Assignments

Read the Sections then do the following assignments:

Cases 1-6, pp. 22-23
Check Your Understanding, pp.45-46
Case Study, pp. 47-49
Case Studies, pp. 64-65
Case Studies and Case Profile, pp. 68-71
Case Study, pp. 80-81
Case Studies, pp. 93-94
Case Studies, pp. 111-112
Case Study, pp. 132-132
Section 1:

SERVING STUDENTS WITH SPECIAL NEEDS
SERVING STUDENTS WITH SPECIAL NEEDS

Students in vocational and technical education programs have, to a great extent, had certain common characteristics. Yet, more and more students with different characteristics are now seeking vocational and technical training. For information on your role in meeting the needs of these other vocational and technical students, and how to do so, read the following information sheet.

Vocational and technical teacher education programs have traditionally prepared teachers to provide instruction to students who supposedly had common characteristics. Judging from the content of these programs, you could have concluded that the following assumptions were true:

- All students were white, middle-class, and American by birth.
- Males were always in certain programs, females in others.
- Students were of average intelligence and spoke English fluently.
- Students were all teenagers or young adults.
- Students were physically all alike—two arms, two legs, two eyes, two ears, all in proper working order.

Not all students in vocational and technical education programs have been like this, of course. Students with different characteristics have always been in vocational and technical education. Today, however, fewer and fewer students conform to this stereotype. Special students have begun to enroll in vocational and technical programs in increasing numbers.

In the case of mentally, sensory, and physically impaired students, federal and state legislation has guaranteed access to regular vocational and technical programs for these students, who were previously enrolled in special education programs. In other cases, changing social values and conditions have led students with different characteristics to seek vocational and technical training in preparation for the world of work. Thus, vocational and technical teachers may now have many more students who differ significantly from those they have been trained to instruct.

Special students may have different kinds of needs and abilities arising from their special conditions. An obvious example might be the needs of a blind student. As a result of the special condition, the student cannot see and, therefore, cannot use sight to learn as other students do.

Such a student would, for example, be unable to view films or demonstrations that you present. Printed materials (e.g., textbooks, handouts, written tests) would be of no use to this student. Navigating in a crowded, cluttered laboratory could present great difficulties. Using a regular ruler to measure materials for practice activities would not be feasible. Visual safety devices you might have in your laboratory could not warn this student of danger as they do others.

This blind student, then, would have many needs different from those of other students. He or she would need to acquire the information normally presented in films, demonstrations, and printed materials in some other way. The student would need to use a different means of measuring materials for practice activities. And, other kinds of devices would have to be used to warn the student of danger.

**Your Responsibility**

You know, of course, that it is your responsibility as a vocational and technical teacher to provide instruction to all your students, including those with special needs. In order to do so fairly and effectively, you must be able to accommodate their wide range of needs and abilities. You must be able to meet all those needs we have just discussed—and many others that your special students may have.
However, you may not, at present, be prepared to accommodate the unique needs and abilities of your special students. You may not have all the knowledge and skills necessary to provide fair and effective instruction to them. If this is the case, you will need to prepare yourself further. You will need to acquire the knowledge and skills to serve students with special needs.

**Keeping the Task in Perspective**

At this point, it might help to look at serving special students from a slightly different perspective. You need to be aware that you are probably more prepared to serve special students than you might think.

Consider, for example, the fact that the first thing you should do, when a special student enters your program, is to identify and diagnose the student's needs and abilities. If you think about doing so for a blind student, or a mentally retarded student, or a gifted student, you may be intimidated. You might think, at first, that you are setting out to do something you've never done before.

In all probability, however, you do have some experience at this already. Identifying and diagnosing student needs and abilities is, ideally, the first thing any good teacher does. Common sense tells us that, before you try to teach students anything, you find out what they already know and can do.

So, although we cannot emphasize too strongly how crucial it is to identify and diagnose special students' needs and abilities, remember that this is, in part, a matter of pure common sense and practicality. Special students may well have some special needs and abilities to identify and diagnose, but finding out about student needs and abilities are probably not new to you.

In fact, you may have at least some knowledge and experience in many of the things you will need to do to serve your special students. Most of these things are not new. They are, rather, just a little different in that they are always done with the individual needs and abilities of your special students in mind.

Furthermore, as you consider serving special students, you might also remind yourself that there is, as always, another side to the coin. So far, we have only talked about one side—the special condition, the needs and abilities of the special student. These needs and abilities cannot be denied, of course. It remains true that, if you are not able to accommodate these needs and abilities, your special students are not likely to succeed in your vocational and technical program.

But when you flip the coin, you will discover that there is more to a special student than a simple list of needs and abilities. There is, in fact, a person in whom you will find the whole range of qualities that you might find in any other person. The student's special condition, whatever it might be, is only one small part of an entire human being.

When you understand that a special student is a whole person, it helps to put the student's special condition in its proper perspective. No matter how visible, how obvious, how unavoidable the special condition is, it is only a fraction of the whole person. It is only one of a long list of attributes describing the person.

Being a whole person, just like every other person in the world, and special student has his or her own strengths and weaknesses, likes and dislikes, hopes and fears, successes and failures. There may well be things a special student cannot do, but all people have things they cannot do. No one can do everything.

Likewise, a special student may be different, in some respects, from you and from other students. But isn't everyone different in some ways? Are any two people ever really alike? If you should feel nervous or
lack confidence as you set out to prepare to serve special students, you might remind yourself that these special students are just people, after all.

Preparing

How, then, can you prepare yourself to serve special students? How can you gain the knowledge and skills you need in order to provide them with fair and effective instruction? How can you learn to accommodate their unique needs and abilities? Although preparing yourself to serve special students may require some time and effort, it should not be a difficult thing to do. It consists primarily of some common sense, practical steps you can take.

You can plan a program of professional development based on these steps:

• Expand your concept of your role. You can ensure that your idea of what you should do, as a vocational and technical teacher, includes all the responsibilities that you will have in serving special students.

• Review your attitudes. You can identify any attitudes you have that would hinder the success of special students in your vocational and technical program.

• Gain greater experience. You can broaden your knowledge of special persons and expand your experience in working with them. You can learn to avoid their conditions and their chances for success in vocational and technical education and in the world of work.

Let's look closer at each of the three steps.

Expand Your Concept of Your Role

It will be essential for you to fulfill several simple responsibilities in order to serve the special students in your vocational and technical program. As a teacher of special students, you may need to act more frequently in roles that go beyond just providing vocational and technical instruction. In a word, you should ensure that you are appropriately involved in all phases of training special students. Bear in mind that your concern at this point is not to learn how to fulfill these roles, but to identify the roles in which you must serve and come to grips with the need to do so.

Provide Input into Placement Decisions

The special student's first step in acquiring vocational and technical training is placement into a vocational and technical program. As a teacher and expert practitioner in your own occupational specialty, you are the person most highly qualified to provide input into vocational and technical placement decisions. You have extensive and detailed knowledge of what it is like to be both a student and a worker in the area. You know what knowledge and skills students need to acquire as they work to attain entry-level competency in the area.

It will probably not be your responsibility to make final placement decisions. Others usually make these decisions, such as special educators, counselors, administrators, the student, and the student's significant others (e.g., parents or guardians). However, those making placement decisions will need input from you if their decisions are to be good ones. Thus, you may be asked to attend a placement meeting or to furnish information about your vocational and technical program to those making such decisions.

They will need to know from you what kinds of knowledge are required in the area. If, for example, your area is one that requires understanding of highly technical or complex ideas and concepts, they will want...
to take that into account as they determine appropriate placement for a mentally retarded student. They will need to determine, with input from you, whether the student might be placed into an area that is less demanding intellectually, or whether the student can understand and use the necessary concepts with modified instruction.

By the same token, those making placement decisions need to know from you what manipulative skills are required in the area. This information could be very important for students with physical impairments. Would limited use of one arm or leg prevent a student from operating a particular piece of machinery? Is prolonged standing required? What kind of general endurance is needed for the area--is there constant heavy work, occasional heavy work, or none at all?

Other factors pertinent to the placement of special students might also require your input. To what extent are basic skills, such as reading, writing, and speaking, necessary in the area? Would the work require a great deal of high-level technical reading? Would the work involve meeting and communicating with the general public? What kinds of problems could a hearing impairment present?

The list of factors affecting placement decisions could be quite long. The important point, however, is that you share your own experience when those making placement decisions call upon you. The knowledge you share will help decision-makers to place the special student into an appropriate program.

Serve in a Counseling Role

Once special students are placed into your vocational and technical program, you will have the responsibility of providing instruction to prepare them for employability. Part of this responsibility could be to counsel students with personal-social problems. Special students may have personal-social problems that affect their behavior and performance in your classroom or laboratory.

Such problems may take the form of disruptive behavior, boredom, poor personal hygiene, absence, inability to get along with others, or lack of motivation. Your on-the-spot counseling in the classroom, as such problems occur, may be of great benefit to these students.

Some of your special students may have low self-esteem, perhaps because they have not often experienced success. You may need to establish rapport with your special students, letting them know that you are confident of their success. The small word of encouragement or the pat on the back that you offer as you work with a student can often help that student to develop a better self-concept.

Special students may also benefit from counseling you could provide in other areas. Racial or ethnic minority students may feel a conflict between the values of their own culture and those of the majority culture. Some special students--physically disabled or mentally retarded students, for example--may have been overprotected by well-meaning parents. These students might need to be helped to learn to take responsibility for their own actions.

Finally, perhaps the most important counseling skill for you to develop is referral. Since you are not a professional counselor, you do not have all the knowledge and skills required to offer intensive, sustained counseling to your special students. Consequently, you can often counsel your special students best by referring them to the appropriate, trained, professional personnel.

Help Students Develop Basic Skills

Not all students have the level of basic skills: reading, writing, speaking, math--necessary to function in the world of work. Some of your special students may have this same low level of basic communication
and computational skills. In order to prepare students fully for employability, you may need to help your special students develop their basic skills.

You need not become a specialist in communication remediation or pure and applied mathematics in order to help students develop these skills. You can, in fact, do a great deal within the framework of your regular vocational and technical instruction. You can, and should, give students vocational and technical reading assignments that allow them to improve their reading skills. You can give students the opportunity to learn and practice the math, writing, and speaking skills they will need on the job.

The level of basic skills that special students need on the job depends on the specifics of the job. In some occupations, workers don't need to read anything more complex than the labels on packing crates. In others, workers have to read highly technical operation sheets, instruction manuals, and schematic diagrams.

Similarly, some occupations do not require sophisticated writing, speaking, or math skills. Some workers never write anything at work. They may only need to speak well enough to communicate with their supervisor and co-workers. They may use their math only when they count items on a shelf or figure their work hours. Other workers, however, must write orders and reports, communicate with the public in person and over the telephone, and balance account ledgers.

As an expert practitioner in your occupational specialty, you should know what levels of basic skills are required on the job. You should also know what levels of basic skills your special students presently have. Should you find that your students' levels of basic skills are lower than those required on the job, it will be part of your responsibility to do what you can to help. You can refer special students to trained remedial specialists, but you can always do your own part, too.

Provide Flexible, Individualized Instruction

We have already discussed the wide range of needs and abilities your special students might have. Some students comprehend information rapidly, some quite slowly. Some students need a great deal of practice to master a skill, some very little. Some learn best by reading printed material, some by listening to an oral presentation, some by observing a demonstration, and some by hands-on experience. Some students work best alone, some in small groups, and some in large groups.

In order for each student to learn most efficiently and effectively, the student should be able to learn in the way that suits him or her best. Sometimes the student's learning style is simply a matter of preference--the student learns best and most easily that way. At other times, however, the student's special condition dictates that the student cannot learn in a particular way--the blind student cannot use printed materials without adaptation.

If you are to accommodate this wide range of learning styles, you will need to provide flexible, individualized instruction. You will need to tailor your use of instructional activities, materials, grouping arrangements, and so on, to the learning styles of your special students. You might think of yourself not as the sole dispenser of knowledge, but as a learning facilitator.

This does not mean, by the way, that you will have to have each of your students doing a different activity, using different materials, at a different pace, in a different sequence. This approach may simply not be practical to implement. What you can do, however, is to get away from the idea that all students must do the same thing at the same time using the same set of materials. You will find, instead, that you can plan and use alternative or supplementary activities and materials to allow students to learn their own best way.
Furthermore, the flexible, individualized instruction you provide will benefit not only your special students, but all students. You will have more than one student who does not read well. All of these students, special or otherwise, might profit from being able to view a slide/tape presentation instead of reading a handout. Likewise, you will have some students who prefer to work alone and others who prefer to work in small groups. Using a variety of grouping patterns can accommodate these varying learning preferences or styles.

**Provide Essential First Aid**

Special students with physical or sensory impairments may require first aid in your classroom or laboratory. An epileptic student might have a seizure, a diabetic student could go into insulin shock, or a student on crutches might fall. Other incidents could also require that first aid be administered before qualified emergency personnel arrive.

Therefore, your first responsibility is to become familiar with the specific nature of any physical impairments or conditions your special students may have. You should learn to recognize the symptoms of an epileptic seizure or insulin shock if you have a student with such a condition in your program. You need to know how the student's specific condition might affect the kind of first aid he or she should receive in a given situation.

The next step is twofold: you need (1) to identify the state and local laws and regulations governing the administration of first aid by nonmedical personnel and (2) to acquire--through a Red Cross course, for example--the first aid training necessary to deal with emergency situations, within the limits of the laws and regulations.

Finally, you need to establish a procedure for attending to the first aid needs of students. You will need to know whom in your school or institution is professionally qualified and authorized to administer emergency aid--the school nurse, for example. You will also need to know whom to contact (e.g., the local emergency squad, paramedics, and ambulances). It would be wise to keep phone numbers for such personnel handy in your classroom or laboratory.

**Perform Administrative Tasks**

Although you may feel that you already have more than enough to do in every 24-hour day, there may be additional administrative tasks to perform when special students are placed into your vocational and technical program. These tasks could include filling out paper work, attending planning meetings, or acting as liaison with a community service agency. Such tasks may not bear directly on your classroom instruction, but they do form a part of your total responsibility for serving special students.

The administrative task you will be called on to perform perhaps most frequently is record keeping. Law requires certain special students, to have formal Individualized Education Programs (IEPs). The IEP contains the student's specific instructional goals and objectives and is used for recording the student's progress toward them.

In addition, if your school or community receives federal funds to maintain services or facilities for special students, you may be required to document student use of these services or facilities. If you are thorough in documenting students' progress in your program, your records will serve as a basis for meeting any such additional record-keeping requirements for special students. In general, documenting students' progress toward goals and objectives simply allows you to serve special students most efficiently.
You may also need to improve your time management skills, your technical writing skills, or your interpersonal skills. Improving skills in these areas can help you to perform necessary administrative tasks quickly and efficiently, so that you can devote your main effort to your principal responsibility--providing fair and effective instruction to your special students.

**Teach Both Your Subject AND Your Students**

Some vocational and technical teachers are fond of remarking, "I don't teach a subject--I teach students!" Such a remark certainly shows a humane attitude toward students and a teacher's responsibility to serve them. It emphasizes the notion that students are individuals and should be treated as such. Further, it points out that students are, and should be, as important to teachers as their subject matter.

As you provide instruction to your special students, you should always remember that they are individuals--no more, no less. Your special students, just like all your other students, need the knowledge and skills that make up entry-level competency in your vocational and technical area. They may need your wisdom, advice, and motivation as they acquire these skills. Most important, they need to be treated as individuals--each unique, each able to learn, each worthy of your personal attention and consideration, each with his or her own contribution to make.

In spite of this, however, you should not lose sight of the importance of your subject. The occupational knowledge and skills you offer your students are vitally important, as well. They are as important to your special students as they are to you--perhaps more so. You do your special students no favor if you deny this, in word or deed.

It will not help these students, for example, if you cut corners in your subject in order to give them a "break." It wouldn't help a young man in home economics, for instance, for the female teacher or students constantly to do little things for him. Once this student leaves the program, prospective employers will expect him to have the same skills as the female graduates.

**Keep Involved on an Ongoing Basis**

Finally, in serving special students, you need to stay prepared. You will want, as much as possible, to seek or create opportunities to keep up to date professionally. In addition, as your own experience and expertise in serving special students grow, you will be able to help others do what you have done. You can share your knowledge and skills with others in the teaching profession and in the community.

You might, for instance, want to encourage your school or college, district, or state to offer relevant in-service activities to assist in your further preparation. These activities might include workshops, lectures, mini-classes, presentations, and training sessions. They might be exercises involving sex equity, human relations, cultural awareness, group dynamics, or interpersonal skills. They might be activities simulating disability conditions--in which participants, for example, could go around blindfolded, experiencing what it's like not to be able to see.

As part of your ongoing involvement in serving special students, you could also consider supporting and participating in professional organizations concerned with the teaching of special students. This will provide further opportunities for preparation as you take part in the activities sponsored by the organization. Membership can also put you in touch with other professionals who can share their own expertise with you.

You may find it very helpful, as you continue to serve special students, to organize or participate in a teacher support group--an informal group of teachers who serve or have served special students. This can be another opportunity to get in touch with other concerned professionals with whom to share ideas, solve
problems, develop materials, and offer mutual understanding and encouragement. As your own experience and expertise in serving special students increase, you can help others less prepared than yourself.

You might even approach such a support group or professional organization to create opportunities for continued preparation. Together, you could plan and carry out activities to share your collective experience and expertise with others. You might apply for grants or write proposals to support your own experimentation and innovation. You could even band together to support the passage of educational legislation affecting special students.

One very important part of staying involved and keeping up to date is to identify--on a continual basis--the areas in which you need additional training or information. As the theory and practice of teaching evolve, you will want to be aware of new ideas and techniques related to your own instruction. As the technology of your occupational area develops, you will want to make sure that you are teaching the right knowledge and skills to your special students. As you try out new ideas and techniques, you will need to evaluate whether they have been effective.

You can also use student follow-up data to identify your own need for further preparation. Formal or informal, this data will help you to pinpoint areas in which you need further improvement. It can show you where you are doing your job well--serving special students by preparing them to succeed in the world of work. It can also tell where you need to improve in order to serve special students better.

**Review Your Attitudes**

We have been saying all along that it is your responsibility to provide fair and effective instruction to your special students. This might be rephrased to say that you should provide your special students with the same opportunity to learn as other students. Yet you may have some attitudes that do not allow you to provide this opportunity. How so?

You may know the answer to this question already. You probably know about self-fulfilling prophecies. You should be aware that, if you think a particular student cannot learn and succeed in your vocational and technical program, the student is less likely to do so. Thus, your attitudes toward special students and their chances for success become crucial, if these students are to succeed.

But what do you mean by success—that every student will end up with exactly the same skills and knowledge? Not necessarily. In your vocational and technical program, success means achieving those competencies identified in a student's individual plan as necessary for entry into the occupation of his/her choice. In the world of work, success means obtaining and keeping an entry-level position in the occupation for which the student is trained. For some students, it also means progressing in a chosen career.

Thus, success in your program may be different for two different students if their occupational goals are different. But their ultimate goal is the same—employability in a chosen occupation. It is in these two important areas—in training and on the job—that each student needs to succeed.

Ideally, your attitudes toward special students and their chances for success would all be positive. You would be, first of all, indifferent to their differences. You would hardly notice if your special students were of a different race or culture. Behavior patterns or a life-style unlike your own would not bother you. You wouldn't care whether students spoke your own dialect of English, a different dialect, or a foreign language. Differences in intelligence and mental capacity would affect nothing more than the way you provide instruction. Your students' physical condition, age, sex, and economic status would be nothing
more than details in the overall picture. You would be too involved with the whole person to react emotionally to what differences there might be.

Furthermore, you would be completely and rightly confident that you could accommodate these special students' needs and abilities in your instruction. You would understand that physical, intellectual, cultural, and gender differences do not affect the students' chances for success, but only the way you lead students to success. You would believe that your special students can succeed, both in your program and in the world of work.

These two sets of attitudes, about differences and chances for success, would not ignore the obvious. They would not deny the differences, for to do so would be to guarantee failure for your special students. Nor would they predict student success lightheartedly, without the necessary accommodation. But they would see differences and success for what each really is--one, something to be accommodated; the other, something to be attained.

If your attitudes toward special students and their chances for success are accepting, realistic, and optimistic, as described above, you will be able to provide your special students with the essential opportunity to learn. If you accept your special students and believe they can succeed, your instruction can be fair and effective.

However, reality does not always reflect the ideal. Your attitudes may not be accepting, realistic, and optimistic. You may not be comfortable with the difference of a special student. You may be frightened of something you know nothing about--different race, culture, language, body, mind, age, or sex. Perhaps you have never before had close contact with these differences. Perhaps you have had contact with such differences, but that contact has left you with negative feelings.

Furthermore, you may not believe that special students can succeed in your program or the world of work. You may see only obstacles and hindrances to their success. Perhaps you have never seen a special worker in your area. Or, perhaps you have seen such a worker struggling and failing at a task that was truly impossible to perform.

Consequently, you will need to review your attitudes toward special students and their chances for success. For your own purposes, you will want to identify your attitudes to determine if they are appropriate--if they favor success for your special students. Once you have identified your attitudes and are consciously aware of what they are, you can ensure that they do not hinder the success of the special students in your vocational and technical program.

Should you find, after honest self-examination, that your attitudes toward special students and their chances for success are not appropriate, you will need to take action. You will need to take a fresh look at special students and their chances for success. You should keep your mind open, put your attitudes on hold, and allow yourself the time and opportunity to think once more.

In the meantime, while you think once more, there is something you must do. Regardless of what attitudes you may have at the moment, you must behave appropriately toward your special students. You must ensure that your actions toward them are fair, equitable, and just.

