None	Good	Poor	Fair to Poor
Dental Lab Technician/Aide	Excellent	Excellent	Poor	Good	None	Good	Poor	Excellent

Key to Job Employability Ratings

Excellent	Outstanding possibility for employment; no supervision necessary
Good	Better than average employment possibility; little to no supervision necessary
Fair	Moderate employment possibility; minimum supervision necessary
Poor	Very slight employment possibility; supervision necessary
None	Little to no employment possibility; supervision necessary

Employability ratings should be used only as indicators of possible employment success, taking into consideration the following variables that affect employment success:

- attitudes of facility management and/or staff
- social and mental attitudes of the individual to be placed
- geographical location of the facility
- need for services indicated by job title (e.g., a small facility as opposed to a large facility)

Receptionist/Dental Receptionist

Source: Occupational Outlook Handbook 2000–2001, found on Department of Labor Web page: <http://stats.bls.gov>

O*NET Codes: 55305

Receptionists are charged with a responsibility that may have a lasting impact on the success of an organization—making a good first impression. These workers are often the first representatives of an organization a visitor encounters, so they need to be courteous, professional, and helpful. Receptionists answer telephones, route calls, greet visitors, respond to inquiries from the public and provide information about the organization. In addition, receptionists contribute to the security of an organization by helping to monitor the access of visitors.

Whereas some tasks are common to most receptionists, the specific responsibilities of receptionists vary depending upon the type of establishment in which they work. Receptionists in hospitals and doctors' offices may gather personal and financial information and direct patients to the proper waiting rooms.

Increasingly, receptionists use multiline telephone systems, personal computers, and fax machines. Despite the widespread use of automated answering systems or voice mail, many receptionists still take messages and inform other employees of visitors' arrivals or the cancellation of an appointment. When they are not busy with callers, most receptionists are expected to perform a variety of office duties including opening and sorting mail, collecting and distributing parcels, making fax transmittals and deliveries, updating appointment calendars, preparing travel vouchers, and performing basic bookkeeping, word processing, and filing.

The following abilities and traits are necessary to perform this occupation:

- ability to communicate in written and verbal form
- reading skills (11th–12th grade level)
- clean and neat appearance
- ability to type (approximately 35 words per minute)
- ability to file
- business math skills
- ability to utilize technical vocabulary pertaining to dentistry
- ability to sit for long periods of time (2–3 hours)
- ability to work well with others
- good cognitive skills
- good telephone skills

Dental Assistant

Source: Occupational Outlook Handbook 2000–2001, found on Department of Labor Web page: <http://stats.bls.gov>

O*NET Codes: 66002

Dental assistants perform a variety of patient care, office, and laboratory duties. They work at chair-side as dentists examine and treat patients. They make patients as comfortable as possible in the dental chair, prepare them for treatment, and obtain dental records. Assistants hand instruments and materials to dentists, and keep patients' mouths dry and clear by using suction or other devices. Assistants also sterilize and disinfect instruments and equipment, prepare tray setups for dental procedures, and instruct patients on postoperative and general oral health care.

Some dental assistants prepare materials for making impressions and restorations, expose radiographs, and process dental x-ray film as directed by a dentist. They may also remove sutures, apply anesthetics and cavity preventive agents to teeth and gums, remove excess cement used in the filling process, and place rubber dams on the teeth to isolate them for individual treatment.

Those with laboratory duties make casts of the teeth and mouth from impressions taken by dentists, clean and polish removable appliances, and make temporary crowns. Dental assistants with office duties schedule and confirm appointments, receive patients, keep treatment records, send bills, receive payments, and order dental supplies and materials.

Dental assistants should not be confused with dental hygienists, who are licensed to perform different clinical tasks.

Dental assistants work in a well-lighted, clean environment. Their work area is usually near the dental chair, so they can arrange instruments, materials, and medication, and hand them to the dentist when needed. Dental assistants wear gloves and masks to protect themselves from infectious diseases. Following safety procedures minimizes the risks of handling radiographic equipment.

The following abilities and traits are necessary to perform this occupation:

- fine motor dexterity in both hands
- ability to sit or stand for long periods of time (approximately 2 hours)
- reading skills
- basic math skills
- good physical mobility
- clean and neat appearance
- ability to comprehend, retain, and follow through with oral instructions
- good cognitive skills
- ability to lift up to 10 pounds
- ability to utilize technical vocabulary pertaining to dentistry
- ability to express self orally and communicate verbally
- good mental and visual perception

Dental Laboratory Technician

Source: Occupational Outlook Handbook 2000–2001, found on Department of Labor Web page: <http://stats.bls.gov>

O*NET Codes: 89921

Dental laboratory technicians fill prescriptions from dentists for crowns, bridges, dentures, and other dental prosthetics. First, dentists send a specification of the item to be fabricated, along with an impression (mold) of the patient's mouth or teeth. Then dental laboratory technicians, also called dental technicians, create a model of the patient's mouth, by pouring plaster into the impression and allowing it to set. Next, they place the model on an apparatus that mimics the bite and movement of the patient's jaw. The model serves as the basis of the prosthetic device. Technicians examine the model, noting the size and shape of the adjacent teeth, as well as gaps within the gumline. Based upon these observations and the dentist's specifications, technicians build and shape a wax tooth or teeth model, using small hand instruments called wax spatulas and wax carvers. They use this wax model to cast the metal framework for the prosthetic device.

Once the wax tooth has been formed, dental technicians pour the cast and form the metal, and using small hand-held tools, prepare the surface to allow the metal and porcelain to bond. They then apply porcelain in layers, to arrive at the precise shape and color of a tooth. Technicians place the tooth in a porcelain furnace to bake the porcelain onto the metal framework, then adjust the shape and color, with subsequent grinding and addition of porcelain to achieve a sealed finish. The final product is a near exact replica of the lost tooth or teeth.

In some laboratories, technicians perform all stages of the work, whereas in other labs, each technician does only a few. Dental laboratory technicians can specialize in one of five areas: orthodontic appliances, crowns and bridges, complete dentures, partial dentures, or ceramics. Job titles can reflect specialization in these areas. For example, technicians who make porcelain and acrylic restorations are called dental ceramists.

Dental laboratory technicians generally work in clean, well lighted, and well-ventilated areas. Technicians usually have their own workbenches, which can be equipped with Bunsen burners, grinding and polishing equipment, and hand instruments, such as wax spatulas and wax carvers. The work is extremely delicate and time consuming.

The following abilities and traits are necessary to perform this occupation:

- fine motor dexterity in both hands
- good vision
- ability to recognize fine color shadings and variations in shape
- artistic aptitude for detailed and precise work
- reading skills
- ability to communicate verbally
- ability to sit for long periods of time (approximately 4 hours)
- ability to measure
- ability to record information
- good cognitive skills
- ability to conceptualize a problem
- good perceptual skills

Sample Employment Opportunities for Medical Occupations

**Medical Transcriptionist
Medical Receptionist
Medical Secretary
Interviewing/Admitting Clerk
Health Information Technician
Medical Assistant
Billing/Insurance Clerk**

Guide to Placement for Medical Occupations

Job Title	Limited Lifting	Wheelchair User	Reading Impaired	Speech Impaired	Visually Impaired	Epilepsy/ Mild CP	Mild M R	Hearing Impaired
Medical Transcriptionist	Excellent	Good	Good to Fair	Good	Excellent to Good	Good	None	None
Medical Receptionist (Front Office)	Excellent	Poor	Poor	Poor to None	Good to Poor	Good	None	None
Medical Secretary	Excellent	Poor	Poor	Poor	Poor	Good	None	None
Interviewing/ Admitting Clerk	Good	Poor	Poor	None	Poor	Good	None	None
Health Information Technician (Hospital)	Good	Fair	Poor to None	Good	Poor to None	Good	Poor	Fair to Poor
Medical Assistant (Clinical, Back Office)	Poor	None	Poor to None	None	Poor to None	Good	None	Poor to None
Billing/ Insurance Clerk (Doctor's Ofc)	Excellent	Good	None	Good	Poor to None	Good	None	Poor to None
Billing/ Insurance Clerk (Hospital)	Excellent	Good	None	Good	Poor to None	Good	None	Fair to Poor

Key to Job Employability Ratings

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Poor	Very slight employment possibility; supervision necessary
None	Little to no employment possibility; supervision necessary

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- social and mental attitudes of the individual to be placed
- geographical location of the facility
- need for services indicated by job title (e.g., a small facility as opposed to a large facility)

Medical Transcriptionist

Source: Occupational Outlook Handbook 2000–2001, found on Department of Labor Web page: <http://stats.bls.gov>
O*NET Codes: 55302A and 55302B

Medical transcriptionists translate and edit recorded dictation by physicians and other healthcare providers regarding patient assessment and treatment. They use headsets and transcribing machines to listen to recordings by physicians and other healthcare professionals. These workers transcribe a variety of medical reports about emergency room visits, diagnostic imaging studies, operations, chart reviews, and final summaries.