Fair and equitable behavior toward your special students is not only a matter of professionalism in teaching. It is also, in many cases, a legal obligation. Regardless of your personal feelings, you must act in a nondiscriminatory fashion toward all students, and specifically toward special students. These students, like all others, have a right to be in your program and a right to learn. Your obligation, then, is to accept them into your program and provide them with the needed opportunity to learn.
Gain Greater Knowledge, Skills, and Experience

As you expand your concept of your professional role and review your attitudes, you may discover certain areas in which you lack knowledge, skills, and experience. You may feel that you do not know enough, or cannot do enough, to serve your special students fairly and effectively at this point.

Your next task, then, is to determine what additional knowledge, skills, and experience you may need. Then, you will need to know how you can go about acquiring this additional knowledge, skill, and experience.

What Knowledge, Skills, and Experience?

You should bear in mind, again, that your concern at this point is simply to identify the specific knowledge, skills, and experience that you need to acquire. The information presented in the following sections is not sufficient to prepare you to serve your special students.

General characteristics of special conditions.
A logical starting place would be to be sure that you have adequate information on the general characteristics of the different kinds of special students and their conditions. That is, do you know the common group characteristics of the students who have the special conditions we are considering?

For example, you will need to have a general idea of the developmental cycle of the mentally retarded. You may need to know the typical pattern of how such a student grows and develops mentally. Does a mentally retarded student generally mature, emotionally and intellectually, to the same level as other students, but at a slower pace? Or, can mentally retarded students mature only to a certain level, and no further?

You will need to have corresponding information on all the various kinds of specialties. What, for instance, is the life of an economically disadvantaged student really like? What does it mean, in concrete terms, to live at a low socioeconomic level? Likewise, how is the life of a racial or ethnic minority student affected by this minority status? How does minority status affect the student's performance and progress in learning?

On the other hand, what makes a student gifted or talented? Do such students have any common characteristics that show up over and over again? How might these characteristics affect their performance in the classroom or laboratory? Similarly, what is the typical picture of an adult in a retraining program? What things usually present problems to such students? What are their concerns, in general, as they seek retraining?

The same questions would apply to students with limited English proficiency, students enrolled in programs nontraditional for their sex, and students with physical or sensory impairments. What are the identifying characteristics of such conditions? What do these characteristics imply for students’ performance and progress in your vocational and technical program?

Factors that may cloud identification.
Furthermore, you should have additional information about some common student characteristics that may cloud the issue. Certain typical behavior patterns may sidetrack you as you seek to identify potential special students. If you are not aware of this possibility, you might focus your attention on these behaviors and fail to see the true special condition.
Consider, for example, a student who appears constantly bored and uninterested in the lesson being presented. You could assume that the student is unmotivated or incapable of handling the material.

However, this apparent boredom may well stem from the student's ability to absorb information faster than other students may—the student may be gifted. However, if you, as an instructor, do not realize this, you will have missed the main point—that the student needs higher-level, more challenging work.

Other students may display inappropriate classroom behaviors as a result of their special conditions or, sometimes, in an effort to hide their special conditions. The student who seems to be a discipline problem may, in fact, have a learning disability, such as dyslexia. A dyslexic student cannot read because the printed letters on a page appear all jumbled and out of order. Such a student may become disruptive when required to read in the classroom or laboratory. The disruption is the student’s attempt to conceal the fact that he/she cannot read.

One more example might be a student who sleeps in your classroom or laboratory. On the surface, sleeping in class is a problem in and of itself. There might, however, be an explanation for the behavior that overshadows the behavior itself. The student could, of course, be sleeping simply because he or she is unmotivated, lazy, young, and foolish. On the other hand, the student might be an adult in retraining, with a family to support. He/she might be working full-time in addition to going to school and simply not have time to get enough sleep. This would be the real problem.

Similarly, the student might be economically disadvantaged. He or she may be sound asleep because he or she doesn't eat well enough to stay awake all day. Or, the student may be an undiagnosed diabetic. This disease, if untreated, can cause extreme sleepiness throughout the day. It follows, then, that you should be aware of these common factors that may cloud the real condition of your special students.

A perspective on general characteristics.

As you acquire new knowledge and information about the general characteristics of special conditions and factors that may cloud identification, there is a perspective, or viewpoint, that you should also acquire. It has to do with the shortcomings of using general characteristics to identify special students and the danger of stereotyping.

The advantage of using general characteristics is that they form a sort of mental shorthand. Once you know the general characteristics of an economically disadvantaged student, you can be immediately aware of the kinds of problems a particular student might have in your vocational and technical program. You know how economically disadvantaged students generally perform in the classroom or laboratory. This may save you time and trouble—you don't have to reinvent the wheel every time you need one, so to speak.

There is one severe, overriding disadvantage to using general characteristics, however. Not every student, for example, who is gifted will have all the general characteristics associated with giftedness. Furthermore, not every student having one or more of the characteristics will be gifted. You never know, for instance, whether a given mentally retarded student has the level of emotional and intellectual development that the general characteristics would lead you to believe. And, you can't be sure that the adult man in retraining who is sound asleep in your classroom was up all night working to support his family. He may have other reasons entirely.

The viewpoint that you need to acquire, then, is that all these general characteristics need to be taken with a large grain of salt. They should be used to pinpoint the possibility that a student may have special needs. Further diagnosis is needed to verify that fact. If you just assume that a particular special student has all the usual general characteristics, you run the danger of stereotyping the student. You might be trying to make the student fit into a slot that is not the right size and shape.
So, as you learn about the general characteristics of various special conditions, you should always keep in mind that any individual student may or may not have each of these characteristics. Before you ever act on the basis of general characteristics, you must always ensure that they apply to the individual student with whom you are working.

**A perspective on differences.**
In reviewing your attitudes toward special students, you may have determined that you are uncomfortable with their differences. In that case, it may be helpful to you to gain a new perspective on differences.

Assume that you have a student in your program whose left arm was amputated after a serious automobile accident. This difference between the student's physical condition and your own repels you. The thought of the accident, the surgery, the rehabilitation, and the stares of strangers on the street fills you with horror. You can't imagine what it would be like to be so different. Wouldn't life be a constant reminder of this one, cruel, glaring difference?

But why? There must be hundreds of differences that you encounter every day that you don't react to. Are you equally put off by persons of the opposite sex? Are you in horror of people with hair or eyes of a different color? Do you shrink from contact with people who live in different cities? Are you afraid of people of different height or weight?

In all probability, these differences don't put you off. You're accustomed to all these things, just as you're accustomed to people who wear glasses or false teeth or wigs. You may be put off by the amputee, however, because this is a difference to which you are not accustomed. You should consider differences in this perspective—that they are nothing more, nothing less than things you are not accustomed to. They are not aberrations, not irregularities, not embarrassments. They are just something you haven't run into before.

Viewed from this perspective, differences that may have been threatening before can lose their emotional impact. As you learn about different cultures, values, life-styles, and races, you will probably also find that you learn from them. A wheelchair might find its rightful place, along with eyeglasses and false teeth, in the list of ingenious contrivances that help us overcome nature. A gifted student and a mentally retarded student fall easily into place on a continuum of intelligence, just as people who read a little faster or a little slower than you fit on a continuum of reading skills.

For example, you may find that a gifted student knows more about something or has greater skills in certain things than you do. If this is the case, you should not hesitate to learn from the student.

Likewise, students from different racial or ethnic groups, different cultures, or different parts of the world may have a different way of seeing the world and their part in it. You may be able to acquire a greater understanding of people and their lives from such students.

Other special students have things to offer, also. A physically impaired student may be a model of perseverance and fortitude. An adult in retraining may show you patience and wisdom in a difficult situation. A student in a program nontraditional for his/her sex may bring an entirely new outlook to a familiar situation. So, developing a positive perspective on differences can help you as well as your students.

**Evidence of success.**
You may also discover, in reviewing your attitudes toward special students, that at present you are skeptical about their ability to succeed in your vocational and technical training program and in the world of work. If so, you should take this into account as you plan for the preparation you will need to serve
special students. You will need to include in your plan strategies for securing evidence that these students can, in fact, succeed.

Evidence of success can also help you to understand the positive benefits of training special students and placing them in the world of work. It can give you the chance to see that a special worker, bringing home a regular paycheck, can be an independent, self-sustaining, and valuable member of society.

Legislation and guidelines.
There are four pieces of federal legislation that affect the placement of special students in vocational and technical education programs, as follows:

- Title IV of the Civil Rights Act of 1964 prohibits discrimination in vocational and technical education settings on the basis of racial/ethnic origin or limited English proficiency.
- Title IX of the Education Amendments of 1972 prohibits discrimination in vocational and technical education settings on the basis of sex.
- The Education of All Disabled Children Act (P.L. 94-142) states that all disabled children must be placed in the least restrictive environment possible in vocational and technical education settings.
- Section 504 of the Rehabilitation Act of 1973 prohibits discrimination on the basis of physical/sensory disability or mental retardation.

In addition, there may be state and local legislation affecting the placement of special vocational and technical program. Likewise, federal, state, or local level may have regulations and guidelines concerning the placement of special students in vocational and technical education.

Your school or institution will have to be especially concerned about such regulations and guidelines if program money is received from government agencies.

Thus, you will need to be familiar with the specifics of these types of legislation and guidelines. You will also want to keep up to date concerning new legislation and guidelines as they appear.

Occupational developments.
In order to train your vocational and technical students for the world of work, you must always keep abreast of occupational developments. You must be up to date yourself in order to teach your students the knowledge and skills actually required for entry into the trade as it is practiced today. Occupational developments can be even more important when you have special students. As the technology of the occupation changes, barriers to the employment of special workers may be reduced or eliminated. With new technology, a sensory or physical disability may become immaterial. Physical strength may no longer be required for a certain job position. Employers may seek workers who have a different kind of previous experience in order to work with newly installed technology.

Thus, you should be particularly careful to keep up to date with occupational developments, in order to ensure the placement and success of your special students in the world of work. You should always have your finger on the pulse of industry, so that you can both meet the needs of your special students and capitalize on their unique abilities.

Burnout.
Finally, you may need to have some information on burnout. Burnout is a condition experienced by workers of many kinds, especially teachers. Usually, burnout begins with a feeling of emotional exhaustion--of having nothing more to give on the job. The worker becomes cynical and callused toward work and toward the people dealt with at work. Other symptoms may include chronic fatigue, irritability, and a negative attitude toward oneself and work. Finally, the worker often feels that all his/her efforts on the job have been unsuccessful and will continue to be so.
One factor that often leads to burnout is unmet expectations. For example, a worker may begin a job in the expectation of helping people. It may be very important to this person to have the satisfaction of seeing people whose lives are changed for the better because of his/her help. However, this expectation may be unrealistic. Observable change is rarely immediately forthcoming. Nor do people who have been helped always appreciate that help, or show their appreciation. When this worker realizes that he or she does not seem to be truly helping people as anticipated, the worker may become disillusioned, and burnout may set in.

Burnout especially affects workers in helping occupations. Teachers, therapists, social workers, and others work extensively with other people, trying to help them in one way or another. As you help your special students gain new occupational knowledge and skills, you may suffer from burnout yourself. Thus, you may need to know how to cope with burnout.

The first strategy for coping with burnout is preventive. You can ensure that the expectations you have about teaching special students are realistic and can be met. You can gain accurate, reliable information about special students. You can acquire evidence that they can succeed, with a certain amount of time and effort on your part. This accurate understanding on your part will allow your expectations to be realistic.

You can use other strategies to relieve burnout if it has already set in. Many psychologists say that the best thing to do is to vary your routine in order to restore some healthy self-centeredness. This can help you overcome the feeling that you have given of yourself until you have nothing left to give.

This break in routine could be a vacation from work, a trip, or a new interest—perhaps a new hobby. Of course, you may not be able to make such a major break in your own situation. In that case, you should simply be sure that you spend some time every day doing something you truly enjoy. You can certainly allow yourself some small luxury.

You might, for instance, set aside a half hour every day after work for yourself. You could go window shopping or head for the tennis courts. You might luxuriate in a hot bath or settle into your armchair with a favorite magazine. You could get together with friends or tinker with your car—anything you enjoy just for yourself because you deserve it.

Finally, you can develop the habit of persisting in the face of apparent failure. You can persevere even if things don't seem to be working out today. You may already have this habit. You may already be aware that sometimes it is necessary, in teaching, to do it once, do it twice, and then do it over again. Some of your special students may need this variety of repetition and reinforcement as they acquire new knowledge and skills. So, your ability to persist in teaching, as students learn, may be of great benefit to both you and them.

How to Gain Knowledge, Skills, and Experience

Now, you probably have some idea of the kinds of knowledge, skills, and experience that you may need as you prepare to serve special students. How can you go about obtaining this greater experience? You can do so by consulting reliable resources, observing firsthand, and interacting with people who have special needs.

Consult reliable resources.
A good way to start gaining greater experience is to consult reliable resources. Resources with accurate, up-to-date information about special persons and their conditions may be all around you. You can begin to tap these resources to expand your knowledge about special students.
Perhaps the first reliable resource you might consider is the library. The library in your school, college, or community may contain many kinds of books about special persons and their conditions. You might, for example, find biographies of historical figures who share the characteristics of your special students—Thomas Edison was deaf, Franklin Roosevelt was confined to a wheelchair, and Albert Einstein was certainly gifted.

You might also find many books at your library on the general characteristics of your special students. You can read about the physical condition of physically impaired students, the life-style of an ethnic minority student, or the intellectual development of mentally retarded students. These books might be technical in nature (e.g., textbooks, case studies, dissertations) or very popular in their appeal (memoirs of a special person, the parents of a special child, or a professional serving special persons, for example). You may find much of great value in understanding the general characteristics of special conditions.

At the library, you should also find professional journals and periodicals. Many journals and periodicals deal with the problems and concerns of special persons. You might find articles written by medical specialists, counselors, teachers, teacher educators, or other concerned professionals about the needs and abilities of special students. You can read how others meet these needs. You may find evidence of special students succeeding in vocational and technical programs and in the world of work.

And don't overlook the media resources your library may contain. The library may have films, filmstrips, slides, or videotapes that deal with special persons and their general characteristics. You may find references to such media resources as you read books, journals, and periodicals.

Also, as you use the library, don't ignore the possibility of having the library acquire a specific resource that they don't already have. Speak to the librarian if you can't find a reference you are looking for. The library may be able to buy it or borrow it for you from another library or system with which they cooperate. Or, they may be able to refer you to another library to obtain the reference yourself. The local librarian can tell you the possibilities in each case.

As you consult the resources available at your library, you will read about groups and organizations that deal with the problems and concerns of special persons. These might be community organizations, such as the National Association for the Advancement of Colored People (NAACP), the National Association for Retarded Citizens, or the National Organization for Women (NOW). You might also find references to educational organizations concerned with teaching special students—for example, the National Clearinghouse for Bilingual Education or the National Indian Training and Research Center.

Organizations such as these can be a valuable resource to you. They often publish journals and periodicals. They provide the opportunity for concerned professionals to share their experiences and profit from the experiences of others. They may present activities—workshops, lectures, presentations—to convey accurate, reliable information about special persons and their conditions. You might consider joining one or more such groups, so that you can share the expertise they have to offer.

There are public or government agencies that can also serve as a resource to you. Many such agencies address the problems and concerns of special persons. You could contact agencies serving the interests of your special students to obtain information on students and their needs in vocational and technical education. Examples of such agencies are the Council for Special Children (for disabled students), the Asia Resource Center (for Asian-American students), and the Dissemination Assessment Center for Bilingual Education (for bilingual students and those with limited English proficiency).

Sample I lists some of the organizations and agencies that you might want to consult in preparing to serve special students. You should, first of all, contact those that might serve the concerns of your own special students. You can inquire about what specific services they offer—information, materials, support
services—and how to gain access to them. The sample does not include all such groups. It is meant simply
to suggest what types of resources may be available. You should also try to identify local or regional
organizations that act in the same capacity.

Finally, you should be able to obtain information about the general characteristics of your special students
through the media. You can, for example, find articles in newspapers or magazines that deal with special
persons and their conditions. Frequently, there are programs on television (especially public broadcasting
channels) or radio on the same topics. There may also be movies showing locally that treat special
persons, their lives, and their conditions.

Your school or college may also offer activities to assist professional staff in preparing to serve special
students. You should participate in these activities as much as possible. If no such activities are offered,
you should urge your institution to begin providing them. You could also consider enrolling for further
course work at a local college or university.

Finally, you can consult other people who have firsthand experience in serving special students. Your
school or college will probably have many such specialists. They might be other vocational and technical
teachers who have, or have had, special students in their programs. You could talk with a special
education teacher, a foreign language teacher, or a remedial reading specialist. You could consult the
school nurse, psychologist, or guidance counselor. Your community may have even more--rehabilitation
workers, interpreters, social workers, physical therapists, sex equity coordinators, adult education
specialists--the list is almost endless.

**Observe firsthand.**

Another way of gaining greater experience with special workers and students is to observe them,
firsthand, being successful in what they are doing. To gain this evidence of success, you can identify
vocational and technical programs in your school or community in which special students are enrolled.
You can visit these programs yourself. You can watch a student in a wheelchair operate a modified lathe,
or a young woman overhaul brakes, or a Hispanic student preside over the meeting of a vocational and
technical student organization.

You can also observe special persons who are successfully employed. You can compare the special
worker's job performance with that of his or her peers on the job. Through such experiences, you will
have the chance to see that special workers, like special students, can perform successfully. Observing
special workers and students firsthand may also enable you to gain perspective on general characteristics.
As you observe special students and workers, you may be able to see how one individual has some of the
"expected" characteristics but not others. You can see that each individual is unique and should be
examined on his or her own merits.

Finally, as you observe you may be able to gain a new perspective on differences. You will have the
opportunity to observe special persons as whole persons, human beings with feelings just like everyone
else. You can use this opportunity to ensure that your view of special students includes an entire human
being in every case. You can help yourself see the person inside every student because you can see past
the difference.

If you can see the whole person inside your special student, you will have the chance to understand that
this person has interests and feelings, goals and fears, likes and dislikes just like your own. You can add
to your experience the sure knowledge that the "difference" in a special student is only one of a long list
of qualities describing the student--qualities that perhaps describe you.
Interact.
A final and, possibly, best way to gain experience with special persons is to interact with them. You have already sought needed information from reliable resources. You have observed the success of special students and workers. You have had the chance to understand that a particular special characteristic is only one small part of a whole person.

You have, thus, added a great deal of new information and perspective to your experience with special students. You can now add further to this experience by interacting with special persons--whether your students or other people who share the characteristics that make them special. You should interact with them in the same way that you interact with all other people. Ideally, you treat all people--including your students-as individuals, each of them good at some things and not at others. But you do not let a single quality in the person block your view of the person as a whole. Your approach to special persons should be the same.

When you interact with special students in this way, you will have the chance to see that they learn by building on their good points and overcoming their weak points--just as all students do. As you help special students build on good points and overcome weak points, you can see that they are learning and succeeding in your vocational and technical program--just as all students can. You will know that they can leave your vocational and technical program with all the knowledge and skills they will need for the world of work-just as all students can.

Perhaps the best strategy for interacting with special persons is to simply sit down and chat with them and get to know them. There may be special persons in your place of worship, your neighborhood, an organization you belong to, or the restaurant where you have lunch every Monday. There may be a lounge in your school or college where special students congregate on their breaks. You can take the opportunity to make their acquaintance, get to know them, and see them as people.

You could also make an effort to interact with the family and community of your special students. You might plan to visit your special students' homes in order to get to know their families and home surroundings. You might participate in community events. Perhaps one of your Hispanic students lives in a neighborhood that has a Hispanic Awareness Week; you could attend some of the activities. You can get to know your students by getting to know the people that live around them.

Thus, you are giving yourself one more opportunity to acquire a perspective on differences and evidence of success. You create the opportunity to see that a special student is a real, whole person, with certain characteristics and certain differences, but capable of success all the same.
AGENCIES AND ORGANIZATIONS SERVING STUDENTS WITH SPECIAL NEEDS

Vocational and technical Education and Special Students in General
The National Center for Research in Vocational and technical Education
The Ohio State University
1960 Kenny Road
Columbus, OH 43210

U.S. Department of Education
Office of Vocational and technical and Adult Education
Seventh and "D" Streets, S.W.
Washington, DC 20202

Mentally or Physically Disabled
Alexander Graham Bell Association for the Deaf
3417 Volta Place, N.W.
Washington, DC 20007

American Association on Mental Deficiency
5201 Connecticut Avenue, N.W.
Washington, DC 20015

American Printing House for the Blind
1839 Frankfort Avenue
Louisville, KY 40206

The Council for Special Children
1920 Association Drive
Reston, VA 22091

ERIC Clearinghouse for Disabled and Gifted Children
1920 Association Drive
Reston, VA 22091

Junior National Association of the Deaf
Gallaudet College
Florida Avenue at 7th Street, N.E.
Washington, DC 20002

National Association for Retarded Citizens
2709 Avenue “E” Arlington, TX 76011

National Center on Employment of the Disabled
Human Resources Center
Albertson, NY 11507

President's Committee on Employment of the Disabled
1111 Twentieth Street, N.W.
Washington, DC 2021

Science for the Visually Disabled
919 Walnut Street, Eighth Floor
Philadelphia, PA 19107

U.S. Department of Education
Office of Special Education and Rehabilitation Services
Seventh and "D" Streets, S.W.
Washington, DC 20202

Students Enrolled for Retraining
American Association of Community and Junior Colleges
National Center for Higher Education
One Dupont Circle, N.W.
Washington, DC 20036

National Council on Aging
1828 "L" Street, N.W.
Washington, DC 20036

Gifted and Talented Students
The Council for Special Children
1920 Association Drive
Reston, VA 22091

ERIC Clearinghouse for Disabled and Gifted Children
1920 Association Drive
Reston, VA 22091

Students with Limited English Proficiency
National Clearinghouse for Bilingual Education
1500 Wilson Boulevard, Suite 802
Rosslyn, VA 22209

U.S. Department of Education
Office of Bilingual Education and Minority Language Affairs
400 Maryland Avenue, S.W.
Washington, DC 20202

Students Enrolled in Programs Nontraditional for Their Sex
The Resource Center on Sex Equity
Council of Chief State School Officers
400 North Capitol Street, N.W.
Washington, DC 20001

Rj Associates, Inc.
1018 Wilson Boulevard
Arlington, VA 22209

U.S. Department of Education
Office of Equal Opportunity
400 Maryland Avenue, S.W.
Washington, DC 20202
Women’s Educational Equity Act Dissemination Center
Education Development Center (EDC)
55 Chapel Street
Newton, MA 02160

Women on Words and Images
P.O. Box 2163
Princeton, NJ 08540

**Racial/Ethnic Minority Students**

Asian American Studies Center
Box 24A43
Los Angeles, CA

Bureau of Indian Affairs
Office of Indian Education Programs
Indian Education Resource Center
Box 1788
Albuquerque, NM 87103

Center for Latin American Studies
319 Grinter Hall
University of Florida
Gainesville, FL 32611

Chicano Studies Center
University of California
405 Hilgard Avenue
Los Angeles, CA 90024

**Economically Disadvantaged Students**

Appalachia Educational Laboratory
P.O. Box 1348
Charleston, WV 25325

Indian Studies Center
1817 E. Baltimore Street
Baltimore, MD 21231

Migrant Educational Development Center
800 Brazos
Austin, TX 78701

National Association for the Advancement of Black Americans in Vocational and technical Education
218 Lane Hall
Blacksburg, VA 24061

National Indian Training and Research Center
2121 S. Mill Avenue, Suite 204
Tempe, AZ 85212

Opportunities Industrialization Centers of America
Green and Coulter Streets
Philadelphia, PA 19144

Puerto Rican Research and Resource Center
1529 Connecticut Avenue, N.W.
Washington, DC 20036

U.S. Department of Education
Office of Equal Opportunity
The following case studies describe how six vocational and technical teachers prepared to serve their special students. Read each case study and then critique in writing the teacher's performance, explaining:

1. the appropriateness of the teacher's attitudes toward special students and his/her role in serving them.
2. what the teacher should do to prepare to serve special students.

Case Study 1:

"This flexible, individualized instruction they're talking about is really fascinating," said Mr. Jones. He and Ms. Wilson were taking a break from the staff development seminar on accommodating special students in vocational and technical education. "It looks like it won't be that much trouble. In fact, a lot of my other students can use some of the same stuff. The only thing is—well, I met the kid they're going to put in my program next term. He seems nice enough. But one of the counselors better talk to him soon. I don't think he takes a shower very often."

Case Study 2:

Ms. Walker and Mr. Brown were having coffee in the teachers' lounge. It was their lunch period on the first day of the fall term. Each of them had had special students placed in their programs for the first time. They had both been preparing over the summer to serve these students. "I'm certainly glad the term has finally started," said Ms. Walker. "After reading all those books and articles, going to seminars, joining organizations, and reviewing my attitudes, I'm really ready to get started teaching these special students. Now that we're finished preparing, we can get down to that."

Case Study 3:

Mrs. Dixon looked up from the newspaper. "Say, dear, here's an interesting article. It says that they're going to start placing special students in vocational and technical programs at your school next year. Have you heard anything about that?"

"Yes," Mr. Dixon replied. "The counselor told me Friday that I might get some of them for next fall. I just hope that they don't give me some kid who can't do the heavy lifting in my program—much less all the reading my kids have to do. Those specification sheets we teach the kids to use can be pretty tricky reading."

Case Study 4:

Robin Ray looked up with a start as her classroom door opened. In walked Joy Leland, a good friend of hers on the teaching staff. "Oh, May! Thank heavens it's you! I was just about to throw out some of these forms, and you scared me half to death!"

"What forms, Robin?"

"Oh, a bunch of stuff I was supposed to fill out on that mentally retarded student I have this term. They were just pages and pages long, and I couldn't understand half of the questions, and there was practically no room to write the answers. So I wrote this instead—it's a summary of the
student's progress so far. It covers everything we've done, and I think it does a better job than those forms anyway. I'll just staple it to the back of this first one and let them figure it out."

**Case Study 5:**

Sifting in the counselor's office, Mr. Carlson was getting a little agitated. The counselor was offering some suggestions on how Mr. Carlson could go about preparing for the two gifted students who were enrolling in his vocational and technical program for the coming term.

"Okay, so I can see the point of a lot of what you're saying. But this individualized instruction business--well, I'm sorry, but that just sticks in my craw. If these two kids are that smart, I don't see any reason why I have to change my lesson plans for should be able to do just fine as things are now. "And another thing-what could I possibly learn from them? I've been in this field for 24 years now. I started out as an apprentice and worked my way up to crew foreman. And believe me, I had to scrap the whole way! I don't see what I'm supposed to pick up from these two kids who are still wet behind the ears!"

**Case Study 6:**

"Drat!" snapped Mrs. Pope, bending over to pick up the brochure she had just dropped. She had been distracted all day, it seemed. She had just found out that morning that she would have a new student in her program next week--a blind girl transferring in from across town.

Mrs. Pope settled back with the brochure again. It announced seminars and lectures on serving special students. She kept seeing interesting topics, but every time she tried to focus on one, all she could think of was that blind girl.

She had seen a blind man on the street once. She wondered whether the girl would roll her eyes and blink and seem to stare right through her the way that man had. She remembered the strange feeling she had, looking at that man, wondering what it would be like. She shook her head to clear her thoughts.

"Now, where did I see that seminar on . . .?"
Section 2:
IDENTIFY AND DIAGNOSE STUDENTS WITH SPECIAL NEEDS
IDENTIFY AND DIAGNOSE STUDENTS WITH SPECIAL NEEDS

Recognizing that a student in your class has special needs or abilities is the process of identification. To identify special students, you need to be able to note that some aspect of their performance or behavior requires your attention. Perhaps a student is “disruptive” or does not understand the material that you present. Perhaps a student has a physical condition or wears special apparatus, such as a hearing aid. Clues such as these may indicate that the student will need special assistance to succeed in your vocational program.

To provide that assistance, you will need further information about the specific areas in which students have special needs or abilities. This information will help you determine what type and how much extra assistance, support services, and so forth, they will require. This step is called diagnosis—analysis of students’ academic, social, and vocational backgrounds to determine specific areas of strength and weakness. The data you collect during diagnosis will help you plan programs for special students. Special students have a wide range of needs and abilities that you should consider in your teaching. For information on these special needs and abilities and how to identify and diagnose them, read the following information sheet.

Purpose of Identification and Diagnosis

The whole purpose of identifying and diagnosing special students is to make you aware of their individual needs and abilities. To ensure that learning takes place, you must identify those students who are likely to need your individual attention. Once these students have been identified, you can then diagnose the exact areas in which they are likely to benefit from additional assistance. Identification and diagnosis are crucial to the planning of individualized instruction for students with special needs.

In general, special students require a different type of instructional approach because of their special needs or abilities. Some of them may have learning problems. Some may be withdrawn or lack motivation to perform in your program. So-called slow learners” may be mentally retarded or lack basic educational skills because of economic disadvantages. Students with physical impairments can be prevented from achieving their full potential in your program because of the physical environment of the classroom or laboratory. The blind student, for example, may need to have equipment labeled in Braille. The deaf student may need to be seated close to the instructor so that he/she can read lips.

Other special students may perform poorly because they lack basic academic or occupational skills in your particular vocational area. For example, you might have a female enrolled in a machine shop course. She may be unfamiliar with basic terms because, traditionally, women have had less exposure to tools and machinery than men have. If you do not take time out to explain basic terms, the student may feel lost or alienated. If this happens, she will not achieve her full potential in your program.

Other students may be hampered academically and vocationally because of speech or language differences. Some special students may come from homes where English is not spoken at all. Consequently, they may be less proficient in communicating in standard English. Others—for example, some Black Americans—may speak a dialect of English different from your own. Language proficiency affects proficiency in other academic areas to a large extent. Thus students
with limited proficiency in standard English may be at a disadvantage. Difficulties with speech and language can also affect mentally retarded students, hearing-impaired students, or students with physical impairments such as cleft palates. These students may be at a disadvantage not only academically and vocationally but also socially. Many individuals are not tolerant of differences. The person whose speech is different from the standard or is difficult to understand may be cruelly mimicked or derided.

Cultural differences can also cause some students to feel isolated from the mainstream. Racial and ethnic minority students—such as Black Americans, American Indians, Hispanics, or Appalachian Whites—may have customs or values that are different from those of the other students. This difference and sense of isolation can affect students’ motivation to succeed.

Still others may have problems in your program because they learn faster or think more creatively than the typical students may. Gifted and talented students can seem inattentive, bored, or disruptive when, in fact, they may be frustrated with the slow pace of the lesson. You will therefore need to find out what their specific interests and abilities are so that you can challenge them.

Sometimes you will have adults in your regular program. They may already have had some occupational experiences. Some may have difficulty adjusting to being in a class with younger students. Some may feel isolated and out of place. These students will need material that is geared to their social and emotional levels.

From these examples, you can see that it is important to identify your special students and diagnose specific areas of concern. Failure to spot problem areas can result in lack of success for your special students as well as for you, the teacher.

When to Identify and Diagnose

You will identify and diagnose special students on different occasions, depending upon the situation. Ideally, this process should take place before instruction begins. However, this is not always possible. In some cases, you will find yourself ready to teach a new class at the beginning of the year without knowing anything about your students. You will want to find out why students chose to enter your program in the first place and how much they know about your area. Your first reaction would probably be to find out what you can from the students themselves and from any existing records. If this is the first thing you do when you are confronted by a sea of new faces, you are on the right track.

In other instances, you may begin identification and diagnosis when a new student is assigned to your class with no cumulative record or other documented information. In this situation, you would need to work with counseling staff to collect the necessary data.

You can also be involved in identification and diagnosis of students with physical, sensory, or mental disabilities. All disabled students at the elementary and secondary levels must, by law, have an Individualized Education Program (IEP). The IEP is the student’s total educational program. It includes academic and vocational preparation as well as supportive services, such as tutoring. This kind of planning necessarily includes identification and diagnosis. As a vocational teacher, you may be involved in IEP planning as it relates to your vocational area.

Finally, you may begin identification and diagnosis when a student has been in your class a while. You may have reviewed the student's records and not noticed that there was a special need. Yet,
something may happen during the course of the program that indicates that the student needs special attention. You yourself may note that the student is not performing well or is behaving inappropriately. A counselor, administrator, nurse, or parent may alert you to a special need. So, realistically, identification and diagnosis can occur at any time during the course of the program.
Your Role

There are some important things to keep in mind about your role in identification and diagnosis. First, the amount of time you can reasonably put into identification and diagnosis, without disrupting the entire classroom environment, is limited. You will have to be fair to both regular and special students. Although identification and diagnosis are crucial, you must recognize the reality of your situation. You may not have the time to gather, on your own, all the data you need and still fulfill all your other responsibilities.

Second, there are others who can help. You may lack the expertise to conduct certain types of diagnosis. For example, diagnosis of academic aptitude using standardized tests must be conducted by trained persons. You should refer students to the testing specialist or school counselor for standardized tests. Similarly, you should rely on specialists to conduct diagnoses in such areas as health, physical disability, speech, and hearing.

People who can help, by assisting in diagnosis or providing information, include the following:
- School psychologists, nurses, and physicians
- Counselors
- Speech pathologists and audiologists
- Math and reading specialists
- Special education teachers
- English-as-a-Second-Language instructors
- Social workers
- Students’ former teachers
- People who share cultural heritage with specific students

Third, it is important to remember that you are focusing on special needs as they relate to instruction. Your goal is to help each student by providing instruction in a way that ensures that learning will take place.

Finally, the confidentiality of the material you gather in your identification and diagnosis must be respected. You should maintain your records in a secure place, such as a filing cabinet that can be locked or the central administrative office. Also, you need to assure any person’s involved—students, parents, and others—that whatever material you gather will be kept confidential.

Identification Techniques

Identifying special students is not a difficult task in most cases. Sometimes the student’s condition will be pointed out to you. For example, a trained professional will have identified most students with physical, sensory, and mental disabilities before they enter your program.

In any case, identification of special students is largely a matter of common sense. It does not require the use of sophisticated skills or equipment. As a teacher, you need to be alert and sensitive to your students so that you can note behavior or conditions that require special assistance. You should therefore make the most of your daily contact with students, observing them to spot potential problems.

Obvious visible clues can often tell you that a student may have special needs. For example, wheelchairs, hearing aids, use of sign language, or white canes and dark glasses will indicate physical or sensory impairments. A heavy accent may indicate limited English proficiency. Some
racial/ethnic minority students will be identifiable from their appearance or language. Students enrolled in programs nontraditional for their sex and adults in regular vocational classes will generally be easily recognizable.

It is important to remember, however, that these are clues. Being a member of a certain group may mean a student has special needs—but not necessarily. Having noticed visible clues, you can observe students to see if they do, in fact, have special needs. For example, you should be alert to the following kinds of clues with a racial/ethnic minority student:

- Does the student have difficulty interacting with other students?
- Is the student a member of an isolated clique, not participating in activities with peers? In extreme cases, does the student even try to disrupt the activities of peers?
- Is the student hostile, defensive, or overly aggressive? This kind of behavior can result from having been the butt of insulting racist remarks.

Sometimes students enrolled in programs nontraditional for their sex can experience difficulty in adjusting to a class that has mostly members of the opposite sex. Clues:

- Is the student withdrawn and passive?
- Does the student avoid volunteering in class?
- Is the student very easily discouraged? You should also pay attention to the student's vocational performance:
  - Does the student lack basic occupational information or skills?
  - Does the student appear to be lost or puzzled when certain technical terms are used?

Then, too, an adult enrolled in a program for retraining may have special needs if his/her values and expectations are not being met in the program. Some adults may have trouble relating to younger students. Adult students who are quite capable of understanding content sometimes lack a technical vocabulary. You can look for such clues as the following:

- Does the student appear frustrated with the program?
- Does the student withdraw from other students?
- Does the student's responses to the material you present indicate that the content is geared to his/her level?
- Does the pace of the lesson appear suited to the student's experiences and abilities?
- Does the student use technical vocabulary correctly?

Sometimes adults in regular programs have special responsibilities that may affect their performance. For example, displaced homemakers often have children. More clues:

- Is the student frequently absent, perhaps because of inadequate child-care arrangements?
- Does the student seem to need financial assistance?
- Is transportation a problem?

If you don't know that you need to face the student when talking to him/her, the student will frequently not understand what is being said. The student may then invent ways to get you to repeat information or may ask to borrow peers' notes or to have them explain the material to him/her. An unfair burden is placed on both you and the students. You must strike a balance between respecting the special student's right to be considered "normal" and your responsibility to maintain a desirable classroom atmosphere.
What to Diagnosis

Diagnosis provides you with information about the specific needs and abilities of students previously identified as having potential special needs. You will essentially be conducting a needs assessment of each special student. This will provide you with the information you need for planning individualized instructional programs.

There are many crucial areas that require diagnosis. It has been noted previously that special students may have social adjustment problems, vocational and academic deficiencies, health problems, speech and language deficiencies, motor skill weaknesses, and economic needs. Special students, like all students, also have individual learning styles-unique ways of absorbing and retaining information. Similarly, special students have a wide range of differing values. All these areas may enter into your diagnosis.

It is important to examine the total picture to determine what kind of assistance a student really requires. Problems in one area are likely to affect other areas. For example, an economically disadvantaged student may lack basic academic skills, such as reading and math. He/she may have a limited perception of the value of education and lack the motivation to succeed in the regular program. This, in turn, affects the student's potential to succeed occupationally.

As the cycle continues, an economically disadvantaged student may not be well adjusted socially. Others may regard him/her with pity or hostility, which can affect the student's self-concept. The student may have few successful role models and limited experience with the outside world. He/she may resent authority figures, such as teachers or supervisors. The student may lack proper nutrition and clothing. His/her values and goals may be affected by a low standard of living. The student's expectations may be low or unrealistic.

From this example, you can see that a student's economic situation can affect many other important educational, social, and emotional areas. Thus, when diagnosing disadvantaged students, you should include academic strengths and weaknesses, learning styles, home conditions, and any other factors that may hinder their progress in school.

A racial/ethnic minority student may also be economically disadvantaged. In addition to having the problems associated with low economic status, this student may have a strong cultural element operating at home that conflicts with the values and customs of the mainstream culture. There may also be language and communication barriers. Therefore, you need to consider the home conditions of racial/ethnic minority students, as well as their communication skills, academic and vocational skills, social adjustment, and learning styles.

Many related areas need to be diagnosed in dealing with a mentally retarded student because mental retardation may affect the student's social, emotional, and academic development. For example, a mentally retarded student may have had negative experiences in dealing with others. Such experiences could easily affect the student's self-esteem. The mentally retarded student usually also lacks basic academic skills appropriate to his/her age or grade level. In addition, depending on the extent of the mental retardation, the student may have speech/language deficiencies, poor manual and finger dexterity, and motor skills problems.

Therefore, for mentally retarded students, you should include academic skills, vocational readiness, social behavior, motor skills development, speech and language proficiency, and learning styles. Much of this diagnosis will have been done before the students enter your
program. However, you may need to supplement the diagnosis, especially in the area of vocational readiness.

A student who is physically or sensory impaired may have special needs because of his/her impairment. Before you can plan a vocational program for this student, you will need to determine the extent of the impairment. How do the demands of the chosen occupation compare with the student's physical capacities and limitations? Will the student's physical condition require you to make modifications to instructional materials, furniture, equipment, machinery, or tools in your vocational laboratory or shop?

It is also important to observe the student's attitude toward the impairment. If the student has a negative attitude toward the fact that an impairment exists, this can affect his/her self-esteem, social development, and emotional well being.

If a student has communication deficiencies or limited English proficiency, this clearly has far-reaching implications. Students with speech or language problems may tune out the rest of the world because they feel that they neither understand nor are understood. Such a student may not understand the importance of developing appropriate work habits or attitudes. He/she may lack basic occupational knowledge and skills. The student may view the world of work as one that sets him/her up for failure.

Social adjustment may also present problems for this student. This is especially true for students from homes where little English is spoken. Their values and cultural norms are likely to be different from what school personnel and others in society expect.

If you have a hearing-impaired student, you should consider whether the student has developed alternative methods for communicating. Does the student lip-read well, use a hearing aid, or depend on an interpreter? Does the student primarily use sign language? If so, does he/she have a way to communicate with hearing people? Perhaps the student has some speech or writes notes. Perhaps he/she chooses to try to communicate with hearing people. A student with a hearing loss may also have deficiencies in basic reading and writing skills and may have a limited vocabulary.

A different approach may be useful for students with limited English proficiency. For example, it is a good idea to diagnose bilingual students in a bilingual mode. Many bilingual students have adequate reading and writing skills in their native language. Since it may be possible to help transfer these skills to standard English, you can seek the help of the English-as-a-Second-Language teacher in diagnosing them in a bilingual mode. If you are bilingual yourself, that is an added bonus.

A student who is gifted or talented needs to be diagnosed from the point of view of his/her goals, values, and expectations. Very often such a student needs to have creative, problem-solving experiences that are different from those that other students require. For example, the student may be in your class as part of a career exploration activity. He or she might be attempting to explore various career options before deciding on a single one. This does not necessarily imply indecisiveness; it may simply indicate that the student needs room to explore his/her many talents.

It is also useful to observe the social adjustment of the gifted or talented student. Often such a student is younger than his/her classmates are. He or she may find it difficult to mix or may truly prefer being alone. The student may be "turned off" by school because class- room activities
seem dull. Teachers may have perceived the student to be disruptive because he/she was inattentive.

Finally, it is very important to determine the learning style of the gifted or talented student. Does the student think so quickly that he/she has the correct answer to a question almost before you've finished asking it? Does he or she process abstract ideas with amazing accuracy and speed? Does the student like to engage in intricate hands-on experiences? Is the student good at unraveling difficult problems in his/her head? Does the student become disruptive when he/she does not have enough to do?

The student enrolled in programs nontraditional for his/her sex will often need to be diagnosed in terms of vocational readiness, work-related experiences, work habits, and attitudes. He or she may lack basic occupational skills or information because of lack of exposure. You should also observe the student's social adjustment. Is the student experiencing social isolation from peers purely on the grounds of sex differences? Is the student encountering sex-stereotyping pressure from others because he/she is training in a "female" or "male" occupation? This type of pressure can cause emotional or psychological tension and conflict, which may affect academic and vocational success.

The adult in retraining may have goals, values, and expectations that differ from those of traditional students. Like the gifted or talented student, the adult may need to be challenged in terms of the content of the course. You should therefore consider his/her interests, occupational goals, and expectations of the course. An adult may wish to proceed at a rapid pace—to be trained and leave as quickly as possible in order to get on with his/her life. Most adults will need material that is not only geared to their level but that has relevance for them in terms of their future employment.

You should also observe the adult student's social adjustment. This student's maturity can cause him/her to be isolated from the social environment of the classroom. You need to determine whether or not the student finds it difficult to mix or prefers being by him/herself.

Also, although some adults can proceed at a faster pace than other students can, some may lack knowledge of basic occupational or technical terms. You should look at the adult student's occupational or work-related experience to determine whether any remedial work is needed. Finally, you should determine to what extent special responsibilities, such as a spouse and children, place demands on the adult. Especially if these demands threaten vocational or occupational success, you should diagnose the specific problem. Perhaps it is economic-proper child-care facilities may be needed.

The extent of your diagnosis will depend to a large extent on whose needs you are diagnosing. For some special students, you may need to diagnose only certain specific areas. In other cases, nearly all educational areas will be affected by the special need. You should therefore assess each student's needs in as many areas related to his/her special need as is required.

In this section, we have been discussing potential areas of diagnosis for students with various special needs. However, it is extremely important to remember that each special student is an individual. It is very dangerous to think of your special students in stereotypical terms. This defeats the entire purpose of your careful identification and diagnosis.

Remember that you identify and diagnose special students to discover exactly what their special needs and abilities are. To think stereotypically, to make assumptions based on generalities, to
fail to examine students carefully and in depth will undo all the hard work you put into identification and diagnosis. So, look at each special student with a clear mind and fresh eye. Never assume that one student is like another. Treat each student as a separate case and your efforts will be worthwhile.