To understand and accurately transcribe dictated reports into a format that is clear and comprehensible for the reader, the medical transcriptionist must understand the language of medicine, anatomy and physiology, diagnostic procedures, and treatment. He or she also must be able to translate medical jargon and abbreviations into their expanded forms. After reviewing and editing for grammar and clarity, the medical transcriptionist transcribes the dictated reports and returns them in either printed or electronic form to the dictator for review and signature, or correction. These reports eventually become a part of the patient's permanent file. (Medical secretaries may also transcribe as part of their jobs.)

Medical transcriptionists are found in hospitals, doctors' offices, or medical transcription services. Work in these occupations presents few hazards, although sitting in the same position for long periods can be tiring, and workers can suffer wrist, back, neck, or eye problems due to strain and risk repetitive motion injuries such as carpal tunnel syndrome. Also, the pressure to be accurate and fast can be stressful.

Employers prefer to hire transcriptionists who have completed postsecondary training in medical transcription, offered by many vocational schools and community colleges. Completion of a 2-year associate degree program—including coursework in anatomy, medical terminology, medicolegal issues, and English grammar and punctuation—is highly recommended. Many of these programs include supervised on-the-job experience. The American Association for Medical Transcription awards the voluntary designation, Certified Medical Transcriptionist (CMT), to those who earn passing scores on written and practical examinations. As in many other fields, certification is recognized as a sign of competence in medical transcription.

The following abilities and traits are necessary to perform this occupation:

- good English grammar, spelling and punctuation
- ability to sit for long periods of time (entire work activity is performed seated)
- understanding of medical terminology
- ability to communicate verbally
- ability to use computers and word processing software
- ability to type rapidly and accurately (60+ words per minute)
- excellent listening skills, as many health professionals speak English as a second language

Receptionist/Medical Receptionist

Source: *Occupational Outlook Handbook 2000–2001*, found on Department of Labor Web page: <http://stats.bls.gov>

O*Net Code: 55305

Receptionists are charged with a responsibility that may have a lasting impact on the success of an organization—making a good first impression. These workers are often the first representatives of an organization a visitor encounters, so they need to be courteous, professional, and helpful. Receptionists answer telephones, route calls, greet visitors, respond to inquiries from the public and provide information about the organization. In addition, receptionists contribute to the security of an organization by helping to monitor the access of visitors.

Whereas some tasks are common to most receptionists, the specific responsibilities of receptionists vary depending upon the type of establishment in which they work. Receptionists in hospitals and doctors' offices may gather personal and financial information and direct patients to the proper waiting rooms.

Increasingly, receptionists use multiline telephone systems, personal computers, and fax machines. Despite the widespread use of automated answering systems or voice mail, many receptionists still take messages and inform other employees of visitors' arrivals or cancellation of an appointment. When they are not busy with callers, most receptionists are expected to perform a variety of office duties including opening and sorting mail, collecting and distributing parcels, making fax transmittals and deliveries, updating appointment calendars, preparing travel vouchers, and performing basic bookkeeping, word processing, and filing.

The following abilities and traits are necessary to perform this occupation:

- ability to communicate in written and verbal form
- reading skills (11th–12th grade level)
- clean and neat appearance
- ability to type (approximately 35 words per minute)
- ability to file
- basic math skills
- ability to utilize technical vocabulary pertaining to medical field
- ability to sit for long periods of time (2–3 hours)
- ability to work well with others
- good cognitive skills
- good telephone skills

Secretary/Medical Secretary

Source: Occupational Outlook Handbook 2000–2001, found on Department of Labor Web page: <http://stats.bls.gov>

O*Net Codes 21999C, 55102, 55105, 55108

As technology continues to expand in offices across the nation, the role of the secretary has greatly evolved. Office automation and organizational restructuring have led secretaries to assume a wide range of new responsibilities once reserved for managerial and professional staff. Many secretaries now provide training and orientation to new staff, conduct research on the Internet, and learn to operate new office technologies. In the midst of these changes, however, their core responsibilities have remained much the same—performing and coordinating an office’s administrative activities and ensuring that information is disseminated to staff and clients.

Secretaries are responsible for a variety of administrative and clerical duties necessary to run an organization efficiently. They serve as an information clearinghouse for an office, schedule appointments, provide information to callers, organize and maintain paper and electronic files, manage projects, and produce correspondence. They may also prepare correspondence, handle travel arrangements, and contact clients.

Secretaries are aided in these tasks by a variety of office equipment, such as facsimile machines, photocopiers, and telephone systems. In addition, secretaries increasingly use personal computers to run spreadsheet, word processing, database management, desktop publishing, and graphics programs—tasks previously handled by managers and other professionals. At the same time, these other workers have assumed many tasks traditionally assigned to secretaries, such as word processing and answering the telephone. Because secretaries are often relieved from dictation and typing, they can support several members of the professional staff. In a number of organizations, secretaries work in teams in order to work flexibly and share their expertise.

Specific job duties vary with experience and titles. Some secretaries, such as legal and medical secretaries, perform highly specialized work requiring knowledge of technical terminology and procedures. Medical secretaries transcribe dictation, prepare correspondence, and assist physicians or medical scientists with reports, speeches, articles, and conference proceedings. They also record simple medical histories, arrange for patients to be hospitalized, and order supplies. Most medical secretaries need to be familiar with insurance rules, billing practices, and hospital or laboratory procedures.

Secretaries usually work in offices with other professionals in schools, hospitals, or in legal and medical offices. Their jobs often involve sitting for long periods. If they spend a lot of time typing, particularly at a video display terminal, they may encounter problems of eyestrain, stress, and repetitive motion, such as carpal tunnel syndrome.

The following abilities and traits are necessary to perform this occupation:

- ability to communicate in written and verbal form
- clean and neat appearance
- ability to file
- ability to type (approximately 45 words per minute)
- business math skills
- ability to utilize technical vocabulary pertaining to medical field
- excellent telephone skills

Interviewing/Admitting Clerks

Source: *Occupational Outlook Handbook 2000–2001*, found on Department of Labor Web page: <http://stats.bls.gov>

O*NET Codes: 53105 and 55332

In doctors' offices and other health care facilities, *interviewing clerks* are also known as *admitting interviewers* or *patient representatives*. These workers obtain all preliminary information required for admission, such as the patient's name, address, age, medical history, present medications, previous hospitalizations, religion, persons to notify in case of emergency, attending physician, and the party responsible for payment. In some cases, interviewing clerks may be required to verify benefits with the person's insurance provider or work out financing options for those who might need it.

Other duties of interviewers in health care include assigning patients to rooms and summoning escorts to take patients to their rooms; sometimes these workers may escort patients themselves. Using the facility's computer system, they schedule lab work, x-rays, and surgeries and prepare admitting and discharge records and route them to appropriate departments. They may also bill patients, receive payments, and answer the telephone. In an outpatient or office setting, they also schedule appointments, keep track of cancellations, and provide general information about care.

In addition, the role of the admissions staff, particularly in hospitals, is expanding to include a wide range of patient services from assisting patients with financial and medical questions to helping family members find hotel rooms.

The following abilities and traits are necessary to perform this occupation:

- good customer service skills
- ability to sit for long periods of time (during work shift)
- ability to read
- ability to communicate verbally
- knowledge of telephone etiquette and techniques
- ability to type (approximately 30 words per minute)

Health Information Technician

Source: *Occupational Outlook Handbook 2000–2001*, found on Department of Labor Web page: <http://stats.bls.gov>

O*Net Code 32911

Every time health care personnel treat a patient, they record what they observed, and how the patient was treated medically. This record includes information the patient provides concerning their symptoms and medical history, the results of examinations, reports of x-rays and laboratory tests, diagnoses, and treatment plans. Health information technicians organize and evaluate these records for completeness and accuracy.

Health information technicians, who may also be called medical record technicians, begin to assemble patients' health information by first making sure their initial medical charts are complete. They ensure all forms are completed and properly identified and signed, and all necessary information is in the computer. Sometimes, they talk to physicians or others to clarify diagnoses or get additional information. Technicians assign a code to each diagnosis and procedure. They consult classification manuals and rely, also, on their knowledge of disease processes. Technicians then use a software program to assign the patient to one of several hundred "diagnosis-related groups," or DRG's. The DRG determines the amount the hospital will be reimbursed if the patient is covered by Medicare or other insurance programs using the DRG system. Technicians who specialize in coding are called health information coders, medical record coders, coder/abstractors, or coding specialists. In addition to the DRG system, coders use other coding systems, such as those geared towards ambulatory settings.