**Diagnostic Techniques**

There are several techniques to use in diagnosis, depending on the information that you need. Some relevant data may be available in existing records. Other information can be collected by observation or teacher-made tests. Sometimes it is appropriate to consult with others who have information about the special student or to refer the student to trained persons for diagnosis. Often you will use all these techniques together.

It is important to view diagnosis as a team effort, requiring input from many persons. In this way, you will not have to rely solely on any one method to get a thorough, overall picture of your students. It is crucial to assess special students in as many ways as you can. Through careful diagnosis, you will be able to determine not only what their special needs are but also where their strengths lie.
Reviewing Existing Records

Reviewing existing records is one way to obtain diagnostic information about your special students. The most commonly available records are the cumulative record, medical or health records, work experience records, and the IEP. Health records, however, do not always have complete information. They may merely describe the presence of a mental or physical impairment. Of course, some impairments go undetected and therefore are not documented in the records. Student's work experience records can yield useful information about past job performance, work habits, and work attitudes. This information may be in the form of references from past employers or supervisor evaluations of job performance. They can also indicate whether special students already have experience in certain occupational areas.

For disabled students, the IEP is a useful source of information on academic and vocational performance, social behavior, and general educational levels. It documents specific areas of strength and need and includes long-term and short-term objectives for the student, designed to meet his/her particular needs. You may be involved in developing the IEP. If not, you should review it carefully. The diagnostic data in the IEP will be used to plan instructional objectives for the student.

Reviewing existing records can yield information and save you time and effort. However, it is important to remember that they may not be complete in areas crucial to the diagnosis of special students. You should therefore plan to obtain additional data using other methods.

Referral to Trained Persons

You may need to refer some special students to specialists for diagnosis. If you have students with suspected physical conditions, you should refer them to a nurse or physician. Students with possible hearing or speech problems might be referred to a speech pathologist-audiologist. An English-as-a-Second-Language teacher might be able to help in the diagnosis of students with limited English proficiency. Some special students will need to be referred to the school counselor for standardized testing in basic academic skills such as reading and math.

However, bear in mind that you should not rely solely on the results from standardized tests to determine the needs and abilities of special students. In fact, some special students perform very poorly on standardized tests because of the cultural biases the tests contain. Moreover, standardized tests cannot predict occupational success, and you must weigh other factors in the students' development, such as motivation to succeed, in making judgments about their capabilities. In any case, no single method should be used as the predictor of future success. For these reasons, some school districts and states prohibit the use of standardized test results.

Teacher-Made Tests

Academic performance.

Academic performance can be determined using teacher-made tests. You can devise simple, in-class tests to obtain a quick idea of student performance or aptitude in an actual classroom situation. If you have been teaching for some time, you have probably already developed your own exercises for determining your students' levels of performance on the material in your program. They may be in the form of written or oral assignments. These same assignments can be used to determine students' reading levels or their knowledge of basic concepts in math. You can use actual in-class situations to determine the language proficiency of students with limited English proficiency, for example. Their written assignments can be checked for correct grammar,
sentence structure, vocabulary, and comprehension. You can also ask questions orally in class to check their proficiency in speaking English.

These methods for diagnosing academic skills are not meant to replace standardized methods. However, many teachers rely on in-class tests for determining the basic academic skills of their students. Your tests can be simple and based on the material you wish your students to cover in the program.

**Vocational readiness, interests, and goals.**
You will need to determine your students' proficiency in performing specific tasks as an indicator of their readiness for your vocational program. You will also want to know what their interests and goals are and how these goals relate to your occupational area. Diagnosing these areas will help you to develop a vocational plan for each student.

The most efficient method of diagnosing vocational readiness is the use of work samples. Work samples are simulated activities that resemble an actual job operation. They can be developed in any vocational area, and you can make them up yourself. First, you would determine the requirements for a given occupational task. You would then provide students with the necessary equipment and explain what you expect from them in terms of task performance.

For example, in a horticulture class, you might give a student the task of planting seeds. You would observe the student's performance and note whether the student followed the correct procedures in planting the seeds, measured the correct amount of soil, and so on. Also, you would check how the rows were marked off, what the depth of the rows were, and whether the seeds were properly covered with soil and sealed. Sample I illustrates the kind of form you could use to record students' performance on work samples.

Work samples are a good technique for determining manual dexterity, eye-hand-foot coordination, spatial aptitude, and students' general ability to follow instructions. If you have a spastic student in your class, for example, having him/her perform a task in a work sample can tell you how adequately he/she maintains coordination. Similarly, you could give written instructions to a student with limited English proficiency to find out whether bilingual instructions will have to be used until the student is more proficient in English.

Through work samples you can also find out what previous experience in the particular vocational area students have had and where you will have to start with each of them in your instruction.

To diagnose your students' interests and goals so that you can determine how these fit into your program, you may wish to administer an interest inventory. The school counselor may have such inventories available. Or you may wish to develop your own. You can devise a simple checklist of preferences, asking the students to indicate what types of tasks they like doing best. For example, you can ask whether they prefer working with their hands or their heads and whether they prefer working indoors or outdoors. Sample 2 illustrates the kind of checklist you could use in determining students' goals and interests.
### Horticultural Work Sample

**TASK: Planting Seeds**

<table>
<thead>
<tr>
<th>STEPS</th>
<th>PROCEDURE</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>ONE</td>
<td>1. Measured out 3 cups of soil into the container</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2. Thoroughly moistened the soil</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TWO</td>
<td>3. Leveled the soil in the container</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>4. Firmed the soil in the container</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>5. Marked off 2 spaced rows in the container</td>
<td></td>
<td></td>
</tr>
<tr>
<td>THREE</td>
<td>6. Made the depth of the rows approximately 1/4 inch</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>7. Planted 3 seeds in each row</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FOUR</td>
<td>8. Covered the seeds completely with dry soil</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>9. Moistened the dry soil covering the seeds</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FIVE</td>
<td>10. Sealed the planted pot in a plastic bag</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Time Required**

**COMMENTS:**
### Student Interest Checklist

<table>
<thead>
<tr>
<th>Student</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Course/Grade</th>
<th>Teacher</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**For each of the paired items listed below, check (✓) the one that most interests you or in which you would like to become involved.**

<table>
<thead>
<tr>
<th>Math</th>
<th>Light work</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td>Heavy work</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>English</th>
<th>Being with people</th>
</tr>
</thead>
<tbody>
<tr>
<td>Typing</td>
<td>Being alone</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Inside work</th>
<th>Sales</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outside work</td>
<td>Purchasing</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Handling small tools</th>
<th>Using my hands</th>
</tr>
</thead>
<tbody>
<tr>
<td>Handling large equipment</td>
<td>Using my head</td>
</tr>
</tbody>
</table>

**List the things you would like to do for fun or pleasure when you are not in school.**

**List the clubs, groups, or organizations to which you belong, in school or out of school.**
Observation

Observation is perhaps the most effective and widely used technique for diagnosing students' potential to perform. All teachers observe students' academic and vocational performance continually throughout the course of their programs. Observation is an especially appropriate technique for diagnosing learning styles and social behavior, which cannot be observed on a one-shot basis.

Learning styles.
Students have different methods of perceiving and processing information. They learn best in different ways. Some students have difficulty processing abstract ideas. Some prefer hands-on, concrete learning experiences. The extent to which instruction matches a student's preferred learning style can affect whether the student learns at all.

It is important to you to be aware of the preferred learning styles of all your students. This information will enable you to individualize your instruction to meet their needs. With special students, diagnosing learning styles is even more crucial. Each special student has needs that could prevent him/her from succeeding in the regular classroom. If, on top of those special needs, your instruction does not fit his/her learning style, the student is doubly disabled.

The subject of learning styles is complex. Many theorists have written about it and developed different models of learning style. However, there are certain aspects of learning style that you should be especially aware of when diagnosing special students' learning styles:

- **Sensory preference**--Which senses do the student use most efficiently for absorbing and retaining information? Does the student learn best through visual, aural, or psychomotor experiences? Seem most motivated when involved in hands-on experiences? Learn best through lectures and discussions? Respond most favorably to audiovisual instruction, such as filmstrips, tapes, flashcards, or pictures?
- **Impulsiveness and reflectiveness**--How impulsive or reflective is the student when making decisions? How does the student make decisions or respond to questions and instructions? Does the student make a great many errors because he/she responds too quickly? Does the student respond very slowly, mulling over each step at length and taking too much time in the process?
- **Focus of attention**--How well does the student focus attention on the main point in a piece of material? Does an inability to concentrate prevent the student from grasping the main point? Is the student easily distracted or overstimulated? What things distract the student-noise, movement in the room, bright lighting, or the need to move around?
- **Reinforcement**--How important is frequent reinforcement in achieving acceptable behavior and the learning of content? Does the student become easily discouraged without frequent encouragement? Prefer to work undisturbed, with only occasional rewards? Perform most satisfactorily when allowed a special privilege after completing a task?
- **Content assimilation**--How much content can be digested by the student at one time? Given various amounts of material, both written and oral, how well does the student comprehend? How much does he or she retain? Does the student need to have material presented several times in order to retain it?
- **Grouping preference**--What type of grouping arrangement (e.g., large group, small group, pairs, individualized instruction) does the student prefer? Does the student become disruptive during large- or small-group interaction?
Learning style can be diagnosed in a variety of ways. Guidelines and tests are available for use with different learning style models. Some of them require special training. However, you can do some diagnosis of learning styles through observing special students as they perform tasks or interact in class. Through your observations, you can find out how they absorb and retain information in terms of the six learning style aspects listed previously. Your observations could be structured by a checklist listing these criteria.

In order to make useful observations, you must engage students in various types of activities that are carefully designed to give you the kind of information you want. You might give them timed hands-on tasks to determine how quickly or slowly they work. You should vary the sensory presentation of content to see which types of instructional modes are most effective with which students. You can also vary the types of reinforcement techniques you use to encourage students to learn.

You should record your observations in observable terms. For example, "Sam needs to have content repeated at least three times before he remembers it." Or "Maria understands and can remember written instructions better than oral instructions." It is generally best to decide in advance that you are going to diagnose a particular aspect of learning style. As you make your observations, you should record them as soon as possible.

Observation is a technique that takes time, and learning style is a complex area. It may take a week or more to determine what an individual student’s learning style is.

Social behavior.
Social behavior can also be diagnosed through observation. However, you should avoid prejudging or stereotyping students based on isolated incidents. You should choose a variety of classroom activities during which you can observe students’ social interaction repeatedly, over a span of time. For example, watching students' behavior an hour a day for a week will enable you to see different aspects of students' behavior. You may wish to arrange large-group, small-group, or one-to-one sessions with certain students to find out how they behave in these situations. You may set up games, discussions, or tasks during which students have to work with or interact with others.

Of course, these activities would be going on anyway, for purposes related to program content. You would simply be remaining alert to the social aspects of the situation at the same time. On your checklist, you could note whether there were students who appeared overly aggressive or persistently tried to dominate. You should also note those students who tended not to want to interact with others, seemed withdrawn and unresponsive, or preferred one-to-one situations.

The important thing to remember about the diagnosis of social behavior is that, although a student may have social adjustment problems, you need to have an overall picture. You need to see not only weaknesses but also strengths. You can use strengths to overcome weaknesses.

Significant others may be a source of information about some students. You may come into contact with them at school events or through regularly scheduled interviews. These situations can serve as opportunities to observe--to get a sense of the home environment. In some cases, you might even schedule a meeting with significant others to discuss a student's specific problems--academic, vocational, social, or other. Family members, through their long associations with the students, may have been able to gain some perspective on his/her problems.
Involving significant others may be more appropriate in the secondary setting than at the postsecondary level. Most secondary students are minors, responsible to the adults in their lives, and usually living with them. Involving family members in planning the student's education is often appropriate and can help gain their support. In the case of disabled students, law requires their involvement.

At the postsecondary level, however, there is apt to be a somewhat different situation. The students are older, often legally responsible. They may be on their own or married. In any case, many postsecondary students consider themselves adults and would resent an instructor's interference in their personal lives.

Therefore, in contacting students' significant others as part of your diagnosis, it is wise to be cautious. You should base your decision about contacting them on knowledge of the student. How would the student feel about it? How much information are you likely to gain that you can't get from other sources (including the student)? It is a good practice to contact significant others through the student whenever possible. This helps to avoid giving the impression that you are going behind the student's back. Such an impression could undermine the rapport you are trying to build with the student.

Finally, you should use the information you obtain with judgment. While statements should be regarded as legitimate perceptions, they should not be given undue weight. Parents, for example, are not always objective about their own children. A student could have had difficulty with the teacher you talked to (a personality conflict, perhaps) but not with many other teachers that you didn't talk to. The information you get from these various sources should be treated as one piece of information in the total diagnostic picture.

Sample 3 lists the most appropriate methods to use in diagnosing various problem areas of special students. You may wish to refer to the chart from time to time for quick information on these diagnostic methods.

Consultation

Another method of obtaining information about your special students is to talk with their former teachers and counselors, their significant others (parents, guardians, spouses, or others who have significant roles in the students' lives), or the students themselves.

Talking to students about themselves is useful for several reasons. First, it is a simple, efficient way of learning about them. Many students can give you a lot of information about themselves. Second, it will give you an idea of how they perceive themselves. You may find, for example, that an ethnic minority student is not aware that some behavior is socially unacceptable. Third, it is a good way of establishing rapport and trust with the student.

Talking with former teachers and counselors can be a useful strategy for obtaining background information on students. You might learn about previous or ongoing problems or special needs that have been noted or suspected before. Former teachers and counselors may be more available in secondary programs than at the postsecondary level.
## WHAT AND HOW TO DIAGNOSE

<table>
<thead>
<tr>
<th>WHAT</th>
<th>HOW</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social Adjustment</td>
<td>Observation</td>
</tr>
<tr>
<td></td>
<td>Consultation</td>
</tr>
<tr>
<td>Learning Styles</td>
<td>Observation</td>
</tr>
<tr>
<td>Economic Conditions</td>
<td>Review of existing records</td>
</tr>
<tr>
<td></td>
<td>Consultation</td>
</tr>
<tr>
<td>Vocational Readiness, Interests, and Goals</td>
<td>Teacher-made tests</td>
</tr>
<tr>
<td></td>
<td>Observation</td>
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<tr>
<td></td>
<td>Review of existing records</td>
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<tr>
<td></td>
<td>Teacher-made tests</td>
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<tr>
<td></td>
<td>Referral for testing</td>
</tr>
<tr>
<td>Academic Skills</td>
<td>Observation</td>
</tr>
<tr>
<td></td>
<td>Teacher-made tests</td>
</tr>
<tr>
<td></td>
<td>Referral for testing</td>
</tr>
<tr>
<td></td>
<td>Review of existing records</td>
</tr>
<tr>
<td>Health History</td>
<td>Review of existing records</td>
</tr>
<tr>
<td></td>
<td>Referral for physical examination</td>
</tr>
<tr>
<td>Motor Skills Development</td>
<td>Observation</td>
</tr>
<tr>
<td></td>
<td>Review of existing records</td>
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<tr>
<td></td>
<td>Teacher-made tests</td>
</tr>
<tr>
<td></td>
<td>Referral for testing</td>
</tr>
</tbody>
</table>
Methods for Recording Diagnostic Information

Some of the information about your special students will already have been recorded in a cumulative record or IEP. As you collect additional information, you will need to devise some method of recording this information. Keeping a written record of your diagnosis is desirable for future reference. It will also encourage you to be consistent in your instructional approach to the special student. Finally, it enables others—such as administrators, counselors, or special educators—to refer to your records when they need information on a particular student.

A simple and efficient way of recording information about students is to devise a form that has spaces for biographical data and information on academic and vocational ability, social adjustment, health, and any other areas you include in your diagnosis. For example, if you have identified learning styles or vocational readiness through various means, you should add this information.

Each instrument that you use for diagnosing academic levels or other areas should be named, and the date when the student took the test should be recorded. The sources from which you obtained your information about the student should also be noted. Sample 4 is an example of an appropriate form for recording information about special students.

The data can be maintained in a file folder or in an index card file. If you use folders, it is best to have a separate folder for each individual student. The folder should be loose-leaf, so that new items can be inserted as the need arises. If you use the index card system, the cards should be put in a suitable box. You may wish to arrange them in alphabetical order by your students' surnames.

Protecting the confidentiality of your diagnostic data is important. If you have your own personal filing cabinet that can be locked, you may keep these data there. If your school district or state does not allow you to have this kind of information at your disposal, whatever data are collected should be given either to counseling personnel or to a central administrative office for filing.
### SAMPLE 4

**STUDENT DATA SHEET**

<table>
<thead>
<tr>
<th>Student’s Name</th>
<th>School District</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vocational Program Area</td>
<td>Date</td>
</tr>
<tr>
<td><strong>BIOGRAPHICAL INFORMATION</strong></td>
<td></td>
</tr>
<tr>
<td>Address</td>
<td>Telephone</td>
</tr>
<tr>
<td>Grade</td>
<td>Date of Birth</td>
</tr>
<tr>
<td>Male</td>
<td>Female</td>
</tr>
<tr>
<td>Father’s Name</td>
<td>Mother’s Name</td>
</tr>
<tr>
<td>Father’s Occupation</td>
<td>Mother’s Occupation</td>
</tr>
<tr>
<td><strong>HOME CONDITIONS</strong> (e.g., siblings, children, others in household, economic factors, language spoken in home):</td>
<td></td>
</tr>
<tr>
<td><strong>HEALTH INFORMATION</strong> (e.g., immunization, special problems, allergies, physical/sensory impairment, self-care and coping skills):</td>
<td></td>
</tr>
<tr>
<td>Physical Specialist’s Name</td>
<td></td>
</tr>
<tr>
<td><strong>OTHER</strong> (e.g., character traits, personality traits, social behavior):</td>
<td></td>
</tr>
<tr>
<td><strong>ACADEMIC INFORMATION</strong> (e.g., tests taken, math scores, reading scores, learning styles):</td>
<td></td>
</tr>
</tbody>
</table>
### ATTENDANCE INFORMATION

<table>
<thead>
<tr>
<th>Year:</th>
<th>Grade:</th>
<th>Year:</th>
<th>Grade:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st Semester</td>
<td>2nd Semester</td>
<td>1st Semester</td>
<td>2nd Semester</td>
</tr>
<tr>
<td>Absences:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tardies:</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Remarks:        |        |                |        |

### VOCATIONAL INFORMATION (e.g., employment history, occupational interests, hobbies, special interests, special occupational talents, skills, work preference, work habits/attitudes)

Remarks:        |
Special Educational or Transition Services:

Interpretation of Diagnostic Information

Once you have collected data on your students, you can make decisions about how best to plan programs for them. Your data may indicate that modifications will have to be made in furniture or equipment for the visually, orthopedically, or hearing-impaired student. You may decide that gifted or talented students need to attend special workshops periodically. You may decide that a student with limited English proficiency needs to attend an English-as-a-Second-Language course. You may have found that an adult student in your regular class could tutor some of the younger students. These decisions will obviously be based on the data that you have collected about each individual student.

Your interpretations should be directed toward such purposes as the following:

- Determining what instructional or counseling techniques will work best with your students
- Determining students' overall strengths and weaknesses in specific areas
- Recommending resources, support services, or special assistance for students
- Stating what long- and short-term objectives are most appropriate for the achievement of the students' vocational goals

If a student needs special services, you should share your interpretations with the relevant personnel in your school. Resource persons can also be of assistance in making suggestions to you about the options available to students who need special assistance.

It is often useful, when making interpretations, to involve other persons in the process. You might ask guidance staff, special education staff, the students themselves, and significant others to sit in on a diagnostic team meeting. (When developing instructional objectives for disabled students, the special education teacher, the students themselves, and their parents must, by law, be present at the planning meeting.)

An advantage of having a meeting with a planning team is that additional data can be collected when information is shared by all present. If you use the team approach, you can also arrange to have the team members meet from time to time to review the students' progress. If there is a periodic review, objectives can be modified or changed to reflect the students' growth and progress through the year.
This type of team effort will prevent you from making decisions that will pigeonhole the student or pre-judge his/her capabilities. If parents are involved, they will know what is happening to their child in school, what is expected from him/her in terms of performance, and how they can help. They are also likely to be more supportive if they have been involved in the interpretation and planning process. Team interpretations will also help you to share resources and expertise with other trained personnel.
Check Your Knowledge

The following items check your comprehension of the material in the information in this section. Please explain each item briefly, but fully, and make sure you respond to all parts of each item.

1. What do the terms identification and diagnosis mean as applied to special needs students?

2. Critique the following statement: "Knowing the established characteristics for each of the special needs groups makes identification and diagnosis easy and reliable." Do you agree with this statement? Why or why not?
3. For each of the following areas, explain why it is important to diagnose student’s special needs in that area. Give examples of the techniques that you would use in making your diagnosis. Explain why the methods used are appropriate and explain which school personnel can be of assistance to you in your diagnosis.

- Vocational readiness
- Learning styles
- Basic academic skills

4. Why should you record diagnostic data about students with special needs? How would you ensure that the material you have recorded is kept confidential?
CASE STUDY

This case study describes how Mr. Brown, a vocational teacher, identified and diagnosed the special needs of Mary Ann Green. Read the case study, and as you read, try to determine what Mr. Brown is doing right and what he is doing wrong. At the end of the case study are some key questions. Using these questions as a guide, prepare a written critique of Mr. Brown’s performance in identifying and diagnosing this special student.

Case:

Mr. Brown is a vocational teacher at a local comprehensive high school. The fall term started about a month ago, and he is quite involved in his program. He wants to do his best for the students enrolled in his program. He is particularly concerned about a new student, Mary Ann Green.

Mr. Brown began to feel concerned about Mary Ann during the very first week of the term. First, he noticed some rather obvious things about her. She had an Appalachian accent. She seemed somewhat thin, and her complexion was rather pale. Although she was always neat and clean, her clothes all looked old and faded.