Technicians also use computer programs to tabulate and analyze data to help improve patient care or control costs, for use in legal actions, or in response to surveys. *Tumor registrars* compile and maintain records of patients who have cancer to provide information to physicians and for research studies. Health information technicians' duties vary with the size of the facility. In large to medium facilities, technicians may specialize in one aspect of health information, or supervise health information clerks and transcribers while a *health information administrator* manages the department. In small facilities, an accredited health information technician sometimes manages the department.

Health information technicians usually work a 40-hour week. Some overtime may be required. In hospitals where health information departments are open 18–24 hours a day, 7 days a week, they may work day, evening, and night shifts.

The following abilities and traits are necessary to perform this occupation:

- ability to communicate in written and verbal form
- reading skills (11th–12th grade level)
- excellent attention to detail
- ability to type (approximately 35 words per minute)
- ability to sit at computers for long periods of time
- ability to utilize technical vocabulary pertaining to medical field

Medical Assistant

Source: Occupational Outlook Handbook 2000–2001, found on Department of Labor Web page: <http://stats.bls.gov>

O*NET Codes: 66005 and 66099A

Medical assistants perform routine administrative and clinical tasks to keep the offices and clinics of physicians, podiatrists, chiropractors, and optometrists running smoothly. They should not be confused with physician assistants who examine, diagnose, and treat patients under the direct supervision of a physician. The duties of medical assistants vary from office to office, depending on office location, size, and specialty. In small practices, medical assistants are usually “generalists,” handling both administrative and clinical duties and reporting directly to an office manager, physician, or other health practitioner. Those in large practices tend to specialize in a particular area under the supervision of department administrators.

Medical assistants perform many administrative duties. They answer telephones, greet patients, update and file patient medical records, fill out insurance forms, handle correspondence, schedule appointments, arrange for hospital admission and laboratory services, and handle billing and bookkeeping. Clinical duties vary according to State law and include taking medical histories and recording vital signs, explaining treatment procedures to patients, preparing patients for examination, and assisting the physician during the examination. Medical assistants collect and prepare laboratory specimens or perform basic laboratory tests on the premises, dispose of contaminated supplies, and sterilize medical instruments. They instruct patients about medication and special diets, prepare and administer medications as directed by a physician, authorize drug refills as directed, telephone prescriptions to a pharmacy, draw blood, prepare patients for x-rays, take electrocardiograms, remove sutures, and change dressings. Medical assistants may also arrange examining room instruments and equipment, purchase and maintain supplies and equipment, and keep waiting and examining rooms neat and clean.

The following abilities and traits are necessary to perform this occupation:

- clean, neat, well-groomed appearance
- courteous, pleasant manner
- ability to put patients at ease and explain physicians' instructions
- ability to respect the confidentiality of information
- good manual dexterity
- good visual acuity
- ability to stand for long periods (approximately 6 hours)
- good physical mobility
- ability to communicate verbally
- very good reading skills
- ability to record information
- ability to lift up to 25 pounds

Billing Clerk/Insurance Clerk

Source: Occupational Outlook Handbook 2000–2001, found on Department of Labor Web page: <http://stats.bls.gov>

O*NET Codes: 55344 and 56002

Billing clerks keep records, calculate charges, and maintain files of payments made for goods or services. Billing machine operators run machines that generate bills, statements, and invoices. Hospital billing clerks review hospital records or charge slips to calculate the total amount due from a customer. Calculating the charges for an individual's hospital stay may require a letter to an insurance company.

After billing clerks review all necessary information, they compute the charges using calculators or computers. They then prepare itemized statements, bills, or invoices used for billing and recordkeeping purposes, depending on the organization's needs. In one organization, the clerk might prepare a bill containing the amount due and date and type of service; in another, the clerk would produce a detailed invoice with codes for all goods and services provided. This latter form might list items sold, credit terms, date of shipment or dates services were provided, a salesperson's or doctor's identification, if necessary, and the sales total.

After entering all information, billing machine operators then run off the bill to send to the customer. Computers and specialized billing software allow many clerks to calculate charges and prepare bills in one step. Computer packages prompt clerks to enter data from hand-written forms and manipulate the necessary entries of quantities, labor, and rates to be charged. Billing clerks verify the entry of information and check for errors before the computer prints the bill. After the bills are printed, billing clerks check them again for accuracy.

The following abilities and traits are necessary to perform this occupation:

- ability to read
- ability to sit for long periods of time (approximately 6 to 8 hours)
- basic math skills
- good phone skills
- ability to type (30–40 words per minute)
- ability to file
- ability to communicate with others

Sample Employment Opportunities in Hospital Health Services

**Physical Therapist Assistant/Aide
Occupational Therapy Assistant/Aide
Pharmacy Technician/Assistant
Housekeeping Personnel
Dietary Aide
Human Service Worker
Surgical Technologist
Maintenance Mechanic**

Guide to Placement for Hospital Health Services Occupations

Job Title	Limited Lifting	Wheelchair User	Reading Impaired	Speech Impaired	Visually Impaired	Epilepsy/ Mild CP	Mild M R	Hearing Impaired
Physical Therapist Assistant/ Aide	None	None	Fair	Fair	Poor	None	None	Good
Occupational Therapy Assistant/ Aide	Good	Fair	Fair	Poor	Poor	None	None	Fair
Pharmacy Technician/ Assistant	Good	Fair	Poor	Fair	None	Fair	None	Fair
Housekeeping Personnel	None	None	Good	Good	Poor to None	Poor	Poor	Good to Poor
Dietary Aide	None	None	Fair to Poor	Good	Poor to None	Poor	Poor	Good to Poor
Human Service Worker	Good	Fair	Fair to Poor	Fair	None	Fair	None	Fair
Surgery Technologist	Fair	Poor	Poor	Poor	Fair to Poor	Poor	None	Good to Fair
Maintenance Mechanic	None	None	Good	Good	None	Poor	Good	Good to Fair

Key to Job Employability Ratings

Excellent	Outstanding possibility for employment; no supervision necessary
Good	Better than average employment possibility; little to no supervision necessary
Fair	Moderate employment possibility; minimum supervision necessary
Poor	Very slight employment possibility; supervision necessary
None	Little to no employment possibility; supervision necessary

Employability ratings should be used only as indicators of possible employment success, taking into consideration the following variables that affect employment success:

- attitudes of facility management and/or staff
- social and mental attitudes of the individual to be placed
- geographical location of the facility
- need for services indicated by job title (e.g., a small facility as opposed to a large facility)

Physical Therapist Assistant/Aide

Source: *Occupational Outlook Handbook 2000–2001*, found on Department of Labor Web page: <http://stats.bls.gov>

O*NET Code: 66017

Physical therapist assistants and aides perform components of physical therapy procedures and related tasks selected and delegated by a supervising physical therapist. These workers assist physical therapists in providing services that help improve mobility, relieve pain, and prevent or limit permanent physical disabilities of patients suffering from injuries or disease. Patients include accident victims and individuals with disabling conditions, such as low back pain, arthritis, heart disease, fractures, head injuries, and cerebral palsy.

Physical therapist assistants perform a variety of tasks. Treatment procedures delegated to these workers, under the direction of therapists, involve exercises, massages, electrical stimulation, paraffin baths, hot and cold packs, traction, and ultrasound. Physical therapist assistants record the patient's responses to treatment and report to the physical therapist the outcome of each treatment.

Physical therapist aides help make therapy sessions productive, under the direct supervision of a physical therapist or physical therapist assistant. They are usually responsible for keeping the treatment area clean and organized and preparing for each patient's therapy. When patients need assistance moving to or from a treatment area, aides push them in a wheelchair, or provide them with a shoulder to lean on. Because they are not licensed, aides perform a more limited range of tasks than physical therapist assistants do.

The duties of aides include some clerical tasks, such as ordering depleted supplies, answering the phone, and filling out insurance forms and other paperwork. The extent to which an aide or an assistant performs clerical tasks depends on the size and location of the facility. Physical therapist assistants and aides need to have a moderate degree of strength, due to the physical exertion required in assisting patients with their treatment. For example, in some cases, assistants and aides need to help lift patients. Additionally, constant kneeling, stooping, and standing for long periods are all part of the job. Employers typically require physical therapist aides to have a high school diploma, strong interpersonal skills, and a desire to assist people in need. Most employers provide clinical on-the-job training.

The following abilities and traits are necessary to perform this occupation:

- strong interpersonal skills
- fine motor dexterity in both hands
- ability to lift up to 50 pounds
- ability to kneel, stoop and stand for long periods
- desire to assist people in need
- ability to follow written and verbal instructions

Occupational Therapy Assistant/Aide

Source: *Occupational Outlook Handbook 2000–2001*, found on Department of Labor Web page: <http://stats.bls.gov>

O*NET Code: 66021

Occupational therapy assistants and aides work under the direction of occupational therapists to provide rehabilitative services to persons with mental, physical, emotional, or developmental impairments. The ultimate goal is to improve clients' quality of life by helping them compensate for limitations. For example, occupational therapy assistants help injured workers re-enter the labor force by helping them improve their motor skills or help persons with learning disabilities increase their independence, by teaching them to prepare meals or use public transportation.

Occupational therapy assistants help clients with rehabilitative activities and exercises outlined in a treatment plan developed in collaboration with an occupational therapist. Activities range from teaching the proper method of moving from a bed into a wheelchair, to the best way to stretch and limber the muscles of the hand. Assistants monitor an individual's activities to make sure they are performed correctly and to provide encouragement. They also record their client's progress for use by the occupational therapist. If the treatment is not having the intended effect, or the client is not improving as expected, the therapist may alter the treatment program in hopes of obtaining better results. In addition, occupational therapy assistants document billing of the client's health insurance provider.

Occupational therapy aides typically prepare materials and assemble equipment used during treatment and are responsible for a range of clerical tasks. Duties can include scheduling appointments, answering the telephone, restocking or ordering depleted supplies, and filling out insurance forms or other paperwork. Aides are not licensed, so by law they are not allowed to perform as wide a range of tasks as occupational therapy assistants do.

Occupational therapy assistants and aides usually work during the day, but may occasionally work evenings or weekends, to accommodate a client's schedule. These workers should be in good physical condition, because they are on their feet for long periods of time and may be asked to help lift and move clients or equipment.

The following abilities and traits are necessary to perform this occupation:

- strong interpersonal skills
- fine motor dexterity in both hands
- ability to work as part of a team
- ability to lift up to 25 pounds
- desire to assist people in need
- ability to follow written and verbal instructions

Pharmacy Technician/Assistant

Source: *Occupational Outlook Handbook 2000–2001*, found on Department of Labor Web page: <http://stats.bls.gov>

O*NET Code: 32518

Pharmacy technicians and assistants help licensed pharmacists provide medication and other health care products to patients. *Pharmacy technicians* usually perform more complex tasks than assistants do, although in some States their duties and job titles overlap. Technicians usually perform routine tasks to help prepare prescribed medication for patients, such as counting and labeling. A pharmacist must check every prescription before it can be given to a patient. Technicians refer any questions regarding prescriptions, drug information, or health matters to a pharmacist.

Pharmacy assistants usually have fewer, less complex responsibilities than technicians. Assistants are often clerks or cashiers who primarily answer telephones, handle money, stock shelves, and perform other clerical duties.

Pharmacy technicians who work in retail pharmacies have varying responsibilities depending on State rules and regulations. Technicians receive written prescriptions or requests for a prescription refill from patients or representatives. They must verify that the information on the prescription is complete and accurate. To prepare the prescription the technician must retrieve, count, pour, weigh, measure, and sometimes mix the medication. Then, they prepare the prescription labels, select the type of prescription container, and affix the prescription and auxiliary labels to the container. Once the prescription is filled, technicians price and file the prescription, which must be checked by a pharmacist before it is given to a patient. Technicians may establish and maintain patient profiles, prepare insurance claim forms, and stock and take inventory of prescription and over-the-counter medications. Some also clean the pharmacy equipment, help with the maintenance of equipment and supplies, and manage the cash register.

In hospitals, technicians have added responsibilities. They read patient charts and prepare and deliver the medicine to patients. The pharmacist must check the order before it is delivered to the patient. The technician then copies the information about the prescribed medication onto the patient's profile. Technicians may also assemble a 24-hour supply of medicine for every patient. They package and label each dose separately. The package is then placed in the medicine cabinet of each patient, until the supervising pharmacist checks it. It is then given to the patient. Technicians are responsible for keeping a running inventory of medicines, chemicals, and other supplies used.

The following abilities and traits are necessary to perform this occupation:

- ability to stand for long periods of time (most work done while standing)
- fine motor dexterity in both hands and arms
- good reading, writing, spelling and math skills
- ability to lift up to 50 pounds
- ability to climb ladders
- ability to follow written and verbal instructions
- strong interpersonal and teamwork skills
- ability to work independently
- ability to type and use a computer
- enjoyment of precise detail work
- no record of drug or substance abuse

Housekeeping Personnel

Source: Occupational Outlook Handbook 2000–2001, found on Department of Labor Web page: <http://stats.bls.gov>

O*NET Codes: 61008, 67002, and 67005

Janitors and cleaners—also called building custodians, executive housekeepers, or maids—keep office buildings, hospitals, stores, apartment houses, hotels, and other types of buildings clean and in good condition. Some only do cleaning, while others have a wide range of duties. They may fix leaky faucets, empty trashcans, do painting and carpentry, replenish bathroom supplies, mow lawns, and see that heating and air-conditioning equipment works properly. On a typical day, janitors may wet- or dry-mop floors, clean bathrooms, vacuum carpets, dust furniture, make minor repairs, and exterminate insects and rodents. In hospitals, where they are mostly known as maids or housekeepers, they may also wash bed frames, brush mattresses, make beds, and disinfect and sterilize equipment and supplies using germicides and sterilizing equipment.

Housekeeping personnel use various equipment, tools, and cleaning materials. For one job, they may need a mop and bucket; for another, an electric polishing machine and a special cleaning solution. Improved building materials, chemical cleaners, and power equipment have made many tasks easier and less time-consuming, but janitors must learn proper use of equipment and cleaners to avoid harming floors, fixtures, and themselves.

The following abilities and traits are necessary to perform this occupation:

- ability to stand for long periods of time (most work done while standing)
- gross motor dexterity
- ability to follow instructions
- ability to lift up to 50 pounds
- ability to bend, stoop and stretch
- basic math skills
- good interpersonal skills

Dietary Aide

Source: Occupational Outlook Handbook 2000–2001, found on Department of Labor Web page: <http://stats.bls.gov>

O*NET Codes: 65021, 65026, 65028, 65032, 65035, 65038A, 65038B, and 69999E

Hospital dietary aides assist chefs by cleaning surfaces, peeling vegetable, and performing other duties. Under the direction of chefs and cooks, they weigh and measure ingredients, go after pots and pans, and stir and strain soups and sauces. These workers also clean, peel, and slice vegetables and fruits and make salads. They may cut and grind meats, poultry, and seafood in preparation for cooking. Their responsibilities also include cleaning work areas, equipment, utensils, dishes, and silverware.

Hospital dietary aides compile dietary information for use by kitchen personnel in preparation of foods for hospital patients, examine diet orders received from the floor, and tally portions and foods of general and special diets.

The following abilities and traits are necessary to perform this occupation:

- ability to stand for long periods of time
- gross motor dexterity
- basic math skills
- ability to lift up to 25 pounds
- ability to read
- ability to communicate verbally and in writing
- ability to measure food portions
- ability to work as part of a team

Human Service Worker

Source: Occupational Outlook Handbook 2000–2001, found on Department of Labor Web page: <http://stats.bls.gov>

O*NET Code: 27308

Human service workers and assistants is a generic term for people with various job titles, including social service assistant, case management aide, social work assistant, community support worker, alcohol or drug abuse counselor, mental health aide, community outreach worker, life skill counselor, and gerontology aide. They usually work under the direction of professionals from a variety of fields, such as nursing, psychiatry, psychology, rehabilitative or physical therapy, or social work. The amount of responsibility and supervision they are given varies a great deal. Some have little direct supervision; others work under close direction.

Human service workers and assistants provide direct and indirect client services. They assess clients' needs, establish their eligibility for benefits and services, and help clients obtain them. They examine financial documents such as rent receipts and tax returns to determine whether the client is eligible for food stamps, Medicaid, welfare, and other human service programs. They also arrange for transportation and escorts, if necessary, and provide emotional support. Human service workers and assistants monitor and keep case records on clients and report progress to supervisors and case managers. Human service workers and assistants also may transport or accompany clients to group meal sites, adult daycare centers, or doctors' offices. They may telephone or visit clients' homes to make sure services are being received, or to help resolve disagreements, such as those between tenants and landlords. They also may help clients complete insurance or medical forms, as well as applications for financial assistance. Additionally, social and human service workers and assistants may assist others with daily living needs.