Then, Mr. Brown began to notice other things about Mary Ann—less obvious things, perhaps, but significant in their own way. She was withdrawn. She didn’t mix much with the other students in the class. She seemed friendly and sociable whenever one of the other students approached her or spoke to her, but she never took the initiative herself. Furthermore, if she was in a group of students, she never really participated fully in what they were doing. She always seemed to hang back for some reason.

Mary Ann also seemed to be lost in the vocational laboratory. She didn’t know what to make of all the equipment and machinery in the lab and, as far as Mr. Brown could tell, didn’t know what any of the equipment or machinery was called. When Mr. Brown was orienting the class to the laboratory one day, Mary Ann seemed perplexed and confused. At one point, Mr. Brown asked her to point out the power switch on the machine next to her. She was unable to find it, although it was in plain sight and clearly labeled.

One day, Mr. Brown had an informal discussion with his class about their reasons for enrolling in his vocational program. Each student gave his or her reason, but Mary Ann didn’t have one to offer. She just stammered a bit, saying she hadn’t thought about it. When she finally said that she had just thought it might be interesting, he dropped the matter.

Finally, Mr. Brown noticed that Mary Ann seemed to have a great deal of trouble with reading assignments. She had questions to ask about fairly simple things on all the assignments he had given her so far. She even had difficulty with an information sheet he gave out one day in class for students to read. She asked him what several words meant. In the course of answering her questions, he determined that she really hadn’t understood what she was reading.

From all these observations, he began to feel worried about Mary Ann. He wondered what conditions were like in her home. Her interaction with the other students in the program seemed awkward. She really had no background in the program area, as far as he could tell. Her problem with reading assignments could turn out to be a stumbling block as well. Mr. Brown decided that Mary Ann apparently had some special needs and that he’d better look into the situation further.

Consequently, Mr. Brown decided that he should investigate Mary Ann’s basic academic aptitude, her vocational aptitude, her health, and her home conditions. He quickly came to the conclusion
that the best place to start looking for further information about Mary Ann was in the cumulative records.

When he went to get Mary Ann's cumulative records, however, Mr. Brown discovered that they were very sketchy. In fact, they contained only the information that Mary Ann was a new student, having enrolled in the school just two weeks before the start of classes. There was no information on her previous courses or grades, no standardized test scores, no vocational experience, no health records—nothing. So, Mr. Brown resolved to get his own information.

Using in-class assessments adapted from written homework assignments, Mr. Brown determined that Mary Ann's reading and writing skills were, in general, three to four years behind her class level. By observing her communication in his vocational laboratory, he determined that her oral language skills were quite adequate. Although her Appalachian accent was, at times, pronounced, it did not affect her ability to understand or be understood.

Remembering that the guidance counselor had standardized instruments to assess mathematical aptitude, Mr. Brown decided to refer Mary Ann to the counselor for testing in this area. He was subsequently informed by the counselor that her score from this testing was very low—in the tenth percentile (i.e., her score was equal to or higher than only 10 percent of the test group).

To assess Mary Ann's vocational aptitude, Mr. Brown had her do a work sample one day in the laboratory when all the students were doing lab work. He felt that, in this way, Mary Ann would not feel singled out, since all the students were involved in tasks. By observing her performance on the work sample, Mr. Brown concluded that Mary Ann lacked knowledge and skill in the kinds of basic vocational tasks that he usually assumed his students could already do when they enrolled in the program.

Mr. Brown also administered an interest inventory to Mary Ann. From this, he learned that she liked working with things rather than ideas, working alone to working in groups, and using visual rather than print materials. Her only hobby was going to movies.

In order to determine Mary Ann's general health, Mr. Brown spoke to the school nurse, who suggested he send Mary Ann to see her. The nurse arranged to have Mary Ann examined by a consulting physician, who reported no serious problems. Mary Ann was slightly anemic, but the physician felt that her low weight and pale complexion might be improved if she participated in the school lunch program. Mr. Brown referred Mary Ann to the counselor again to arrange for her to take part in this program.

Mr. Brown consulted the counselor himself to get some tips on obtaining information on Mary Ann's home conditions. The counselor told him that the best method would be to visit Mary Ann's home and talk to her parents in person. Consequently, Mr. Brown spoke with Mary Ann after class one day and told her that he would like to talk to her parents. Mary Ann said that she would mention this to them. She returned the next day with the answer that he was welcome to drop by that evening if he liked.

At the Green home, Mr. Brown first got some basic biographical information about Mary Ann—her age, height, weight, number of brothers and sisters, and so on. He learned that the Green family had just recently moved to town from rural West Virginia. They moved when Mr. Green lost his job with a highway construction firm because of a cutback in federal funding.

Working on highway construction, Mr. Green had had to move his family around quite a bit, going where the highways were being built. Consequently, Mary Ann had been enrolled in seven different schools previously. When Mr. Brown found this out, he decided that it wouldn't do any good to ask what courses she had taken and what grades she had received. He figured that she had been in too many different schools for this information to have any meaning.
He also learned that Mr. Green had had to take a low-paying job in town and considered himself lucky to have even that. Mrs. Green had to work as a cleaning person five days a week to supplement the family income, which never seemed to stretch far enough to make ends meet. Mr. Brown also observed that the Green home was in a run-down neighborhood and needed a lot of repair work. Inside, the furniture was old and worn, and there were none of the luxuries that Mr. Browns was used to--no television, no stereo, not even a dishwasher.

Having collected all this information, Mr. Brown is now planning to meet with Mary Ann, her parents, and the guidance counselor to use the information to plan how he can help Mary Ann with her special needs. If he could just remember all the information he has gathered, he was sure it would be a productive session.

1. **What visible clues did Mr. Brown use to identify Mary Ann’s special needs?**

2. **How thoroughly did Mr. Brown follow through on diagnosing the special needs that were identified?**

3. **How appropriate were the techniques he used in diagnosing Mary Ann’s special needs?**

4. **How adequate were Mr. Brown’s preparations for recording and interpreting the information he collected?**
Read the case situation, then outline in writing the procedures you would follow in identifying and diagnosing the needs and abilities of Ken.

Case 2:

Today is the third day of the fall term in your high school. You are a vocational teacher, trying to get to know the new students enrolled in your program for the coming year. One of these new students, Ken Wilson seems to be interesting.

First of all, the guidance counselor told you the day before classes started that Ken had difficulty getting along with some of his teachers—they thought that he was a troublemaker. In fact, Ken's math teacher from last year stopped you in the hall yesterday with a story about Ken. It seems that Ken claimed that the teacher's solution to a math problem was incorrect. When the teacher asked Ken if he thought he knew more than the teacher did, Ken answered yes. Thereafter, the math teacher thought it best to treat Ken as a discipline problem.

You haven't had any problems with Ken, however, except that he does often seem to be off in a world of his own. This morning, as you were walking around the class, you noticed Ken hunched over a piece of paper that was covered with complicated mathematical equations. He was hard at work on these equations and had already finished the problems you had given the class to work on. You've also seen two books on Ken's desk—Engineering Calculus and The Theory of Relativity: A Historical Perspective.
Section 4:

MODIFYING THE LEARNING ENVIRONMENT
MODIFYING THE LEARNING ENVIRONMENT

The term learning environment refers to both the physical setting and the instructional setting of the vocational-technical laboratory or classroom. The typical lab contains expensive and sometimes complex apparatus, equipment, tools, and machinery. There are also fittings, storage areas, and furniture.

Other elements that contribute to the learning environment include lighting, ventilation, color, texture, and noise level. These elements of the classroom or lab should create an efficient, orderly, and comfortable learning environment.

The learning environment of every vocational-technical lab and classroom affects students’ comfort, their emotional and psychological well being, their physical safety, and their success. Modifications become necessary when some students have needs that are not accommodated in the traditional setting.

For example, imagine the following conversation between a special education teacher and a vocational instructor:

**Chris:** How's special ed these days, Pat?

**Pat:** Fine, Chris. By the way, Tom Clarke is going to be in your program next quarter. You know him—the student that had that skiing accident two years ago.

**Chris:** What??!! That's out of the question. He can't do my lab.

**Pat:** The lab is required as part of the course, isn't it?

**Chris:** Of course.

**Pat:** Then you have to take him. That's the law.

**Chris:** Even if he's partially paralyzed? How on earth is his wheelchair going to fit in the lab? Furthermore, he won't have the strength to use a smooth plane or a claw hammer, will he?

**Pat:** You'll find a way. You and the student, together. Some students with special needs may not be able to perform successfully in the traditional learning environment of the vocational-technical classroom or laboratory. To learn about the reasons for modifying the learning environment to accommodate these students and techniques to use, read the following information sheet.

**Chris:** But, good heavens, Pat, I'm responsible for his safety—not to mention that of everybody else in the room. What will happen if he bores a hole through his hand, or through somebody else's?

**Pat:** Don't worry I'm sure he's used some of your equipment before. Why don't you sit down and have a talk with him about it?

**Chris:** You mean to tell me that every course has to be open to all students—even if they have severe disabilities?

**Pat:** That's right. Every course, and every program, as long as the student is otherwise qualified.
Chris: But what if the student simply can't do something that is an essential part of the training?

Pat: What do you do, Chris, if you have to move a table that's too heavy for you?

Chris: I get someone to help.

Pat: See what I mean?

This conversation illustrates the attitude that instructors and society at large have sometimes displayed toward students with special needs. Teachers have had similar misgivings about female students wanting to be in construction trades programs. Or about mentally retarded students being in marketing education. Or about visually impaired students being in home economics. The initial response may be that they can't do it.

Of course, there may be certain tools and equipment that could not be used by students with some types of physical or sensory impairments under any circumstances. However, it is also true that many students with special needs can do much more than society may expect of them.

Most students with special needs can be successful in regular vocational-technical programs. Teachers and others need to be willing to adapt the learning environment to the students' needs, rather than trying to fit the students into the existing environment.

Of course, instructors are genuinely—and rightly—concerned about the special students' safety and that of the other students in the program. However, many simple adaptations can be made to the existing environment that would both accommodate students' special needs and maintain or improve safety standards.

After all, a good teacher does not hesitate to modify course content, instructional materials, and methods for "regular" students if they need it. With students with special needs, you simply have to recognize that their needs may be a little different from the needs of other students. If you are sensitive to your students' special needs, a reasonable effort on your part can help them succeed in your program.

**Why Modify the Learning Environment**

The learning environment must be modified as necessary to accommodate students' special needs for at least seven important reasons.

First, your school or institution is required by law to make reasonable efforts to ensure equal access and educational opportunity to all students. This opportunity must be made available regardless of physical or sensory disability, race, age, national origin, or sex. There are four pieces of legislation that have implications for modifying the learning environment for students with special needs:

- **Title IV of the Civil Rights Act of 1964**
  This act prohibits discrimination on the basis of racial/ethnic origin or limited English proficiency.

- **Title IX of the Education Amendments of 1972**
This legislation prohibits discrimination on the basis of sex.

The Education of All Disabled Children Act (P.L. 94-142)
This act states that all disabled students should be placed in the least restrictive environment possible in educational settings.

Section 504 of the Rehabilitation Act of 1973
This section prohibits discrimination on the basis of physical/sensory disability or mental retardation.

Second, student safety must be guaranteed in the shop or lab. Modification of tools, apparatus, machinery, or the physical facility is sometimes necessary to ensure the safety of students with special needs.

Third, the success of students with special needs is more likely when some modifications are made in the learning environment to accommodate their needs. Modifications in the learning environment can help students succeed in learning the program content and skills.

Fourth, many students with special needs learn best when instruction is individualized. They tend to perform best when allowed to work at their own pace. They benefit most from following a program specifically designed to suit their unique needs and to help them develop the specific skills they need. In order to provide the flexibility needed for individualized instruction, some modifications in the learning environment may be required.

Fifth, the learning environment must provide for the emotional and mental well-being of students. They should feel comfortable working in the classroom or lab. It is especially important to create and maintain a secure, pleasant atmosphere for students with special needs. Some students with special needs may feel intimidated and uncomfortable in an atmosphere that is rigid or formal.

Sixth, another area that you need to be concerned about is ensuring the students' physical comfort. Poor lighting and high noise levels may make learning harder for all students. For visually impaired and hearing-impaired students, however, such conditions may make learning impossible. Attractive, clean, well-lit surroundings can also motivate students to perform and do well.

And seventh, you must consider access to tools, equipment, and facilities. Some students with special needs will not be able to locate and use tools and equipment unless special modifications are made. There are two types of modifications that may be necessary. Changes in the actual physical facility may be needed to increase access. And changes in the furniture, tools, and machinery may be needed to enable disabled students to use them.

What to Modify in the Learning Environment

The special needs of your students will dictate what modifications will be required. In modifying apparatus, equipment, and the physical facility, you must first be familiar with the individual needs and abilities of each student. This knowledge comes from your initial identification and diagnosis of students with special needs. Your next task will be to analyze the existing classroom, lab, or shop to determine whether it can adequately meet students' special needs and, if not, what adaptations are most appropriate and feasible.
To Ensure Flexibility

Seating arrangements, furniture, and equipment should be movable rather than fixed, if possible. Some students may need to have their tools or materials placed close to where they sit. Students with limited mobility will need ample space in which to maneuver. Hearing-impaired and visually impaired students may need special seating arrangements. You might have these students choose their own seats to ensure that they can hear or see what goes on during the lesson.

If instruction is to be individualized, students will be engaged in a variety of tasks in the same room at the same time. They need to be able to work individually without disturbing each other's activities. In reviewing the classroom or lab, you will have to determine whether the layout of furniture and equipment needs to be modified so that students can complete tasks on an individualized basis.

Students with special needs may need the option of proceeding at a faster or slower pace than other students. For example, gifted and talented students may finish quickly. They may need their own space in which to work on special projects or tasks that are not part of your regular curriculum.

To Ensure Teacher Mobility and Control

You need to be able to interact with all students at all times to give them the individual assistance they need. You should be able to guide their activities from any point in the room. Therefore in the classroom or lab, you should note anything that obstructs your view of the entire room.

You should also consider the location of any equipment that causes a lot of noise. Perhaps it can be placed where it won't keep you and the students from hearing what is going on. At the same time, you will want to make sure that all equipment is located where you can hear it in operation.

Finally, you need to check the location and layout of all machinery, equipment, and furniture to make sure that you have easy access to all parts of the room.

To Ensure Appropriate Learning Activities

Students in your lab or shop need to be able to learn the skills necessary for the occupation. Some students with special needs learn most effectively when they are exposed to real-life, concrete learning experiences that have relevance to their overall occupational goals.

Therefore, the classroom or lab should duplicate actual occupational conditions as closely as possible. In addition, through hands-on activities in a simulated setting, each student with special needs should have the opportunity to operate actual machinery, tools, and equipment.

In your analysis of the learning environment, you should first ensure that the equipment, tools, machinery, and materials are appropriate to the skills being taught. Then, you should decide whether the layout and location of the equipment and furniture, as well as the overall organization of the room, are accurate simulations of the real-life situation.

To Ensure Efficiency
Instruction needs to be efficient as well as flexible. Teachers and students should be able to work with maximum productivity and a minimum of wasted time, effort, and energy. To create and maintain an efficient classroom or lab, you need to determine whether the spatial arrangement is appropriate. You should be especially sensitive to the needs of students with limited mobility.

For example, some students in wheelchairs or those who lack muscular control may have special storage needs because of the extra apparatus they use. For example, a spastic student might use a wrist hold-down device, pencil holder, or page turner. Additional shelves or drawers may be needed to store the equipment so that the student's work area is not cluttered.

Similarly, in a lab you must determine whether the student can function in the limited space that most labs have available. Ideally, a student would have ample space in which to maneuver his/her wheelchair. If your lab is not constructed in this manner, you might need to find out whether the student can function using crutches.

You may be able to get a stand-in table into which the student can be strapped. Or you may be able to get adjustable seats or worktables so that the student does not need to sit in his/her wheelchair. By thus reducing the amount of floor space used by the student, you can arrange the lab more efficiently for all students.

To Ensure Emotional and Psychological Comfort

Some special modifications may be needed to create an atmosphere in your class or lab in which students with special needs can be comfortable. For example, some mentally retarded students are accustomed to sheltered learning experiences. They may find it difficult to adjust to being in a regular classroom. Similarly, adult learners, unused to going to school, may not perform well in a rigidly structured, formalized lab setting.

You therefore need to look at the environment to see whether the arrangement of furniture, shelves, and equipment allows for maximum flexibility. Neat rows of tables, chairs, and desks may give an appearance of order. But too much emphasis on uniformity can contribute to a rigid or formal atmosphere. Further, it can reduce teacher-student and student-student interaction. How space, equipment, and furniture are arranged and used can significantly affect the psychological comfort of your students.

Finally, you need to make sure that there are no signs, posters, or other materials that may be offensive to certain groups of students. Students with special needs can be insulted by displays that are biased against certain groups, that depict them stereotypically, or that ignore them altogether. You should therefore be sure that no such materials are displayed in your room.

To Ensure Physical Comfort

In some vocational-technical labs, chemicals are used and equipment emits smoke and fumes. Naturally, you will need to be sure there is proper ventilation. In many programs, students do detailed work. While proper lighting is always important, it can be essential for students who are visually impaired. You will also need to make sure that the noise level is acceptable and that the lab itself is clean.

For some students with special needs, additional precautions may be necessary to ensure their physical comfort. For example, some hearing-impaired students cannot work in labs where there
is excessive noise. This is apt to be true especially for students who wear hearing aids. You may need to advise these students to turn down their hearing aids in noisy shop areas.

Naturally, there will be unavoidable noise in some shops and labs. However, in some cases, machines are excessively noisy because they are not functioning properly. In addition, some machines create noise from vibration when not properly secured. These conditions can and should be identified and corrected.

Proper lighting is essential for visually impaired students. You need to make sure that the lighting is adequate for them. Perhaps an added high-intensity lamp would meet the need. In addition, some students with limited mobility may require lighting that is adjustable or movable in order to do close, detailed work.

**To Provide Access to Facilities, Tools, and Equipment**

**Facilities.** Some classrooms and labs are constructed in such a way that there are architectural barriers. For example, there may be stairs, columns or posts in the room that reduce the mobility of a student who uses a wheelchair or crutches.

If your institution is willing to undertake major structural changes, it is unlikely that you will be making these modifications yourself. But there are certain suggestions that you can offer. These may include the use of nonskid flooring and the construction of handrails, ramps, and wide aisles.

You need to bear in mind, however, that removing architectural barriers is a major task. It can be very costly to try to create a barrier-free environment. Obviously, your institution will be constrained by cost factors.

Often, however, using some ingenuity, you can find ways to effect changes without causing "undue hard-ship" to the institution. Rearranging equipment, machinery, and furniture in the facility to provide maximum access may achieve some of the same purposes as major reconstruction.

**Tools and equipment.** In reviewing the lab, you also need to determine whether storage shelves, work stations, furniture, and materials are accessible to students with physical disabilities.

For example, a student in a wheelchair may not be able to reach high enough to get to materials on storage shelves. Perhaps rearranging storage can solve this problem. Similarly, labeling storage areas in Braille or raised print might enable a visually impaired student to locate and identify materials.

In some cases, it might be necessary to modify furniture. Physically disabled students, for example, need furniture that is sturdy and durable, with a wide base. Desks, chairs, and tables must be at the proper height. Sometimes existing furniture can be adapted by making simple modifications.

For example, consider whether you can modify wooden tables by shortening legs or putting on new longer legs. For wheelchair-bound students you may need to cut out tables so that they can pull up close to the work surface. Wooden furniture can be adapted more easily than metal or plastic furniture.
In some cases, new furniture will be needed. If, as you study your facilities, you find that you can't adapt the existing furniture, you should arrange to obtain adjustable desks, tables, or chairs for your physically disabled students. This furniture can then be used in future classes by students who have slightly different needs.

After reviewing the tools and equipment in the lab, you can submit a plan to the authorities specifying needed modifications. That plan should specify whether adaptations can be made to existing equipment and tools, or whether new equipment will need to be installed to accommodate special needs.

Again, your institution is not expected to purchase an entire new stock of equipment to accommodate special needs. You will, however, be required to make a reasonable effort to modify existing equipment, tools, and machinery for disabled students.

With simple modifications, much equipment can be made usable. For example, portable electric tools can be used effectively by many physically disabled persons. However, some power tools can cause problems for persons with missing limbs or muscular control problems. Sometimes these problems can be overcome by using clamps to secure the equipment and by enlarging the size of the worktable. In some cases a lap tray can be used as a substitute for a worktable.

Whether to replace a piece of equipment or adapt it is sometimes a practical matter. For example, students who do not have the use of their lower extremities cannot operate machines with foot controls. In the case of a foot-operated dictaphone, it might be possible to replace it with one that has a hand switch or digital push button. In the case of a very large piece of power equipment with foot controls, it might be necessary to adapt it because of the expense of replacement.

Bear in mind that your students are excellent sources of information on ways to modify equipment to accommodate their special needs. You should ask them for suggestions as you consider possible modifications.

For example, you might have an amputee in home economics for whom handling dishes is a problem. This student may know of modifications that can be made, such as the following. To avoid spills, a plastic curved rail can be attached to the edge of shallow utensils, such as plates and dishes, or around a cutting board. The rail will keep food from sliding off the edge. Similarly, measuring cups, mugs, and teacups can be fitted with extended plastic handles for easier grip. The plastic handles can be riveted onto any standard cup handle.

It is important, when reviewing tools, equipment, and machinery, to look for the most efficient and practical method for meeting students’ special needs. Above all, you should avoid extreme decisions, such as to replace all existing equipment because a student has a special need. Needs can often be accommodated more simply and inexpensively by using some imagination and initiative.