In psychiatric hospitals, rehabilitation programs, and outpatient clinics, human service workers and assistants work with professional care providers, such as psychiatrists, psychologists, and social workers to help clients master everyday living skills, to teach them how to communicate more effectively, and to get along better with others. They support the client's participation in a treatment plan, such as individual or group counseling or occupational therapy.

Working conditions of human service workers and assistants vary. Some work in offices, clinics, and hospitals, while others work in group homes, shelters, sheltered workshops, and day programs. Many spend their time in the field visiting clients. Most work a 40-hour week, although some work in the evening and on weekends. The work, while satisfying, can be emotionally draining. Understaffing and relatively low pay may add to the pressure. Turnover is reported to be high, especially among workers without academic preparation for this field.

Although a bachelor's degree usually is not required for this occupation, employers increasingly are seeking individuals with relevant work experience or education beyond high school. Certificates or associate degrees in subjects such as social work, human services, or one of the social or behavioral sciences meet most employers' requirements.

Human services programs have a core curriculum that trains students to observe patients and record information, conduct patient interviews, implement treatment plans, employ problem-solving techniques, handle crisis intervention matters, and use proper case management and referral procedures. General education courses in liberal arts, sciences, and the humanities also are part of the curriculum. Many degree programs require completion of a supervised internship.

Educational attainment often influences the kind of work an employee may be assigned and the degree of responsibility that may be entrusted to them. For example, workers with no more than a high school education are likely to receive extensive on-the-job training to work in direct-care services, while employees with a college degree might be assigned to do supportive counseling, coordinate program

activities, or manage a group home. Human service workers and assistants with proven leadership ability, either from previous experience or as a volunteer in the field, often receive greater autonomy in their work. Regardless of the academic or work background of employees, most employers provide some form of in-service training, such as seminars and workshops, to their employees.

The following abilities and traits are necessary to perform this occupation:

- good communication skills
- strong sense of responsibility
- ability to manage time effectively
- patience and understanding
- strong desire to help others
- good interpersonal skills

Surgical Technologist

Source: Occupational Outlook Handbook 2000–2001, found on Department of Labor Web page: <http://stats.bls.gov>

O*NET Code: 32928

Surgical technologists, also called surgical or operating room technicians, assist in operations under the supervision of surgeons, registered nurses, or other surgical personnel. Before an operation, surgical technologists help set up the operating room with surgical instruments and equipment, sterile linens, and sterile solutions. They assemble, adjust, and check nonsterile equipment to ensure it is working properly. Technologists also prepare patients for surgery by washing, shaving, and disinfecting incision sites. They transport patients to the operating room, help position them on the operating table, and cover them with sterile surgical “drapes.” Technologists also observe patients’ vital signs, check charts, and help the surgical team scrub and put on gloves, gowns, and masks.

During surgery, technologists pass instruments and other sterile supplies to surgeons and surgeon assistants. They may hold retractors, cut sutures, and help count sponges, needles, supplies, and instruments. Surgical technologists help prepare, care for, and dispose of specimens taken for laboratory analysis and may help apply dressings. Some operate sterilizers, lights, or suction machines, and help operate diagnostic equipment. Technologists may also maintain supplies of fluids, such as plasma and blood.

After an operation, surgical technologists may help transfer patients to the recovery room and clean and restock the operating room.

The following abilities and traits are necessary to perform this occupation:

- manual dexterity
- conscientious
- emotional stability
- orderliness
- ability to respond quickly
- ability to learn procedures well
- ability to understand what instruments are needed without being told

Maintenance Mechanic

Source: Occupational Outlook Handbook 2000–2001, found on Department of Labor Web page: <http://stats.bls.gov>

O*NET Codes: 85119C and 85132

General maintenance mechanics inspect and diagnose problems and determine the best way to correct them, often checking blueprints, repair manuals, and parts catalogs. They obtain supplies and repair parts from distributors or storerooms. They use common hand and power tools such as screwdrivers, saws, drills, wrenches, and hammers, as well as specialized equipment and electronic testing devices. They replace or fix worn or broken parts, where necessary, or make adjustments.

These mechanics also do routine preventive maintenance and ensure that machines continue to run smoothly, building systems operate efficiently, and the physical condition of buildings does not deteriorate. Following a checklist, they may inspect drives, motors, and belts, check fluid levels, replace filters, and perform other maintenance actions. Maintenance mechanics keep records of maintenance and repair work.

Mechanics in small establishments, where they are often the only maintenance worker, do all repairs except for very large or difficult jobs. In larger establishments, their duties may be limited to the general maintenance of everything in a workshop or a particular area.

General maintenance mechanics often do several different tasks in a single day, at any number of locations. They may work inside of a single building or in several different buildings. They may have to stand for long periods, lift heavy objects, and work in uncomfortably hot or cold environments, in awkward and cramped positions, or on ladders. They are subject to electrical shock, burns, falls, cuts, and bruises. Most general maintenance workers work a 40-hour week. Some work evening, night, or weekend shifts, or are on call for emergency repairs.

Most general maintenance mechanics learn their skills informally on the job. They start as helpers, watching and learning from skilled maintenance workers. Helpers begin by doing simple jobs such as fixing leaky faucets and replacing light bulbs, and progress to more difficult tasks such as overhauling machinery or building walls.

The following abilities and traits are necessary to perform this occupation:

- ability to walk and stand for long periods of time
- manual dexterity
- mechanical aptitude
- basic math skills
- ability to lift heavy things
- ability to bend, stoop, and stretch
- ability to work without supervision
- problem-solving skills

Sample Employment Opportunities for Nursing Occupations

**Nursing Aide
Home Health Aide
Psychiatric Aide**

Guide to Placement for Nursing Occupations

Job Title	Limited Lifting	Wheelchair User	Reading Impaired	Speech Impaired	Visually Impaired	Epilepsy/ Mild CP	Mild M R	Hearing Impaired
Nursing Aide	None	None	Fair	Good	Poor to None	None	None	Good
Home Health Aide	None	None	Fair	Good	Poor to None	None	None	Good
Psychiatric Aide	Good	None	Poor to None	Fair	Fair to Poor	Poor	None	Good to Poor

Key to Job Employability Ratings

Excellent	Outstanding possibility for employment; no supervision necessary
Good	Better than average employment possibility; little to no supervision necessary
Fair	Moderate employment possibility; minimum supervision necessary
Poor	Very slight employment possibility; supervision necessary
None	Little to no employment possibility; supervision necessary

Employability ratings should be used only as indicators of possible employment success, taking into consideration the following variables that affect employment success:

- attitudes of facility management and/or staff
- social and mental attitudes of the individual to be placed
- geographical location of the facility
- need for services indicated by job title (e.g., a small facility as opposed to a large facility)

Nursing Aide

Source: Occupational Outlook Handbook 2000–2001, found on Department of Labor Web page: <http://stats.bls.gov>

O*NET Codes: 66008 and 66014

Nursing aides help care for physically ill, injured, disabled, or infirm individuals confined to hospitals, nursing or residential care facilities, and mental health settings. Nursing aides, also known as nursing assistants, geriatric aides, unlicensed assistive personnel, or hospital attendants, perform routine tasks under the supervision of nursing and medical staff. They answer patients' call bells, deliver messages, serve meals, make beds, and help patients eat, dress, and bathe. Aides may also provide skin care to patients; take temperatures, pulse, respiration, and blood pressure; and help patients get in and out of bed and walk. They may also escort patients to operating and examining rooms, keep patients' rooms neat, set up equipment, or store and move supplies. Aides observe patients' physical, mental, and emotional conditions and report any change to the nursing or medical staff.

Nursing aides employed in nursing homes are often the principal caregivers, having far more contact with residents than other members of the staff. Since some residents may stay in a nursing home for months or even years, aides develop ongoing relationships with them and interact with them in a positive, caring way. Aides spend many hours standing and walking, and they often face heavy workloads. Because they may have to move patients in and out of bed or help them stand or walk, aides must guard against back injury. Nursing aides may also face hazards from minor infections and major diseases such as hepatitis, but can avoid infections by following proper procedures. Nursing aides often have unpleasant duties; they empty bed pans and change soiled bed linens. The patients they care for may be disoriented, irritable, or uncooperative.