To Ensure Safety

Safety in the shop or lab is a source of major concern among vocational-technical educators. Ensuring the safety of all students is one of your major responsibilities. However, correct safety procedures can be absolutely crucial for students with special needs. It is therefore important to review the lab or shop to ensure that the special safety needs of these students will be met there.
For example, the safety of some students with special needs might be endangered by improper use of equipment, tools, or machinery. Modifications in warning signals (e.g., fire alarms), fire exits, signs, and safety reminders may also be required. For other students, such as those with epilepsy or asthma, special first aid procedures may be needed.

**Safety instructions.** If you have a safety handbook or handouts, you need to be sure that all students, regardless of their special needs can use these. Therefore, you may need to have these materials translated into a foreign language, prepared in bilingual form, or audiotaped. For students who have reading difficulties, you may need to simplify the language and include a lot of pictures to support the text.

**Equipment, tools, and machinery.** You should already have identified and diagnosed those students who have special needs related to the use of equipment, tools, and machinery. For example, students with motor control limitations may not be able to use certain tools, such as a wood lathe. You need to ensure that they know which tools can be dangerous to them and why.

A mentally retarded student may need to have tools, equipment, materials, machinery, and controls clearly labeled. Labeling tools with their names will make finding them easier. Labels should be prominent and clear. You can use survival words on controls, such as DANGER, ON, OFF. Students with limited English proficiency may need to have bilingual versions of the same labels.

**Warnings and precautions.** Some students with special needs will require special warning devices or modifications in existing warning devices. For example, red lights that flash when the fire alarm sounds could be installed on the ceiling to warn hearing-impaired students.

In examining the lab, you should also decide whether you will need to display additional signs or posters with clearly labeled instructions or warnings. For students in programs nontraditional for their sex, you may want to add signs reminding them to dress appropriately for certain tasks. For example, a poster could serve to remind them to remove jewelry, ties, or scarves; to tie back their hair; to roll up their sleeves; or to wear an apron or lab coat.

You also need to ensure that all warning signs, devices, and posters communicate to students with special needs. For example, for visually impaired students, you may need to add labels and instructions that have raised print. You need to ensure that the language is simple enough to be understood by mentally retarded students. For students with limited English proficiency, you may need to have safety signs and instructions translated into the students' native language.

If you have a learning disabled student in your lab, you may need to use pictures to remind the student of safety concerns in using equipment and machinery or to alert him/her to hazards. One picture could show the right way to use the machinery. In another, the wrong way could be shown, with a large X drawn through the picture.

Special first aid needs. In spite of all the precautions you take to ensure safety in your lab, a student with special needs may require first aid. A student may have an accident. An epileptic student may have a seizure during your class.

Therefore, you must be familiar in advance with any special first aid procedures you need to follow in treating each student. One practical way to identify students' special first aid needs is to ask the students themselves about their needs before the program starts. You could also check health records for any mention of special medical needs and appropriate treatment procedures.
You need to review school policy to identify any legal limits related to your administering first aid to students. State and local policies regulate the types of first aid that can be administered.

You should also talk with trained personnel to determine what the extent and limits of your involvement in administering first aid to these students should be. A special education teacher, school nurse, or physician may have good suggestions concerning what you can reasonably be expected to do for students with special safety or medical needs.

Ensuring That Modifications Are Carried Out

Once you have analyzed the learning environment and consulted students to determine what changes are needed, your next task will be to ensure that the modifications are carried out.

From the previous discussion, it should be clear that modifications to the learning environment need not be complex or costly. They should be functional, simple, and based on the individual needs of each student. In reviewing the existing facility, you need to examine its suitability to each student's needs.

If you determine that modifications are needed to enable students to accomplish their goals, you should make those changes in the simplest and most direct manner. Elaborate and costly modifications may confuse rather than assist the student. On the other hand, where fundamental changes are needed, these must be made to ensure student success. Modification of the learning environment, therefore, requires good judgment coupled with practical common sense.

In some cases, you will be able to make changes yourself, perhaps with the help of students. For example, if desks, chairs, tables, and work stations need to be rearranged to make the learning environment more flexible or efficient, you and the students can probably do this yourselves.

You may also be able to modify some equipment or tools yourself. For example, you could adapt a standard typewriter for use by persons with only one arm. You can simply apply masking tape to the A and F keys for right-handed persons, and to the J and semicolon keys for left-handed students. The difference in texture is a guide for proper finger placement.

You can make some "modifications" related to students' physical comfort and safety as part of ordinary class procedures. For example, you can ensure that floors are cleared of debris or liquids that might cause orthopedically disabled or visually impaired students to slip and fall. This is, of course, a safety measure that should be carried out in any shop or lab. Just a little extra attention on your part may be all that is needed.

You may also be able to do a great deal to provide for the emotional and psychological comfort of students with special needs. For example, if the decor of the classroom makes some students feel out of place, you can alter it. Offensive signs or illustrations can easily be removed. Others, that include students with special needs, can be added. If the classroom/lab arrangement is too rigid or intimidating, you and your students may be able to improve it by rearranging the furniture and equipment.

Finally, you and your students can make numerous modifications to provide for the safety needs of students with special needs. If added warnings or instructions are needed to alert students to possible hazards, you and your students can make the needed posters or signs.
In other instances, you will have to involve others in modifying the learning environment. There are practical limitations on your involvement in making some modifications. For instance, it is unlikely that you will make such changes in the physical facility as the construction of ramps and the removal of architectural barriers.

However, if your institution elects to construct new facilities or modify existing ones, you should arrange to attend the planning meetings. Since you know the requirements of your program and of the equipment used in the lab, your input can be very valuable.

Other examples: If changes are needed in the heating, cooling, or ventilation system, or in machinery to reduce noise, you would probably not be expected to make those changes. Instead, you would need to report the problem to the appropriate source—perhaps maintenance personnel. They should then be able to make the necessary modifications for you. Similarly, if flashing lights for a hearing-impaired student or warning bells for a visually impaired student are needed, you might need to ask the administration to have this equipment installed.

You also may not be making major modifications to tools and equipment yourself. But you should work closely with trained personnel to determine what modifications are most feasible and necessary. You know the students’ needs and capabilities and you will have consulted with them to determine what modifications will work best. You should discuss the possible adaptations with trained personnel and ask them to carry them out for you.

For example, you might have a student in your class who has lost the use of an arm. This student cannot use a brace and bit unless modifications are made. After talking with the student, you may decide that a shoulder plate needs to be added to allow the student to use the entire body to control inward pressure when drilling. You should then take your suggestion to the appropriate repair personnel and request that the plate be made.

You might also need help from others in devising safety instructions. For example, you may need to ask a foreign language teacher to translate safety instructions and signs into another language for a student with limited English proficiency.

Making modifications need not be a difficult task. Your main responsibility is to recognize what should be modified or adapted and to arrange to have the modifications made. You will know when you can make simple modifications yourself, when students or other teachers can help, and when you need the help of trained personnel.

**CASE STUDIES**

The following case studies describe how several teachers modified the learning environment to accommodate students’ special needs. Read each case study and critique in writing the performance of the teacher described, explaining:

1. the strengths of each teacher’s approach.
2. the weaknesses of each teacher’s approach.
3. how each teacher should have modified the learning environment to accommodate the students’ special needs.
Case Study 1:

Tran Thi Minh and Claude LaSalle are students in Ms. Barker's vocational program. Claude speaks English perfectly well but has great difficulty reading and writing because he has dyslexia. Tran Thi Minh, who is from Vietnam, can read and write English but does not speak it well.

Ms. Barker felt that communicating safety precautions to these students could be a problem. She had safety instructions posted in the laboratory and on the equipment and machinery. She got a friend to translate these into Vietnamese for Tran Thi Minh because, even though Tran Thi Minh could read English well, she lacked sufficient knowledge of technical vocabulary in English.

Since Claude could neither write nor read well, Ms. Barker decided that she would just have to tell him all about the safety precautions in the laboratory and hope that he would remember her oral instructions.

Case Study 2:

Mr. Kelly wanted to do all he could to help Patty Webster when she enrolled in his vocational program. He knew that she had had polio as a young child. As a result, she had limited endurance in one leg and limited use of one arm.

Therefore, Mr. Kelly made certain modifications in Patty's work area, tools, and equipment to accommodate her physical impairments. He gave her extra space so that she could store her crutches and her other equipment. He also arranged to have some of the power tools modified for her. He knew that she couldn't use them as they were, since she had limited strength in one arm.

However, Patty has been unable to use her worktable because she cannot stand on her feet for long periods of time. Also, she has complained that the distance between her workspace and the tool board and storage cupboards was so great that she has been spending most of her time hobbling about trying to locate tools and materials.

Case Study 3:

Susan Roth, a hearing-impaired student, has had problems adjusting to the physical conditions in Mr. Clarke's vocational laboratory. She complained about the noise in the lab to Mr. Clarke. He told her that there was bound to be noise in the lab and that she would get used to it in time. He also suggested that she could turn down her hearing aid whenever the machines got too noisy.

Susan also complained that the heat in the room, coupled with the noise level, made her physically ill. Mr. Clarke just ignored her complaints. He felt that she was exaggerating her problem and just felt sorry for herself.

Case Study 4:

Barbara Johnson gave Ms. Hope so much trouble in her typing program that, eventually, Ms. Hope had a talk with her about it. Barbara told Ms. Hope that she found the atmosphere in the classroom disturbing because the class was too formal and intimidating. Barbara also told Ms. Hope that some of the posters on the walls were insulting to blacks because they always portrayed blacks as being in more menial positions than whites.

Ms. Hope listened to Barbara and decided to modify the learning environment a little to make it less rigid and threatening. She rearranged the work areas and seating so that Barbara could work
on her own or with other students if she wanted to. Ms. Hope also removed the offensive posters and replaced them with more suitable ones.

Mike Abrams is also in Ms. Fiope's class, and she has often wondered why he bothered to enroll in the typing program. Mike has seemed very uncomfortable being around so many women. When Ms. Hope asked him, in front of a group of female students, whether he would be able to support his family on a secretary's salary, he seemed very embarrassed and wouldn't answer her.

Case Study 5:

Kim Deveaux and Annette Kostakis are both in Mr. Davis's vocational program. Mr. Davis diagnosed Annette as an especially bright student. Kim is mentally retarded. Mr. Davis made arrangements to modify the learning environment to create a more flexible classroom atmosphere for Kim and Annette, because they both learned at very different rates from the other students.

He realized that his modifications should be designed to give both students an opportunity to learn at their own pace. Therefore, he arranged their workspace in such a way that they could work on their own, on the projects they chose, without distracting or disturbing the other students. He placed Kim in a position where he could observe her constantly and be on hand to assist her whenever she needed help.

Mr. Davis also reviewed the equipment and machinery in the laboratory to ensure that they simulated the actual world of work as closely as possible. He did this so that Kim and Annette would have the opportunity to use the tools and equipment in a hands-on setting.
Section 5: Promoting Peer Acceptance
Promoting Peer Acceptance

It is important for students with special needs to be accepted as friends and equals by their peers in the classroom or laboratory. For information on promoting peer acceptance of students with special needs in your vocational-technical program, read the following information sheet.

Picture this scene. You just got a new job that pays a lot more money. You are moving into a new neighborhood in a new town. You're very happy with your new place. You're looking forward to meeting the new people on the block.

As you cart the last box into the house, you wonder how you'll work up your nerve to go meet the new neighbors. Then--no sooner said than done--two of these new neighbors drop by to introduce themselves and welcome you to the neighborhood. They are quite friendly. Their tone is warm, and they seem eager to get to know you. You are immensely pleased.

However, as they look around, they get cooler and cooler. They ask if the couch and chairs are old pieces of furniture that will go in the basement. They arch their eyebrows when you answer that they are, in fact, your living room furniture. This gives you pause.

Being hospitable, you offer lemonade. They accept. The first glasses you can find are those old jelly glasses your mother gave you when you first left home. As you hand over the glasses, the new neighbors suppress smiles. You are too polite to notice. Finally, one of them looks out the window, notices your 1963 Clunker DeLuxe in the driveway, and asks if your hobby is restoring old cars. You answer weakly that, no, this is the car you drive to work every day. They respond, amid much guffawing, that this does have its advantages—at least you don't have to worry about getting dents in the parking lot, right? You put on your most convincing smile as you think back on all the good times you've had in that old car. You're a little hurt.

Your new neighbors are ready to leave. You exchange good-byes and promise to get together again real soon. But you see that they are glancing over their shoulders and snickering as they walk away. You feel miserable.

Things started off so nicely. What went wrong?

What went wrong was that, unfortunately, your new neighbors—who are your new peers—decided that they didn't care too much for you. They did not accept you. Furthermore, they made this decision based on some rather superficial reasons—your old furniture, your inelegant glassware, your dilapidated automobile. Then, to add insult to injury, they laughed at you when they thought you couldn't see them. Of course you felt miserable.

Knowing how you would have felt in this situation, imagine how students with special needs feel when the same thing happens to them in the vocational-technical classroom or laboratory. You, at least, have the advantage of being a mature adult, with a certain amount of poise, an experience in life. Your students with special needs, however, may not have these advantages. Many of them are not mature adults. They are less likely to be poised. They have probably had less experience in life. If you would have been hurt by the rejection of your peers, they may well be crushed.

The reasons that their peers may not accept students with special needs are often just as superficial as the reasons in the previous case. They are more damaging, however, because they attack the person directly. In the hypothetical case, you were not accepted because of your
possessions; students with special needs are not accepted because of personal characteristics. It is
one thing to deal with someone who thinks your car is a wreck or your furniture is beat up. It is
another matter entirely to deal with someone who thinks you are ugly—or stupid or helpless or
weird or inferior.

Consider, for example, a mentally retarded student who may be entering your program. This
student may have a low self-concept from a lifetime of being called "dumb" and "different." Entering
the class, the student will naturally be on edge, anticipating the same old reaction from the
other students in the class. How can this student, whose abilities may be limited to start with,
be expected to perform well in this new setting?

Many of your other students with special needs may also have a low self-concept and lack
confidence. A displaced homemaker going back to school or college for the first time in twenty
years may feel quite apprehensive. A student with a visual, speech, or hearing impairment could
feel self-conscious because of this impairment. Students who are members of racial or ethnic
minority groups (e.g., blacks, Hispanics, Asian Americans) might enter the program completely
discouraged by their previous experiences with white middle-class Americans. In all of these
cases, a rejection by peers in the vocational-technical program will make the already disquieting
experience of the student with special needs even more difficult.

Thus, it is important to help students with special needs perform successfully in your program
by promoting the acceptance of these students by their peers in the classroom or laboratory. Peer
acceptance of students with special needs may make all the difference between their success and
failure. By promoting peer acceptance, you will be providing a more favorable atmosphere in
your program—an atmosphere that emphasizes the positive and allows each of your students with
special needs to live up to his or her own full potential.

This brings us to the important question: How can you, as a vocational-technical instructor,
promote peer acceptance? How can you get your students to accept the students with special
needs who are enrolling in your program just as they would any other students? As you will see,
promoting peer acceptance involves four basic, common sense steps:

- **Inform students about their peers with special needs**—Give them the information they
  need to understand about students' special needs. At the same time, however, stress the fact
  that all students—with special needs or not—have many characteristics, interests, and feelings
  in common.

- **Set an example of acceptance**—Show by your words and actions that you accept students
  with special needs for what they are—real human beings, with their own feelings, hopes
  aspirations, strengths, and weaknesses. Involve class leaders in setting an example with you.

- **Provide appropriate activities**—Plan activities that will allow all your students to interact,
  cooperate, relate to one another, and increase their understanding of other cultural
  backgrounds.

- **Encourage student support groups**—Support groups can help students with special needs
  feel that they are not alone and that others care about them, their feelings, and their success.
The following case studies describe how four teachers dealt with peer acceptance of the students with special needs in their vocational-technical classes. Read each situation and then critique the performance of the teacher. Specifically you should explain:

1. the strengths of the teacher’s approach.
2. the weaknesses of the teacher’s approach.
3. what the teacher should have done to promote peer acceptance of students with special needs.

Case Study 1.

Mrs. Jaynes was addressing a few remarks to her class about a new student entering the program, due to come to class for the first time the next day.

"Now, students, tomorrow we will have a new student in class, George Black. George is mentally retarded. You’ll surely notice that Bob is different from the rest of you. This is not his fault, however--most mentally retarded people are different from the rest of us. There’s nothing to be done about that. What I want you to so is to treat George like a friend and make him welcome in our class."

“Tomorrow’s assignment is to read pages 440-500 in your text. No questions? Class dismissed.”

Case Study 2:

Mr. Hand was part way through his demonstration on how to operate a lathe. He had just demonstrated the operation of the lathe while telling students orally what he was doing. Now, he was ready for the second step—having a student operate the lathe while Mr. Hand talked through the process. He needed a volunteer.

"Okay, who wants to come demonstrate how to operate this lathe?" Horace Wagner, a young man in a wheelchair, raised his hand. "I can do it, Mr. Hand," he said. Mr. Hand hesitated for a split second. "Well, thanks, Horace, but I was hoping Walter would volunteer for this. Maybe some other time, all right?"

Case Study 3:

Mrs. Walters was at her wit's end and didn't know what to do. She had been trying for weeks to get her students to accept that new Cuban student, Maria Hernandez, as a friend. She was having absolutely no luck, however.

She had started by giving her students a lot of information about Maria. She'd told them how Maria's family had left Cuba and come to the United States, what kind of school Maria had gone to in Cuba, what she had studied, what she wanted to do here in the United States--everything. Furthermore, she had tried her best to set an example by treating Maria just like the other students in her program.

But it didn't work. Every day, Maria just sat there in the back of the class, all by herself, while the other students went about their business. Not one of them seemed to pay a bit of attention to Maria. They never chose her as a partner for group projects. They never asked her advice on anything. No matter how much she lectured the students about Maria, pointed out how much Maria was like them, or treated Maria well herself, they just ignored her. What to do?
Case Study 4:

Mr. Roberts was in his office, planning lessons for his class in carpentry and building trades, when there was a knock on the door. In walked Tonya Washington, a young woman who had just enrolled in his program at the beginning of the term. She looked depressed.

"Tonya, what can I do for you?" he asked.

"Oh, I don't know, Mr. Roberts. I just feel really out of place with all the guys in this class. I feel like everybody's different from me. None of them can know what it's like for me in this class. I really feel all alone."

"Well now, Tonya, I can see why that would bother you. But you know, the guys really do like you. The thing is, they're not used to having girls in the class. It'll just take them a little time to get over that. Meanwhile, you're not really alone. We're all in your corner, even if it doesn't look like it all the time. We're rooting for you. I've got some free time. Would you like to sit down and explain a little further what you're feeling?"

Case Profile

Using the following worksheet as a guide, plan a program to promote peer acceptance of a student with special needs. Read Part I to obtain background information on the student, Betty Carpenter, and her special condition. Then, develop a plan to promote peer acceptance of Betty in your program, by responding in writing to the questions in Part II.

Part 1: Background Information

Betty Carpenter is an attractive, soft-spoken, and capable student who leads an active and involved life. Betty is a polio victim. She contracted polio when she was two years old and spent several months in the hospital. She has limited use of her right arm and a noticeable limp in her right leg.

In spite of her illness, Betty's spirits have remained intact and she has never felt inferior. Her three older brothers had always been encouraged by her parents to treat Betty just as they would have otherwise and not as a weakling. These three active, healthy boys wanted to make sure that Betty was able to stand up for herself. They engaged her in vigorous play, took her swimming and bowling, and involved her in many of their activities.

Sometimes, Betty would be the only girl in the group, and her brothers were proud of her accomplishments. They were especially proud when Betty would excel in activities that others felt she could not handle. Betty came to be better at some things, such as ping-pong, than any of the neighborhood kids.

Betty continues all these activities today. However, there are some things she cannot do—at least not for long periods of time. She has limited endurance. For example, when she tries to hike, the muscles in her right leg simply give out from overexertion.

Betty also has some physical difficulties in going to school. One of these is carrying armloads of books and supplies. Doors are sometimes difficult or impossible for her to open. She sometimes has trouble climbing the stairs. During winter, it can be very hard for her to maneuver on ice and snow. Last year, she fell twice and was unable to pick herself up because the ice was so slippery. She sometimes uses a cane to navigate.
Betty wants very much to be independent, in spite of the physical difficulties she has—or perhaps because of them. She sometimes becomes upset when people want to do things for her that she is quite capable of doing herself. Often, when she tells people that she can manage, they are offended. This usually makes her feel that no one understands what it is like to have a disability like hers.

On the other hand, when she really does need someone's help, she is usually too embarrassed to ask for it. She often feels that people will pity her if she asks for help. She would like to have a friend to talk to who could understand this feeling of hers.

Betty now lives at home with her parents and younger brother. She enjoys all kinds of needlecrafts and has made numerous draperies, bedspreads, pillows, and macramé hangings to decorate the Carpenter home. She beams with pride whenever guests admire any of her work.

Betty plans to get her own apartment as soon as she finishes school and gets a steady job. She looks forward to having friends and family over to her own place. She dates, but her primary interest is in finishing school so that she can be self-supporting. For her, everything else is secondary.

**Part II: Peer Acceptance Plan 1.**

1. **Identify the specific information you would give your students about Betty's special condition.**

2. **Identify other information you would give students about Betty.**

3. **How would you set an example of acceptance for your students?**

4. **What activities would you provide to allow all your students to interact, cooperate, and relate to one another?**

5. **How would you help Betty deal with her feeling of isolation—that no one understands her and that she needs a friend to talk to her?**
Section 6:

BASIC PRINCIPLES IN INSTRUCTING STUDENTS WITH SPECIAL NEEDS
Vocational teachers who have students with special needs in their classes will need to take unusual care in delivering instruction to them. The techniques of instruction will have to be selected thoughtfully and applied with precision in order to (1) increase learning and (2) foster the kind of personal growth and development that are so much needed by students with special needs.

These instructional techniques are not necessarily uniquely designed for use with students with special needs, however. They are basically the same techniques that any good teacher uses. Good teaching promotes learning, whether the students who receive it are "average," healthy, and well cared for, or are students who carry with them a whole variety of Special Needs.