The following abilities and traits are necessary to perform this occupation:

- tact and patience
- gross motor dexterity
- desire to help people
- ability to lift up to 50 pounds
- ability to accept supervision
- ability to read at eighth-grade level
- ability to write
- basic math skills
- good communication skills
- ability to work as part of a team

Home Health Aide

Source: Occupational Outlook Handbook 2000–2001, found on Department of Labor Web page: <http://stats.bls.gov>

O*NET Codes: 66011 and 68035

Home health and personal care aides help elderly, disabled, and ill persons live in their own homes instead of in a health facility. Most work with elderly or disabled clients who need more extensive care than family or friends can provide. Some home health and personal care aides work with families in which a parent is incapacitated and small children need care. Others help discharged hospital patients who have relatively short-term needs.

In general, *home health aides* provide health-related services, such as administering oral medications under physicians' orders or direction of a nurse. In contrast, *personal care* and *home care aides* provide mainly housekeeping and routine personal care services. However, there can be substantial variation in job titles and overlap of duties. Most home health and personal care aides provide some housekeeping services, as well as personal care to their clients. They clean clients' houses, do laundry, and change bed linens. Some aides plan meals (including special diets), shop for food, and cook. Home health and personal care aides may also help clients move from bed, bathe, dress, and groom. Some accompany clients outside the home, serving as guide, companion, and aide.

Home health and personal care aides also provide instruction and psychological support. For example, they may assist in toilet training a severely mentally handicapped child, or just listen to clients talk about their problems. Home health aides may check pulse, temperature, and respiration; help with simple prescribed exercises; and assist with medication routines. Occasionally, they change nonsterile dressings, use special equipment such as a hydraulic lift, give massages and alcohol rubs, or assist with braces and artificial limbs.

In home care agencies, it is usually a registered nurse, a physical therapist, or a social worker who assigns specific duties and supervises home health and personal care aides. Aides keep records of services performed and of clients' condition and progress. They report changes in the client's condition to the supervisor or case manager. Home health and personal care aides also participate in case reviews, consulting with the team caring for the client—registered nurses, therapists, and other health professionals.

The home health and personal care aide's daily routine may vary. Aides may go to the same home every day for months or even years. However, most aides work with a number of different clients, each job lasting a few hours, days, or weeks. Aides often visit four or five clients on the same day. Surroundings differ from case to case. Some homes are neat and pleasant, while others are untidy or depressing. Some clients are angry, abusive, depressed, or otherwise difficult; others are pleasant and cooperative.

Home health and personal care aides generally work on their own, with periodic visits by their supervisor. They receive detailed instructions explaining when to visit clients and what services to perform. Many aides work part time, and weekend hours are common. Aides are individually responsible for getting to the client's home. They may spend a good portion of the working day traveling from one client to another; motor vehicle accidents are always a danger. They are particularly susceptible to injuries resulting from all types of overexertion when assisting patients, and falls inside and outside their homes. Mechanical lifting devices that are available in institutional settings are seldom available in patients' homes.

Federal law requires home health aides to pass a competency test covering 12 areas: Communication skills; observation, reporting, and documentation of patient status and the care or services furnished; reading and recording vital signs; basic infection control procedures; basic elements of body function and changes; maintenance of a clean, safe, and healthy environment; recognition of, and

procedures for, emergencies; the physical, emotional, and developmental characteristics of the patients served; personal hygiene and grooming; safe transfer techniques; normal range of motion and positioning; and basic nutrition. A home health aide may take training before taking the competency test. Federal law suggests at least 75 hours of classroom and practical training supervised by a registered nurse. Training and testing programs may be offered by the employing agency, but must meet the standards of the Health Care Financing Administration. Training programs vary depending upon State regulations.

The following abilities and traits are necessary to perform this occupation:

- ability to assume responsibility and work independently
- ability to be tactful and discreet
- gross motor dexterity
- desire to help people
- ability to lift up to 50 pounds
- good communication skills

Psychiatric Aide

Source: Occupational Outlook Handbook 2000–2001, found on Department of Labor Web page: <http://stats.bls.gov>

O*NET Codes: 66008 and 66014

Psychiatric aides help care for mentally ill or infirm individuals confined to hospitals, nursing or residential care facilities, and mental health settings. Psychiatric aides are also known as mental health assistants and psychiatric nursing assistants. They care for mentally impaired or emotionally disturbed individuals. They work under a team that may include psychiatrists, psychologists, psychiatric nurses, social workers, and therapists.

In addition to helping patients dress, bathe, groom, and eat, psychiatric aides socialize with them and lead them in educational and recreational activities. Psychiatric aides may play games such as cards with the patients, watch television with them, or participate in group activities such as sports or field trips. They observe patients and report any physical or behavioral signs which might be important for the professional staff to know. They accompany patients to and from wards for examination and treatment.

Because they have the closest contact with patients, psychiatric aides have a great deal of influence on their outlook and treatment. Psychiatric aides must be prepared to care for patients whose illness may cause violent behavior. While their work can be emotionally demanding, many aides gain satisfaction from assisting those in need.

The following abilities and traits are necessary to perform this occupation:

- tact and patience
- gross and fine motor dexterity
- desire to help people
- ability to lift up to 25 pounds
- ability to accept supervision
- ability to read at eighth-grade level
- ability to write
- basic math skills
- good communication skills
- ability to work as part of a team

Job and Workplace Assessment

Assessing a Workplace for the Student with a Disability

Functional Assessment for Work Potential

(for students with sensory disabilities, from Wehman, p. 310)

Vision

- Analyze lighting source for high or low illumination with light source on side of the “better eye.”
- Check height and angles of work surfaces and reduce reflective areas as necessary.
- Determine if enlarged print, colors, symbols, or pictures can be used for direction/work supplies.
- Assess usefulness of tactual clues added to materials, equipment, or environment to focus consumer’s residual vision in key aspects.

Hearing

- Note noise level within work environment and determine if work station needs to be repositioned.
- Determine if sound discrimination is a critical factor of the job.
- Analyze work area to assess employee’s need to localize the origin of sound (e.g., fire alarm).

Orientation and Mobility

- Determine systematic methods of traveling across or between landmarks to reduce complicated orientation patterns.
- Analyze methods of maintaining direction regardless of environmental obstacles.
- Critically review all environmental safety factors affecting this area (e.g., fire drills, crowds).

Modifying Task Requirements

- Check the availability of support to include both natural and artificial systems.
- Determine how other senses might be used.
- Identify job components that lend themselves to technology solutions that will meet consumer needs.

Job Analysis

Job Title _____ Name of Company _____

Address _____ Telephone _____ Fax _____

Job Requirements

Check the skills required to perform this job.

- | | | |
|--|------------------------------------|---|
| <input type="checkbox"/> adding | <input type="checkbox"/> lifting | <input type="checkbox"/> sitting |
| <input type="checkbox"/> subtracting | <input type="checkbox"/> carrying | <input type="checkbox"/> hearing |
| <input type="checkbox"/> multiplying | <input type="checkbox"/> walking | <input type="checkbox"/> seeing |
| <input type="checkbox"/> dividing | <input type="checkbox"/> climbing | <input type="checkbox"/> following instructions |
| <input type="checkbox"/> reading | <input type="checkbox"/> balancing | <input type="checkbox"/> using the telephone |
| <input type="checkbox"/> writing | <input type="checkbox"/> stooping | <input type="checkbox"/> using hand tools |
| <input type="checkbox"/> making change | <input type="checkbox"/> kneeling | <input type="checkbox"/> operating machines |
| <input type="checkbox"/> using measuring devices | <input type="checkbox"/> crouching | |
| <input type="checkbox"/> talking | <input type="checkbox"/> standing | |

Working Conditions

Check the working conditions under which this job is done.