The instructional techniques that you, as a vocational teacher, will be using with students with special needs do not have to be learned separately, over and above those you normally apply to your subject matter and your other students. Rather you will need to modify and adapt the way in which you go about teaching, seeking the best methods by which to reach the individuals in your classes. Much of the selection and application process is a matter of common sense, personal sensitivity, and good judgment.

In this module, you will be reminded about a number of teaching techniques with which you are probably familiar. Your attention will be drawn to the importance of the techniques to students with special needs. And you will be given some examples of how the teaching techniques might be used in teaching certain students with special needs.

There is some hazard in this. You may mistakenly infer that there is some sort of prescribed method that should be used with each group of special students--for slower learners you use this set of techniques; for physically disabled students, that set. Such is not at all the intent of the module. It is true that in writing about students with special needs it may be convenient to deal with categories or groups. But as a teacher you must deal with individuals--each a unique and worthy person, each needing your special skill and help.

Identifying students, as, for example, having physical disabilities is useful in determining some Special Needs that they might have. However, you are cautioned not to label your students with special needs as being only "economically disadvantaged" or "physically disabled" or "nontraditional." Such labeling can do a great disservice to students by placing them exclusively in a group with whom they share just one characteristic. Concentrate instead on the uniqueness of individuals and attempt to work with them, using thoroughly learned techniques to solve the particular problems they pose.

There are some basic principles of instruction that apply equally well to most of the students with special needs you are likely to meet in your classes, as well as to the so-called "average" students. In addition, among the various broad categories of special techniques available, individualizing instruction holds great potential for dealing with the unique needs of your students. Finally, the principle of reinforcement of learning can be effectively applied to a wide range of instructional situations and student characteristics. Each of these three broad topics will be dealt with here, with some recommendations for particular techniques and their application.
Teaming

It is important to remember that, in planning and delivering instruction for students with special needs, you are not alone. There are probably others in your school who have special skills, upon whom you can call.

If you are teaching students with limited English proficiency, for example, you can work with a language instructor to devise instruction sheets and audiovisual materials in the student's native language. A paraprofessional may be able to come to your laboratory sessions to work individually with a student who requires much direction and repetition. Other instructors, school counselors, aides and paraprofessionals, volunteers from the community, itinerant teachers, and interpreters may be available to contribute their expertise to your instructional problem.

Sometimes you may wish to work with one of these individuals on one particular problem. If you are working with several students with special needs, it may be good to use a team approach. That is, one or more others can share responsibility with you in delivering the instruction best suited to your students' needs. You as the teacher will benefit from the pooling of effort and resources, which should result in increased student learning. This is important to students with special needs; involvement of a variety of persons, as well as the various approaches they can bring, can more readily provide the attention, direction, and personal concern they need.

Variety

The advantages of variety also extend to the instructional techniques that you individually incorporate in your teaching of students with special needs. It is easy to become limited to using a few techniques you know you can use well and feel comfortable in using. However, to meet the learning styles of your students with special needs, you should expand your repertory.

For the slower learner, you might prepare a hands-on experience with clearly defined steps. For the more capable learner, you might simply serve as a resource person while the student devises and completes his/her own project on, for instance, an original design. You might give an oral examination to a student with limited English proficiency and use an advanced retraining student to assess the performance of a beginner.

The wider the variety of teaching techniques you have available to you, the more likely you are to be able to match your instruction to the specific needs of your students. Variety also will help students who have short interest and attention spans to maintain interest in the subject.

Pacing

In a way, pace is another form of variety in instruction. Pace is the rate or speed of instruction. It may refer to the rate at which you deliver a single lesson or to the rapidity with which one unit of instruction or one activity follows another. In either case, the good teacher is able to control the pace at which instructional events take place in the classroom or laboratory and to prevent them from moving in a helter-skelter fashion.

In presenting a demonstration, for instance, you might slow the procedure, frequently pausing to provide time for the student with limited English proficiency to formulate a question. In group activities, the closing of one activity and the beginning of another should permit all students to complete the first set of tasks before being given new ones.
The proper pace may well vary even for one student. For example, a wheelchair-bound student might be given extra time to complete a physically demanding task that involves considerable movement around the shop. That same student might be held to a fast pace in doing a writing assignment.

Students with special needs, in general, should be individually paced in their learning to maintain their progress and interest, yet avoid the frustrations and failure that undue pressure may cause.

**Orientation**

Early in the program, you will undoubtedly be orienting your whole class to (1) your particular classroom and laboratory, (2) the procedures you will be using, and (3) the instructional expectations you have for your students. The students with special needs in your class will be participating in this orientation. But if a general orientation is inadequate for them, they may require some additional attention.

For example, physically disabled students may need additional orientation on how they are to operate certain machines, where controls are located, or where they are to be seated during lectures and demonstrations. In such programs as cosmetology, food services, and health occupations, some students may need to be oriented to the instructor's expectations about their personal hygiene and grooming.

In planning an orientation, it is important that the characteristics of each student with special needs be considered and that nothing be taken for granted. The orientation should be designed to get each student off to a successful and safe start.

As a part of orientation, you will probably discuss the program or course objectives with your students. Those objectives may have been modified somewhat to meet the needs of students with special needs. Each student with special needs should understand the nature of those differences as they apply to him/her. If there are some general objectives that certain students will not be expected to meet for any reason, they should know that. If, because a student has different occupational goals, there are additional objectives to be met, that should be made clear from the start.

Not only should the objectives be clear to the students involved, but also those students should be in agreement with them so they do not perceive them as condescending, patronizing, or inappropriate. Only when students understand the program goals and objectives—and see them as relevant and attainable—will they be able to give them their best effort.

**Consistency and Fairness**

Related to the need for adequate orientation is the general principle that all students should be treated consistently and fairly. It is possible, unintentionally, to treat the student with special needs unfairly in two diametrically opposite ways: (1) by placing unreasonable demands on a student who is incapable of meeting those demands or (2) by making such great concessions that the student feels set apart from the peer group and patronized by the teacher. Either of these unfair treatments may be committed with the best intentions—prompted by anxiety for the student and ignorance of the student's actual needs. But the effect is destructive nonetheless.
In order to ensure consistency and fairness to all students (including those considered to be "average"), routine shop tasks should be rotated so that everyone takes a turn at each one. Similarly, leadership roles or other responsibilities should be assigned so that all students have equal opportunity to experience these roles.

In secondary schools, the same level of behavior should be expected of students with special needs as of others, and disciplinary measures should be applied in an even-handed way. Similarly, a student with prior skill in an area (through previous employment or training) should be required to follow the same safety procedures as the rest of the class, regardless of the expertise he/she supposedly has. Good safety procedures are good safety procedures for everyone. It is also a matter of fairness to ensure that all students are continually involved in relevant and valuable learning activities. Time-on-task (the amount of time a student spends on a learning task) has been shown to be an important factor in the rate of student learning. Many students with special needs can profit greatly by increasing the time they are actually in contact with and paying attention to the learning situation. This means that keeping students "involved" by using time-filling activities or busy work is not acceptable. You must design tasks related to the objectives to be achieved and then work constantly and consistently with the students to keep them on task.

Integration

One of your objectives in dealing with students who have Special Needs should be to instill in them pride in their work, in themselves, and in the classroom group to which they belong. This feeling of self-worth is most crucial to the development of those who have been constantly set apart and who have so often tasted failure. You will need to make the disabled, the disadvantaged—any students who are "different"—know that they are integral members of your class.

One way to do this is to facilitate interaction among your students through large-group and small-group discussion. It is important to provide an opportunity—even for the student who has difficulty in communicating—to contribute something to the process. The artistic disabled student could be assigned to do a bulletin board. Slower learners can be assigned regular tasks—such as passing out supplies—that give them responsibility and a sense of pride in being a part of the group.

Remember, however, the principle of fairness. Certainly, it is true that you should assign tasks to students that they are capable of performing successfully. However, you need to be careful not to relegate all the boring, menial tasks to the mentally retarded student, while the other students are assigned more interesting things.

In addition, some students with special needs (e.g., those in programs nontraditional for their sex, the mentally retarded, the disabled, and those with limited English proficiency) may need to be actively encouraged to take a role of equality in their group. The vocational student organization is an excellent vehicle for accomplishing this. Through your leadership, students with special needs may become fully involved in vocational student organization activities and eventually take some positions of responsibility.

Simply requiring or encouraging membership in the organization is not enough, however. You must work to ensure that the students have remedial help (e.g., extra sessions on parliamentary procedure) if they need it to participate fully. You should also work with the organization to
ensure that its activities are designed to provide opportunities for all students to be actively involved. Activities should draw on and develop each student's talents and strengths.

**Individualization**

The principles of individualizing instruction should be well known to you through your previous study of teaching and perhaps through your own experience. Individualization involves setting objectives and providing learning experiences to achieve those objectives according to the needs, interests, and abilities of the student. Individualization has, of course, been accepted in education as a valuable instructional approach and is widely practiced in vocational education programs. It must be given an even more thorough application in working with students with special needs.

Do not confuse individualized instruction with having each student doing something completely different. Individualization does mean meeting individual needs. But these needs can be met, generally, through a mix of large-group, small-group, and individual activities. Students share needs. For the most part, individualizing instruction for students with special needs is simply a matter of using the usual methods and materials in a more organized and thorough fashion.

To begin with, your total program should be based on an analysis of the tasks or competencies required in the occupation. Because of this, your students with special needs can be accommodated in the program with a minimum of disruption or restructuring. The program competencies, for one thing, can be reviewed in the light of the students' capabilities and occupational goals. They can then be readily selected and sequenced to suit those unique capabilities and goals--keeping in mind occupational requirements, of course.

The use of multimedia learning packages is now becoming widespread and is a boon to the teacher who is trying to provide individualized instruction. Students with various special needs can use well-designed learning packages (e.g., learning activity packages, modules, or learning guides).

Hearing-impaired students, for example, can use print materials and other visuals to achieve competence in the designated skill. Visually impaired students and those with reading deficiencies can profit from the audio versions of the information sheets. Slower and more capable learners can individually proceed at their own best rate to achieve success.

You may wish to supplement the packages to provide the range of learning activities required, but this is a relatively easy matter once the basic package is developed.

Another form of individualized instruction- computer-assisted instruction (CAI)--is available in some schools and should be used wherever possible. CAI has been proven effective where thoroughly prepared and tested programs have been developed. Long associated with high-level learning in the technological fields, programs are now available for various basic skills and beginning learners. Of course, time of learning is not a factor in CAI, but success is. Working with a computer terminal can be enormously fascinating to certain types of students, holding their attention and keeping them on task as almost nothing else can.

Even without computer-assisted instruction or well-developed learning packages, however, you can do much to individualize instruction through simple common-sense strategies. Students with limited English proficiency can be given assignments that help them not only to achieve the occupational skill but also to learn new vocabulary words. Students with different racial/ethnic
backgrounds can go on personal field trips or visits designed to help them understand the conditions of the work place and expectations of American employers.

On a day-to-day level, you can schedule some time, even though brief, to observe and confer with each student during every laboratory period. As you recognize impediments to learning, you can repeat a short demonstration for a student, solve a problem about an inaccessible machine control, or create a different project activity to help the student master a new skill. These kinds of quick and discrete teaching events can clear the path for learning and help students with special needs avoid the sense of crushing frustration and failure caused by problems they have no way of solving themselves.

You should not forget the possibility of having students help other students as a way to increase individualization. Experienced and mature individuals can work with beginners, either in a structured "buddy system" or in informal situations that you set up to meet a need. An Anglo student who speaks Spanish, for example, can be paired with a newly arrived Spanish-speaking student, to the benefit of both. A sensory impaired student can use the eyes or ears of a fellow student to get around in the lab or read the assignments.

For accelerated students in particular, the use of case studies can be a strategy for individualization. The case studies may be hypothetical ones that you develop, or they may be based on students' experiences on the job. Probably the greatest benefit of case studies is that they are a form of simulation and can be used to give students an opportunity to work on their own to solve real-world problems in a creative way.

**Reinforcement**

Every time you give a word of praise to a student who has done a good job, award a high rating for a project, nod approvingly as a student answers a question correctly, or display a sample of a student's work, you are providing positive reinforcement of learning. The basic principles of reinforcement are now a standard feature of learning theory and are commonly used by good teachers.

Briefly, positive reinforcement means providing some form of reward when desired behavior is demonstrated, on the principle that such behavior will then be repeated. Rewards can take the form of approval, praise, privileges, or tangible gifts--whatever the student perceives as valuable and desirable.

It is widely recognized that students who, for whatever reason, have difficulty in succeeding respond more positively to reinforcement than high achievers and more successful learners. Thus, as a vocational teacher with students with special needs--whose exceptionalities hinder their ability to succeed--you should certainly make generous use of positive reinforcement. Too often students with special needs have had few successes and have received infrequent positive reinforcement for what they have done.

All the means of positive reinforcement you regularly use in your teaching can be applied in teaching students with special needs. Some additions and changes in strategy may also be helpful.

For example, some students with special needs may need to be helped to accept delayed gratification- rewards that come after a period of time or after the completion of a long-term, complex task. Giving reinforcement frequently at first, then gradually lengthening the time between reinforcements can accomplish this. Early on, you can provide immediate and frequent
success experiences. As time goes on, you can increase the difficulty of and time allowed for the task so that success takes place at wider intervals.

In addition, constructive criticism, when it is needed, should not be withheld from the student with special needs. However, it should always be given in a positive manner. It is essential that the student understand that it is the action or product that is being criticized, not his/her value or worth as an individual.

In this regard, students must learn from you that some failure and some criticism are a normal and expected part of life. Failures will occur when they are on the job, and employers and supervisors will criticize their work. Thus, your own vocational program should help students achieve a healthy level of acceptance of temporary "failures" and criticism. You can increase your expectations gradually until a job-entry level of skill is achieved, providing regular feedback (a form of reinforcement) to students as they proceed. In this way, you can provide the supportive, accepting environment required to promote learning. At the same time, you will be developing students' feelings of self-worth and easing their transition into the real world.

The use of feedback deserves a further reminder. Some of your students, for example, may come from backgrounds that have provided few guides for growth and positive development. They will need constant feedback from you so they can learn what is acceptable and what is not acceptable. Some students with obvious, severe physical impairments may have been protected from the realities of life to such an extent that they have no accurate measure for knowing how well they are doing. You will need to correct and constructively criticize the work of the student on crutches just as you would others, even though providing this kind of equitable and real feedback may be painful to you at first.

Much can be done to provide positive reinforcement through the atmosphere you create in your vocational classroom and laboratory. Over a period of time, you can foster a nonthreatening learning environment--one that is relaxed rather than tense, where feelings can be expressed, where good ideas are accepted, where all students are treated with dignity, and where students can request special help without reluctance or embarrassment.

You yourself are the most critical factor in this situation, for you are the role model your students will tend to follow. If you treat a student with a severe disfigurement fairly and without discomfort or unease, your other students are more likely to do the same. If you accept the lone male student in a nursing class matter-of-factly, the possible tensions will be greatly reduced. If you encourage a nontraditional student to participate in leadership activities in your vocational student organization, acceptance by the group will be speeded.

There are other ways in which role models can be used to reinforce student learning. For example, a guest speaker who is black, and who has "made it" in your occupational area, can serve as a powerful role model and, therefore, reinforcement for an insecure black student.

Successful disabled workers can be used as resource persons as you work to modify your shop for disabled students. At the same time, they can provide reinforcement for those students. Outside experts, in general, can aid students in gaining a realistic view of the world of work and help them come to terms with their own potential and limitations.

It may not even be necessary to go outside your own program to find such persons. An experienced worker back for retraining can be encouraged to share with peers instruction-related
information and skills acquired through previous employment. An ex-offender preparing for a new occupation may be able to help other students through the insights he/she has gained.

Finally, you can reinforce learning by creating a positive environment—one in which students can grow personally. Slower learners can experience (perhaps for the first time) continued positive achievement and closure on a task. You can structure the work of the economically disadvantaged student so he/she can produce a valuable product or a useful service. Displaced homemakers in your program can, through success and reward, develop a pride of ownership—in their work and in themselves—which they have seldom had before.

CASE STUDY

Read the following case study describing how Blanca Caldera, a vocational teacher, applied the principles governing the provision of instruction to students with Special Needs. As you read, try to determine what Mrs. Caldera is doing right, what she is doing wrong, and what she should have done instead. Then prepare a written critique of Mrs. Caldera’s performance in applying these principles.

Blanca Caldera was very anxious about how she could possibly meet all the various needs of the students in her vocational class. One student, John, had been employed in a related area and did not, therefore, need some of the training she usually provided. Another student, Frankie, who was from an economically disadvantaged family, seemed to fail no matter what Mrs. Caldera tried. As soon as he failed, he lost interest. Two mentally retarded students, Blanche and Roberto, has been mainstreamed into her class. They were achieving slowly but taking up huge amounts of her time in the process. The rest of the students in the class fell somewhere in the so-called “average” range of needs and abilities.

Since funds were limited, Mrs. Caldera knew that she had none of the devices—computer-assisted instruction, learning packages, etc.—that would have allowed her to individualize instruction. So she planned instead to do the following. She would teach her classes according to her usual plans, which would work for the majority of the class. Then, she would use a buddy system, pairing both Blanche and Roberto with John to do any lab work. That way, John could provide the extra help needed, and at the same time, he would be productively involved until such time as she began to cover material that was new to him.

She put this plan into motion, and things seemed to be going well. She sensed some frustration on John’s part, but he was effective in working with Blanche and Roberto. He not only provided instruction but even made sure they cleaned up the lab area for the three of them at the end of each class. John was sometimes late to class, it’s true. But Mrs. Caldera decided not to make an issue of it since he didn’t need the material he was missing and was, after all, doing her a favor.

One day as she was monitoring work in the laboratory, Mrs. Caldera noticed that Blanche and Roberto weren’t keeping up at all, despite John’s efforts, and that Frankie had ruined his assigned materials and, thus, was sitting idle and daydreaming. Frustrated, she had the students finish up and then reassembled the students into a large group. She explained, once again, the objectives of the assignment, what exactly they were supposed to do, why it was important, and how crucial it was for everyone to keep up.

She didn’t want to discourage Blanche and Roberto, so she mentioned that she was very pleased with their perseverance. She said that she knew it wasn’t easy for them and she appreciated their willingness to keep trying.
Then, looking at Frankie, she said that materials were limited and expensive—that students who didn’t care enough not to waste materials, who weren’t even interested, might do well to reconsider either their attitudes or their program choice. Finally, she publicly thanked John for all his efforts in helping Blanche and Roberto.

She dismissed class, noting that she had great hopes for their work tomorrow. John left class first, alone as usual. Then the rest of the students left, with Blanche and Roberto looking a little discouraged and Frankie looking nonchalant and unimpressed as always. Mrs. Caldera was very frustrated. What, she wondered, am I going to do?
The types of specialized instruction you will need to provide in order to meet the needs of your students with special needs can be clustered into three areas: remediation, accommodation, and acceleration. For information on the techniques that can be used in each of these three areas, read the following information sheet.

**REMEDICATION, ACCOMMODATION, AND ACCELERATION**

Students who have specific learning difficulties may require either of two kinds of special instruction. They may need remediation, in which clearly defined deficiencies are attacked and corrected. Or they may require accommodation, in which you as the teacher change, modify, or adapt instructional strategies and techniques to best meet their existing abilities.

For some of your students, who may be especially fast learners or who have a wealth of life experience on which to draw, you will need to use techniques designed to accelerate progress, allowing the students to move ahead at a more rapid pace. The remainder of this information sheet explains these three special approaches to instruction.

**Remediation Techniques**

Remediation techniques are those that are designed to correct a rectifiable learning deficiency. For example, a student, new to the United States from the West Indies, may have difficulty with skills that use the U.S. measurement system rather than the metric. That student can undoubtedly succeed in the skills to be covered in your class if he or she has some extra help.

Extra one-to-one help in class from you or a peer can provide such help. Or it can be furnished through the use of supplementary texts, audiovisuals, games, and so on. It can be supplied through specially designed outside assignments. Or it can be offered through special remedial classes or tutoring.

Generally, providing or arranging for the necessary remediation is a simple task and well worth the effort if it succeeds in preparing students to participate fully and productively in the class.

**In-class Remediation**

Your in-class remedial resources are plentiful so long as you do not limit your thinking to what you alone can do. Consider the following students and the remedial help they need:

- Students whose math skills aren't quite up to par (e.g., perhaps a mentally retarded student or a displaced homemaker, away from formal education for 20 years, whose skills are rusty)
- Students who are unfamiliar with U.S. measurements (e.g., the student from the West Indies)
- Students whose backgrounds did not expose them to tools and equipment usually considered common knowledge (e.g., an auto mechanics student who has never had a car to tinker with because his/her family used public transportation rather than cars)
- Students whose parents didn't work (because of a disability or lack of education or for whatever reason) and who have no realistic frame of reference regarding the world of work

Students who can read, but only slowly (e.g., a student for whom English is a second language, a mentally retarded student, or an economically disadvantaged student in whose home books and reading were nonexistent)
These and other related problems can be treated in a variety of ways within the classroom. At times when students are working on a small-group or individual basis (in the laboratory or in a competency-based program, for example), you have the opportunity to spend small amounts of time with individual students, addressing problem areas requiring remediation. This doesn't require you to do anything you're not already doing as a good teacher. You're just focusing your attention--during your one-to-one or small-group contacts with students--on these specific problems.

For example, the home economics teacher would normally circulate throughout the food lab while students, working alone or in teams, perform a lab assignment, such as preparing an asparagus quiche. The teacher monitors the work, assesses progress, makes suggestions, and provides help as needed. If the student who was unfamiliar with U.S. measurements were in this lab, the teacher could use this time to provide a little remediation on measurements, at a time when it is especially relevant. If the student who understands English only when it is spoken slowly were in this lab, the teacher could use this time to ensure that the student had, in fact, understood the pre-lab lesson and instructions.

Or, consider those times when students are doing reading assignments in class. This is a perfect time for the teacher to work individually with the student who reads slowly, to give him/her a little remedial reading help.