- | | | |
|---------------------------------------|--|---|
| <input type="checkbox"/> extreme heat | <input type="checkbox"/> good ventilation | <input type="checkbox"/> indoor work |
| <input type="checkbox"/> extreme cold | <input type="checkbox"/> tension, pressure | <input type="checkbox"/> outdoor work |
| <input type="checkbox"/> humid | <input type="checkbox"/> dusty and dirty | <input type="checkbox"/> hazardous |
| <input type="checkbox"/> wet | <input type="checkbox"/> noisy | <input type="checkbox"/> distracting conditions |
| <input type="checkbox"/> dry | <input type="checkbox"/> good lighting | <input type="checkbox"/> work with others |

Work Activities/Work Situations

Educational Development/Preparation and Training

Possibility for Adaptations

Salary and Benefits

Travel Time to Job

Detailed Job Analysis

(from Gajar, et al., pp. 293-294)

I. Organization Description

- A. Name _____
- B. Location _____
- C. Name of personnel manager, other contact persons _____
- D. Number of employees _____
- E. Organizational characteristics
1. Work seasonality _____
 2. Union presence _____
 3. Other _____

II. Job Information

- A. Position title _____
- B. General job description _____

- C. Job tasks performed _____

- D. Stability of job tasks performed _____
- E. Entry-level requirements
1. Training _____
 2. Experience _____
 3. Social requirements _____
- F. Equipment operated _____
- G. Physical requirements
1. Speed _____
 2. Strength _____
 3. Endurance _____
 4. Sensory acuity _____
 5. Tolerance of extreme conditions
 - a. noise _____
 - b. heat/cold _____
 - c. other _____

H. Task monitoring

1. quality control _____
2. quantity control _____
3. supervision received
 - a. From whom? _____
 - b. How? _____
 - c. How often? _____

I. Social requirements

1. Co-workers
 - a. number _____
 - b. job classifications _____
 - c. proximity _____
 - d. relationship to incumbent _____
2. Persons outside the organization
 - a. customers _____
 - b. public _____
 - c. representatives of other organizations _____
3. Communication requirements
 - a. written _____
 - b. oral _____

J. Other requirements/conditions _____

1. uniforms or special clothing _____
 2. transportation _____
 3. normal workday _____
 - a. shifts _____
 - b. breaks or meals _____
 4. Decision-making requirements _____
 5. Compensation
 - a. pay _____
 - b. benefits _____
 6. Career ladder _____
 7. Organizational training _____
 8. Other _____
-

Appendixes

Appendix 1

Disabilities That Qualify Children and Youth for Special Education Services under the Individuals with Disabilities Education Act (IDEA)

Autism. A developmental disability significantly affecting verbal and nonverbal communication and social interaction, generally evident before age three, that adversely affects a child's educational performance.

Deafness. A hearing impairment so severe that the child cannot understand what is being said even with a hearing aid.

Deaf-Blindness. A combination of hearing and visual impairments causing such severe communication, developmental, and educational problems that the child cannot be accommodated in either a program specifically for the deaf or a program specifically for the blind.

Hearing Impairment. An impairment in hearing, whether permanent or fluctuating, that adversely affects a child's educational performance but that is not included under the definition of deafness.

Mental Retardation. Significantly subaverage general intellectual functioning existing concurrently with deficits in adaptive behavior and manifested during the developmental period, which adversely affects a child's educational performance.

Multiple Disabilities. A combination of impairments (such as mental retardation-blindness, or mental retardation-physical disabilities) that causes such severe educational problems that the child cannot be accommodated in a special education program solely for one of the impairments. The term does not include deaf-blindness.

Orthopedic Impairment. A severe orthopedic impairment that adversely affects educational performance. The term includes impairments such as amputation, absence of a limb, cerebral palsy, poliomyelitis, and bone tuberculosis.

Other Health Impairment. Having limited strength, vitality, or alertness due to chronic or acute health problems such as a heart condition, rheumatic fever, asthma, hemophilia, and leukemia, which adversely affect educational performance.

Serious Emotional Disturbance. A condition exhibiting one or more of the following characteristics, displayed over a long period of time and to a marked degree that adversely affects a child's educational performance: an inability to learn that cannot be explained by intellectual, sensory, or health factors; an inability to build or maintain satisfactory interpersonal relationships with peers or teachers; inappropriate types of behavior or feelings under normal circumstances; a general pervasive mood of unhappiness or depression; a tendency to develop physical symptoms or fears associated with personal or school problems. This term includes schizophrenia, but does not include students who are socially maladjusted, unless they have a serious emotional disturbance.

Specific Learning Disability. A disorder in one or more of the basic psychological processes involved in understanding or in using language, spoken or written, that may manifest itself in an imperfect ability to listen, think, speak, read, write, spell, or do mathematical calculations. This term includes such

conditions as perceptual disabilities, brain injury, minimal brain dysfunction, dyslexia, and developmental aphasia. This term does not include children who have learning problems that are primarily the result of visual, hearing, or motor disabilities; mental retardation; or environmental, cultural, or economic disadvantage.

Speech or Language Impairment. A communication disorder such as stuttering, impaired articulation, language impairment, or a voice impairment that adversely affects a child's educational performance.

Traumatic Brain Injury. An acquired injury to the brain caused by an external force, resulting in total or partial functional disability or psychosocial impairment, or both, that adversely affects a child's educational performance. The term applies to open or closed head injuries resulting in impairments in one or more areas, such as cognition; language; memory; attention; reasoning; abstract thinking; judgment; problem-solving; sensory, perceptual and motor abilities; psychosocial behavior; physical functions; information processing; and speech. The term does not apply to brain injuries that are congenital or degenerative, or brain injuries induced by birth trauma.

Visual Impairment, including Blindness. An impairment in vision that, even with correction, adversely affects a child's educational performance. The term includes both partial sight and blindness.

Appendix 3

Involving Non-English Speaking Families in the Individual Education Program Process

(from the National Center for Learning Disabilities, www.nclld.org)

Assure parents' informed participation.

- Be sure parents understand their rights.
- Ensure that written information for non-English speaking parents is translated.
- Arrange for an interpreter for parent meetings. Be sure that the person interpreting can do so accurately and impartially.

Avoid jargon and anticipate questions.

- Write all reports in language that explains technical words and is easily understood.
- Offer parents opportunities to ask for clarification both during meetings and in informal conversation.
- Explain to parents the potential advantages of receiving special education services as well as possible disadvantages.
- Inform parents if any of their actions could place them at odds with the legal system or when the school may be able to take action over their objections.
- Do not assume that literal translation will be sufficient to convey the meaning.

Be mindful of cultural differences.

- Do not misconstrue parents' silence or lack of disagreement as signs of satisfaction or consent. For cultural reasons, parents may be inhibited about openly disagreeing with school personnel.
- Keep in mind that ideas about and attitudes toward disabilities are often culturally influenced. Languages other than English do not necessarily have terms that correspond to English-language disability classifications. People from other cultures may not have a corresponding concept and, thus, may not agree that a particular child has a disability.

Increase parents' comfort with the IEP process and keep school officials involved.

- Use forms of address (title and last name) that connote respect unless you are sure that a less formal approach is welcome.
- Involve members of the parents' ethnic community (particularly those who have experience with the school and other local systems and practices) in the planning process, when appropriate.
- Encourage parents to bring others who can help to meetings.
- Understand that parents may mistrust the school system and question its authority with regard to child-rearing issues. Also, they may hesitate to disclose personal information.
- Be prepared to offer referrals to agencies and organizations that can help parents meet their non-educational needs (e.g., English acquisition, shelter, maintaining family integrity) and offer follow-up assistance in working with other agencies and organizations. Be careful not to intrude and only offer such assistance when it is welcome.
- Be realistic and frank about your ability to advocate for parents. Direct them to resources that can provide advocacy assistance, such as a Parent Training and Information Center in your state.

Appendix 4: Working with People Who Learn Differently

(from Miller and Sammons, Everybody's Different, pp. 230–232)

When having a conversation with an individual who learns differently, try these strategies:

- Listen carefully to the person's vocabulary, and try to use words of a similar level. If the person does not seem to understand a question or remark of yours, then try to use simpler words, shorten your sentences to five to seven words or less, or focus on only one idea per sentence.
- Wait patiently for an answer; allow extra time for the person to process your comment or to respond. If you don't understand the person's point, say so. It's not rude to admit, "I don't understand. Are you saying _____?" (Restate the point.) Or, say "Show me what you mean." Help the person demonstrate with actions or gestures.
- If the other person still doesn't grasp your meaning, then pose the question as a choice. For example, "Are you a sports fan?" is a pretty broad, open-ended question. Try narrowing down the question: "Do you like basketball or football better?"

When you're teaching a task or skill to someone who learns differently how to do something, try some of these coaching ideas:

- First, ask the person about his learning needs. For example, say, "I want you to learn how to operate the new label-making machine. Do you want to watch me first? Or, do you want to take home the instruction manual before we meet?"
- Match your method to the person's specific needs. For example, a person with auditory processing difficulties might appreciate diagrams or written procedures, but avoid giving written instructions to a person with a reading disability.
- Reduce distractions in the environment. If possible, reduce the number of people present, the noise level, and distracting objects. Move to a quiet room or corner.
- Tell the person you expect her to have questions and that she should stop you when anything is unclear. Then, periodically invite questions during the training session. Try asking, "Is any of this confusing to you? Which part?" "How am I doing? I'm not sure how well I'm getting this information across to you." "I'm sure you have some questions about that part."
- Divide the task into several smaller steps or subtasks in a specific sequence. Teach them starting from the last step of the sequence. For example, if you are demonstrating coffee-making, start with the last step: pouring the coffee into cups and serving it. Then work backward from this step and teach one more step in the process. Keep adding steps until you've taught the entire process. [backward chaining]
- For each step you teach, demonstrate, and then let the person try. Then give positive feedback at every step, such as "You can do it," "Try again," "Good try!" and "You've got it!" Encouragement and authentic praise are very important.
- Let the person touch the materials and tools; don't keep them in your hands.
- Adjust your pace after checking with the learner: "I talk pretty fast when I'm excited. Should I slow down?"
- At the end, ask which steps are clear and which remain confusing. Assure the person that there will be more time and opportunities for practice and questions.

- Take advantage of helpful tools and devices. Use calculators, memory-dial functions on telephones, and so forth. Tape record your directions for the person to play back several times on his own. Post signs at the task location with reminders, diagrams, or a few words of explanation.
- Ask whether the learner has ideas for doing some steps differently. Especially after trying the new task a number of times, the learner may have another way to accomplish the same task—and her methods will suit her unique learning difficulties and strengths. Try to be flexible and open to these suggestions. Remember that most learners deviate from “standard operating procedures” at some point. Give the person room to try another way.

Appendix 5: Using Consequences to Aid Learning

(from Gajar, et al., p. 301)

Consequences enhance learning when they provide feedback to the learning about his or her performance and reinforcement for correct performance. Try some of the following techniques when teaching job skills to students with disabilities:

- **Praise for completion or mastery of a task.** Praise from co-workers or real work supervisors is more valued by adolescents and young adults than praise from instructors (especially secondary-level instructors).
- **Feedback about the correctness of a performance.** It is unfair and inefficient to provide a learner with general positive feedback. Positive feedback works better than negative feedback (e.g., “That’s wrong”), but it must be specific and honest. Learners must know how they are performing. Saying to a learner, “Good; the wallboard is snug against the ceiling board but it’s not plumb” is effective feedback; saying “You did better than yesterday” is not.
- **A visual display of advancement toward a long-term goal,** such as a graph or chart.
- **Task completion itself.** There is ample evidence that humans are reinforced by success. Thus, instructors can enhance reinforcement by structuring the task and the learning environment to raise the likelihood of success. Instructors should, however, avoid structuring so that every attempt becomes a success, as successes too easily gained have less value. Success rates should be high early in an instructional sequence and gradually more difficult to attain.
- **Increased autonomy and decision-making input for the learner.** This consequence enhances self-worth. All of us want to believe that we have some control over our own lives. In general, the more we feel this, the more we feel reinforced for our performance. Providing increased opportunity to make decisions or to work with less continuous supervision is reinforcing to most workers.

Resources

California Resources for Students with Disabilities

Department of Rehabilitation

PO Box 944222

Sacramento, CA 94244-2220

(916) 263-8981

www.rehab.cahwnet.gov

California Department of Education

Standards and High School Development Division

660 J Street, Suite 300

Sacramento, CA 95814

(916)445-2652

www.cde.ca.gov

Department of Developmental Services

Health & Human Services Agency

1600 9th Street, 2nd Floor

Sacramento, CA95814

(916) 654-1897

www.dds.ca.gov

State Council on Developmental Disabilities

2000 O Street, Room 100

Sacramento, CA 95825

(916) 322-8481

www.scdd.ca.gov

Client Assistance Program

2000 Evergreen Street, 2nd Floor

Sacramento, CA 95815

(916) 263-7372

www.rehab.cahwnet.gov

California Assistive Technology Network: www.atnet.org

Miscellaneous Internet Resources for Individuals with Disabilities

National Information Center for Children and Youth with Disabilities: www.nichy.org

Council for Exceptional Children: www.cec.sped.org

Presidential Task Force on Employment of Adults with Disabilities: www.disability.gov

Disability Resources: www.disabilityresources.org

Assistive Technology Resources Database: www.abledata.com

Technical Assistance Centers for Americans with Disabilities Act: www.adata.org

Rehabilitation Services Administration: www.ed.gov/offices/OSERS/RSA

Resources for Teaching Students with Autism

Autism Society of America

7910 Woodmont Avenue, Suite 300
Bethesda, MD 20814
(301) 657-0881/ (800) 318-8476
www.autism-society.org

Resources for Teaching Students with Brain Injury

Brain Injury Association of California

PO Box 160786
Sacramento, CA 95816
(916) 442-1710/ (800) 457-2443
www.biausa.org/California

Brain Injury Association

105 N. Alfred St
Alexandria, VA 22314
(800) 444-6443
www.biausa.org

Resources for Teaching Students with Cerebral Palsy

United Cerebral Palsy of Greater Sacramento

191 Lathrop Way, Suite N
Sacramento, CA 95815
(916) 565-7700
www.ucpsacto.org

Resources for Teaching Students with Communication Disorders

California Speech-Language-Hearing Association

825 University Avenue
Sacramento, CA 95825
(916) 921-1568
www.caspeechhearing.org

Resources for Teaching Students with Deafness or Hearing Loss

California State Office of Deaf Access

Department of Social Services
744 P Street, MS6-91
Sacramento, CA 95814
(916) 653-8320

Captioned Films and Videos

Captioned Films/Videos for the Deaf
Modern Talking Picture Service, Inc.
5000 Park Street North
St. Petersburg, FL 33709
(800) 237-6213

Web Sites

Alexander Graham Bell Association for the Deaf: www.agbell.org
American Society for Deaf Children: www.deafchildren.org
National Association of the Deaf: www.nad.org
National Council on the Education of the Deaf, Kent State University: www.deafed.net
National Institute on Deafness and Other Communication Disorders: www.nih.gov/nidcd

Resources for Teaching Students with Epilepsy

Epilepsy Society of San Diego County
2055 El Cajon Blvd
San Diego, CA 92104
(619) 296-0161
Epilepsy Foundation of Northern California: www.efnc.com

Resources for Teaching Students with Learning Disabilities

Learning Disabilities Association of California
655 Lewelling Blvd, #355
San Leandro, CA 94579
(916) 725-7881
www.ldaca.org

Web Sites

Learning Disabilities OnLine: www.ldonline.org
Learning Disabilities Division, Council for Exceptional Children: www.dldcec.org
International Dyslexia Association: www.interdys.org

Resources for Teaching Students with Mild Retardation

Arc California

1225 Eighth Street, Suite 590
Sacramento, CA 95814
(916) 552-6619

Web Sites

The Arc of the United States: <http://www.thearc.org>
The American Association on Mental Retardation: www.aamr.org

Resources for Teaching Students with Spina Bifada

Spina Bifada Association of Bay Area
PO Box 6015
Moraga, CA 94570
(925) 210-6006

Spina Bifada Association of Greater San Diego
PO Box 232272
San Diego, CA 92193-2272
(619) 491-9018

Resources for Teaching Students with Visual Impairment

American Foundation for the Blind-West
111 Pine Street, Suite 725
San Francisco, CA 94111
(415) 392-4845

The Center for the Partially Sighted
12301 Wilshire Blvd, Suite 600
Los Angeles, CA 90025
(310) 458-3501/(800) 481-3937

Large-Print Materials

American Printing House for the Blind, Inc.
PO Box 6085
Louisville, KY 40206
(800) 223-1839
www.aph.org

National Association for the Visually Handicapped
22 W 21st St
NY, NY 10010
(415) 221-3201 (San Francisco office)
www.navh.org

Braille Materials

American Printing House for the Blind (above)

Library of Congress National Library Service for the Blind and Physically Handicapped
1291 Taylor St NW, Washington, DC 20542
(800) 424-8567 www.loc.gov/nls

Tape-Recorded Materials

American Printing House for the Blind (above)

Library of Congress (above)

Recording for the Blind

20 Roszel Rd
Princeton, NJ 08540
(800) 221-4792

Web Sites

American Council for the Blind: www.acb.org

American Foundation for the Blind: www.afb.org

American Printing House for the Blind: www.aph.org

Blindness Resource Center: www.nyise.org/blind.htm

National Association for Visually Handicapped: www.navh.org

National Federation of the Blind: www.nfb.org

Resources for Student Transition

National Transition Alliance for Youth with Disabilities: www/dssc.org/nta

National Transition Network: www.ici2.coled.umn.edu/ntn

Transition Research Institute: www.ed.uiuc.edu/SPED/tri/institute

Center for Self-Determination: www.self-determination.org

Independent Living Research Utilization Program: www.bcm.tmc.edu/ilru

Job Accommodation Network (JAN): <http://janweb.icdi.wvu.edu>

National Rehabilitation Association: www.nationalrehab.org

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