A student's peers can also provide some of the needed remediation. That student in the home economics lab, for example, could be teamed with one or more students who are competent in measurement. Remember, though, the act of "teaming" does not automatically result in the provision of remedial help. Anytime you wish to have students instruct other students, you need to prepare them for this task. The student-instructors need to understand their role and the assistance needed. The student requiring remediation needs to understand how that remediation will be provided and what is expected of him/her in the process.

Use of peers or other tutors (e.g., paraprofessionals, aides, and volunteers) is not limited to the laboratory. Anytime students are working individually or in small groups, teaming or tutoring can occur. Anytime one student achieves an objective and masters a skill more quickly than other class members, that student could be asked to help another student requiring remediation. If not overused, this is of help to both students since the student-instructor reinforces his/her own skill in the process of helping another.

One-to-one remediation is not always available or of enough help, however. Neither is it always the most efficient technique. Some students need more help than can be provided in class on a one-to-one basis. Other students can most easily and quickly get the help they need by working on their own.

To help these students, instructional materials are needed. You need to make available to students a variety of materials (e.g., texts, workbooks, programmed materials, worksheets, instructional games, 8-mm film loops, videotapes, slide/tapes, other materials) that students can use, on their own, to get the extra help they need. These can be commercially prepared or teacher-made materials.

A student needing remedial help in math, for example, can be given teacher-made worksheets specifically designed to provide instruction and practice in his/her problem areas. Students needing simple materials, with high-motivation characteristics, can be given instructional games.
Bear in mind that remediation need not be lengthy. The student who isn't familiar with the "common knowledge" tools and equipment of the occupation may need only to see a film loop covering that topic or to have a handout showing those items and their names. By spending a little time with the film loop or the handout, this student may be ready to go.

Students' knowledge and skill levels may not be the only things requiring remediation in class. The Special Needs of some students cause them to develop behavioral problems, which can interfere with their ability to learn and disrupt the class. Disabled students who have been overly pampered, emotionally immature mentally retarded students, or street-wise economically disadvantaged students can all, sometimes, present behavior problems. These problems must be solved, both for the class to function smoothly and for the student to function on the job later.

Severe problems, of course, will need to be handled outside the class, perhaps by trained specialists. For many problems, however, your use of behavior contracting can be very effective. This simply means that you explain to the student why the behavior is unacceptable and then work with him/her to develop a contract specifying how that behavior is to change. The student then signs the contract, agreeing to its terms. This places the responsibility for change where it belongs-on the student.

Change is much more likely to occur when it is self-imposed than when it is imposed from outside. The motivation to change is enhanced because the teacher is not saying in front of everyone, "John, please stop talking out." Instead, the teacher is saying, in effect, "John, I trust you to be responsible-to change your own behavior." Additional motivation can be provided, if necessary, by specifying a reward the student can earn by fulfilling the contract.

**Outside Assignments**

Assignments to be completed outside the classroom/laboratory can be specially designed to provide the necessary remedial help. Of course, the print materials (e.g., handouts, worksheets, texts) mentioned in the previous sections can be used as outside assignments. In addition, however, outside projects can be devised--perhaps as part of vocational student organization activities--in order to provide needed remediation.

One example of such an assignment would be a community involvement project requiring students to repeatedly apply the skills in which they need remediation. The student needing remedial help in English, for example, could participate in a project that requires him/her to speak the language. Perhaps volunteer work, such as visiting the elderly or the hospitalized, would provide the needed practice. Or tutoring youngsters in, for example, math might be another example.

Similarly, the student who is just encountering carpentry tools and equipment for the first time could reinforce his/her new skill in using those simple tools by building a sandbox for the neighborhood park.

For the students who have no realistic frame of reference concerning the world of work, a different type of outside assignment is needed. These students need opportunities to visit job sites or encouragement to arrange for and make such visits on their own.
In order to ensure that such visits are productive, you need to follow the principles guiding the direction of any field trip. The job-site personnel need to have a clear understanding of the purpose of the visit. They need to plan specific activities to meet that purpose (e.g., conducting a guided tour or assigning the student to a specific employee). The student, too, needs to have a clear idea of the purpose of the visit and what he or she needs to do to prepare for it (e.g., prepare a list of questions to be answered).

Incidentally, the benefits of such visits can be brought back into the classroom and shared very easily. Students can be asked to prepare a report of each visit made. (You might want to specify a particular report format.) Then, if many students need remediation in this area--exposure to the world of work--students could present these reports orally. These reports can also be placed in a file, which present and future students can use to gain an understanding of what it's really like on the job.

**Special Remedial Classes or Tutoring**

One of the special remedial techniques available to you--in varying degrees, depending on your situation--is the use of other specialists. These are people who are specially trained to provide regular, intensive remedial instruction for specific problems.

Your secondary or postsecondary school may have remedial reading instructors, English-as-a-Second-Language (ESL) teachers, a corps of paid or volunteer tutors for specific skills such as math, and so on. These specialists may also be available within the community.

In making use of remedial services, your role is to do the following:

- Determine exactly what remedial instruction services are available within the school and community. (Your school should maintain a list of such services, perhaps in the guidance office.)
- Know the prescribed procedures for referring students to these services.
- Alert students to the wealth of services available to them.
- Refer students for this sort of intensive remediation when needed, or encourage them to refer themselves.

**Accommodation Techniques**

Accommodation techniques are those that are designed to help you tailor your instruction each day to the wide variety of Special Needs you must continue to meet. In other words, you cannot remediate or cure students' physical and sensory disabilities; they will continue to govern what those students can do. Your instruction, then, must be designed to accommodate those students' learning capabilities. If a student is visually impaired, for example, that limitation can be accommodated by never relying solely on visuals in your lessons.

Typical instructional accommodations that need to be made when you are working with students with special needs are use of or increased use of (1) concrete activities; (2) simplified activities; (3) multisensory, multimedia approaches; and (4) bilingual peers.
Concrete Activities

Students whose Special Needs (e.g., mental retardation, educationally impoverished backgrounds) are such that they are slower learners will generally benefit from activities that are as real and concrete as possible. Abstract concepts are usually hard for these students to grasp. Manipulative skill demonstrations and hands-on activities using actual objects and equipment (e.g., laboratory work, projects) can increase both the ability of these students to learn and the rate at which they learn.

Since these types of activities are a normal part of the vocational curriculum, this should present no problems. What may be necessary, however, is to increase your use of these activities, at least with those students who need them. Your objective should be to provide these students with the most real activity possible.

A manipulative skill demonstration on how to use a piece of equipment should work well, at least as a first step. These students may, however, need to be able to review the demonstration one or more times in order to master the skill. In keeping with the idea of providing concrete activities, it may not be helpful simply to review the steps orally with the students. They need to see it again. This can be accomplished in any number of ways. You can videotape the demonstration so students can view it later as often as needed. If your school has an active, well-funded media department, you could record the demonstration steps on slide/tape or 8-mm film loop. Or such media may be available commercially. A less sophisticated but effective alternative is to give students a simple handout illustrating and explaining each step of the manipulative skill.

Once again, although you are preparing these instructional supplements specifically to meet the needs of your students with special needs, remember that they can and will be used by other students also. You are not doing "extra work for just one or two students." You are expanding your instructional options to the potential benefit of all. The student, for example, who was absent during your demonstration can also benefit from the videotaped demonstration you made.

Following demonstrations, it is standard to provide students with an opportunity to practice and apply the skill. This kind of hands-on activity is very effective for slower learners. It is very important, however, to ensure that the tools and equipment you use in the demonstration and the students use in the laboratory are the most up to date possible. They should be those that the students will use on the job.

Think, for example, of a slower student you are training to use a simple word processor, which consists of an electric typewriter and an attached unit that stores information on magnetic cards. You can- not assume that he or she can transfer that skill to a different or more sophisticated word processor. These students tend to learn specifics (how to operate a particular machine), not general principles with which they can master similar machines. You'll need to help such a student apply his/her skills to other machines.

Consider also a presentation in which you point to the parts of a word processor, identify each by name, and explain what each part does. For some students in your class, who can relate their previous experience in working with other equipment to this new equipment, such a presentation may be enough. The slower student, however, will probably need to actually work with the machine, seeing what happens as each button is pushed.
Bear in mind that most of us learn best and most quickly by actually trying things out. The point here is that the "average" learner can manage, usually, with presentation followed later by practice. For the slower student, however, it is essential that the hands-on experience occur during the initial presentation for him/her to grasp the subject.

When working with actual objects is not possible, you will need to devise activities that approximate reality: simulations, role-plays, media, visuals. An in-class presentation on tractor maintenance, for example, could be supplemented with visuals or media showing pictures of actual tractors and their parts. They are not real, but they may be the next best things.

Similarly, instruction on customer contacts can be supplemented with role-plays in which students get a feel for working with, for example, a displeased customer. Instruction on the use of a cash register can be supplemented by student use of this machine in a simulated store setting. Once again, these are techniques often used in vocational classes, which work for all students, but which are essential for slower students.

Another type of real activity that may be required for students with special needs is exposure to the real world of work. Some of these students may have a very unrealistic view of the work place and what goes on there. Consider, for instance, the retarded student or the student who lives in a neighborhood in which few people are gainfully employed. These students may have developed a view of work entirely from what they have seen on television--where bank tellers are involved in exciting robberies, socialize a lot with their co-workers and never do any tedious, repetitive tasks.

Such students need exposure to the realities of work. Since they learn best not from presentations but from actual contact, you need to arrange, insofar as possible, to place them in actual job situations: through carefully planned and structured field trips, job-site visits, and on-the-job training.

**Simplified Activities**

Instruction designed to accommodate the needs of a student who learns more slowly in a particular area may also need to be simplified. This can be accomplished by changing the level or the pace.

Some materials, for example, may need to be re-written at a lower reading level. Some materials, written at the appropriate reading level, may need to be adapted to supplement instructions. The steps in your manipulative skill demonstration, for example, may need to be broken down even further. Instead of simply telling students to multiply such and such, you may have to go through each step of the multiplication process, leaving nothing to chance, making no assumptions.

Pace can also be changed simply by going through instruction more slowly. You can slow down the speed at which you demonstrate skills and present information, watching students' faces to determine whether they are staying with you. You can stop a film periodically to allow students to assimilate the information in smaller doses. During each break, you can review what has been shown thus far and ask questions to be sure students have absorbed that much and are ready to go on.

Similarly, you can show a slide presentation more slowly, providing a more simplified and detailed explanation of each slide. This allows students time to comprehend each piece of
information, one at a time. Slides, films, demonstrations, and oral presentations can even be completely divided into smaller parts and presented, a part at a time, over a period of days.

**Multisensory, Multimedia Approaches**

In order to accommodate the needs of students who have sensory or physical disabilities, you must use techniques that allow them to learn through the senses they do have. In other words, you must use multisensory, multimedia approaches. Again, such approaches can only serve to benefit all students.

Assume, for example, that you have in your class a student who is visually impaired and a student who is hearing impaired and can read lips. You would of course place these students near the front of the class to minimize their limitations, but that is not enough.

If your presentation is entirely oral, how can the hearing-impaired student take notes? If he/she looks down to take notes, the lip-reading ceases. Supplementing your lecture with handouts can solve that problem. Showing a film will be of little value to this student if he or she cannot hear the narrative. The information provided in the film should be made available to the student through another medium, perhaps a textbook, a captioned slide presentation, or a script of the film.

Heavy reliance on visuals will be inappropriate for the visually impaired student. This student needs a great deal of oral instruction. If you show an important illustration in class, you need to supplement the visual, perhaps with an oral explanation so that the visually impaired student, too, can "see" the illustration.

In other words, you need to ensure that your instruction includes and is supplemented by a variety of media targeted to several senses in order for all students to receive the same information. The slower learner will benefit from the opportunity to learn by seeing, hearing, and touching, as will the so-called average student.

**Bilingual Peers and Others**

Another way to supplement and enhance instruction to meet the needs of students with special needs is to use individuals who can communicate using the most appropriate communication mode for these students. If you have a number of hearing-impaired students, for example, and if your school has the resources available, a person skilled in American sign language could be available during your major presentations to interpret the presentation into sign language as it is presented.

Similarly, students who are bilingual could be used--within reason--to work with students with limited English proficiency. For example, following a major presentation, the bilingual student could (with preparation) conduct a small-group review of the information. He/she could ensure, through the use of students' native language, that the information was clearly understood. This approach has value in that the primary source of information is in English--the language students will need in the world of work. Yet it acknowledges the limits of students' language development and provides the additional help needed.

Bilingual students could also be called on during a presentation or demonstration if a problem arises. If, for example, a key point is not understood by the student with limited English
proficiency, a brief explanation in that student's native language can move the lesson along with the minimum effort and time.

This approach is not limited to students whose native language is not English, either. Many English-speaking students speak dialects or nonstandard English, which hinders their ability to understand standard English. Students who understand both nonstandard and standard English can also help you communicate instructional content effectively.

**Acceleration Techniques**

Students who are advanced or learn rapidly—the gifted, talented, or those whose previous life and work experiences give them a head start—also need special attention. They need to be challenged to achieve all that they are capable of. They need activities to match the accelerated rates and levels of learning each can handle.

However, do not make the mistake of assuming that accelerated means unstructured. Even though these students may sometimes be working independently, their efforts require structure. Too often, independent work is less productive than it could be because students are left to flounder randomly. The gifted are just as capable as anyone else of procrastinating if they lack specific direction. And how do you and the student evaluate progress if there is no set goal?

Therefore, these students need to be exposed to the components of creative thought and the skills of divergent thinking. They need to learn to solve problems rationally and creatively and how to use that skill to design and conduct an independent study activity. They need to develop their leadership skills. Some of these skills can be developed in class; however, outside activities may be required to fully meet their needs.

**Creative Problem-Solving Skills**

By requiring these students to attack problems in the classroom, you can increase their problem-solving skills on a number of levels. The problems themselves can become increasingly more difficult. For exceptionally gifted/talented students, the problem to be solved may have no known solution. The problems may be designed to require students to discover, on their own, the general principles or other information that is part of the curriculum or to go beyond the curriculum. The solutions desired may be straightforward and prescribed initially; later they may be more creative. The use of case studies, troubleshooting techniques, discovery techniques, diagnostic techniques, or inquiry approaches could all be effective in helping these students develop their problem-solving skills.

Problem solving is a normal activity in the vocational class. Students are taught the steps in the problem-solving process (i.e., define the problem clearly, identify the relevant factors, gather the needed information, examine possible solutions, select tentative or alternative solutions, test the proposed solutions, and assess the results). They are then asked throughout the program or course to solve problems using this process: problems described in case studies, simulated problems, and actual problems.

For example, an agriculture student may need to solve a written case study problem involving what to feed livestock. An auto mechanics student may need to be able to diagnose/troubleshoot the problem of a car's engine, either a problem created by the teacher or one in a car brought in
from the outside for repair. A culinary arts student may need to be able to taste the bouillabaisse and identify the missing ingredient.

By involving all students in these kinds of activities, you are providing the basis that accelerated students need in order to attack more difficult problems. The problem-solving process works equally well regardless of the difficulty of the problem.

Your task, then, is to provide problems of increasing difficulty. You may develop special case studies for these students to cover the normal class work, with more subtle clues provided. The malfunction you build into the car's engine, for example, may be a little more difficult to identify or locate.

Easier still, jobs involving outside work are likely to have built-in problems at a more difficult level. The very talented cosmetology student can be assigned the customer with the problem hair (overbleaching or an irrepressible cowlick). The talented agriculture mechanics student can be asked to deal with a complicated problem on the program's tractor.

These are one-solution problems, but students can also learn to go beyond this level to creative problem solving involving solutions that depart from the "norm." This means that when students get to step four of the problem-solving process-identify solutions--they are being asked to go beyond the usually prescribed solution and to create new solutions. They can invent, for example, an improved tool, a tantalizing new recipe, a novel dress design, a stylish new hair design, an improved filing system- all in response to a problem situation.

There are built-in motivations to such activities. They can be great fun for both you and the student. You will be surprised how invigorating it can be to create such problems for students. It can spark your creativity as well as that of the students. And the student who has invented a new, usable product or design or menu will feel an enormous sense of pride and accomplishment, hard to duplicate through any other activity.

Your role in this process is to devise or provide the problems to be solved, ensuring that students can freely create, invent, and devise solutions without danger to themselves or others. By providing these problems regularly for students to attack individually or in small groups, you can help them learn to (1) "leave the beaten path" and develop solutions that are inventive and original and (2) adapt existing solutions to fit other uses--in other words to think creatively and divergently.

**Independent Study**

Independent study should be a natural extension of the kinds of problem solving described in the previous section. There, the problems were teacher-devised. Here, the student can identify and attempt to solve a problem of his/her own choosing.

To help students structure these activities, you could start by providing a list of prospective topics. Students can then select a topic from the list, use those topics to help them think of one of their own, or select a totally original topic with your approval.

It is then important to have each student plan, in writing, the limits of the independent study or research project. This plan needs to include a clear statement of the problem to be solved, the activities to be completed, and the final outcome to be produced (e.g., a product, an oral report, or a research report). Such a plan allows the student to stretch his/her creative wings within a
structure. His/her goals are clear, but the solution is yet to be discovered. The plan can also include target dates to aid the student in maintaining forward progress. Such a plan can also take the form of a contract in which the student agrees to complete a certain scope of work for a certain amount of credit or for a certain grade.

**Leadership Skills**

Students with advanced skills may be qualified for leadership positions on the basis of those skills. But they may be reluctant to take on such responsibilities or may lack the interpersonal skills required to serve in such roles. Some accelerated students have been isolated from their peers because of their supposed "differences." They do not, therefore, want to increase that isolation by being singled out by the teacher for leadership roles. Other gifted/talented students may be so advanced in their own special interest areas that they have a hard time understanding the difficulties experienced by others.

This does not mean that they shouldn't be considered for or encouraged to pursue leadership roles. You as a teacher can do two things to help. First, you can create an environment in which all students have opportunity for leadership positions at some level. All students, for example, get a turn at serving as shop supervisor for limited periods of time or at chairing a committee. Thus, the accelerated student is not set apart as different-as the only one capable of leadership.

Second, you can provide training for leadership. This training may be a normal part of the vocational student organization activities. In that case, you need only encourage the accelerated student to take advantage of this training. As a result of this training and reinforcement—as part of a group—the accelerated student may easily decide to seek a leadership role—one which he/she might have refused or resented had it been assigned by the teacher.

The most obvious in-class leadership role you might select for accelerated students is that of tutor or teaching assistant. All of the previous guidelines apply here. You certainly would be justified in having these students serve in these roles; their occupational skills may be excellent.

However, you need to provide all qualified students with an opportunity to serve as tutors or teaching assistants. You need to ensure that these are occasional roles—that these duties do not interfere with a student's own education.

Finally, you need to provide these students with adequate training to be effective tutors and teaching assistants. Knowing how to do something yourself does not mean you can explain to someone else. This may be especially true for the student who seems to learn effortlessly. In some cases, that student may have trouble spotting another student's problem area. Thus, training is required to help these students successfully instruct other students.

**Outside Activities**

Opportunities for challenge are also available through outside resources. You can help by identifying these opportunities and informing students about them. You can also offer support, encouragement, and reinforcement when students do participate.

This may not always be quite as simple as it sounds. It requires a strong self-concept—on the teacher's part—to accept that a student is accomplishing things at, perhaps, a higher level than the teacher does. You also need to expand your thinking beyond vocational education, per se, to identify these opportunities.
In terms of occupational skills, you could help really accelerated students locate such opportunities for advanced training or practice as the following:

- Classes offered in adult evening education programs or at local two- or four-year educational institutions.
- On-the-job training through mentorships, internships, or shadowing ("following" an employee around and observing what his/her job involves).
- Involvement in community programs or projects that require the student to apply and expand his/her occupational skills.

You can also help students locate challenges outside vocational education per se—challenges that nonetheless help the student occupationally. For example, you might identify such opportunities as the following:

- Leadership training programs.
- Programs designed to increase interpersonal skills.
- Clubs devoted to problem solving, debate, science fiction, futurism, or similar thought-provoking endeavors.
- Local, state, and national competitions that encourage creativity (e.g., contests sponsored by junior MENSA [a club for people with high IQs], creative problem-solving contests, essay-writing contests, speaking competitions, design competitions).

In short, by identifying and making use of the many techniques, materials, and other resources available to you as a teacher, you can provide good instruction to any student, whether that student needs remediation, accommodation, acceleration, or "regular" instruction. Good instruction isn't necessarily expensive. It just requires attention to individuals and their individual needs.
A CASE SITUATIONS

Each of the following case situations describes the Special Needs of a given student. Read each situation and then describe in writing what instructional techniques and activities would be appropriate to meet that student’s needs.

Case 1.

Rosa is an extremely bright and talented student, with a real aptitude for the skills she is learning. English is, however, her second language. Consequently she sometimes can't keep up with a complicated presentation or demonstration.

Case 2.

Charley is mentally retarded. In an attempt to meet Charley’s needs, his teacher selected a 50-minute film, which covered the necessary information using very simple visuals and simple explanations. However, when the teacher questioned Charley later, it became clear that Charley had learned very little from the film.

Case 3.

Maude is considered gifted, but she finds this a burden. All she really wants is to be one of the girls. She has discovered that some of the students will accept her if she gives the teacher a hard time. With her quick mind and verbal skill, this is easy.

Case 4.

Paula is progressively losing her sight. She can still see the chalkboard but it is a continual strain for her.

Case 5.

Peter third generation American and is bilingual, speaking both English and Spanish fluently. He is an average student in some areas such as math, but when it comes to working on automobile transmissions, he is way ahead of his teacher.

Case 6.

Wanda is mentally retarded. She achieved well in business class and was placed on the job through a co-op program. Her evaluations on the job are not promising, however. Her on-the-job instructor reports that she cannot use the adding machine, although you know full well that she passed the competency test covering that skill in class.
Case 7.

Doug has been totally deaf since birth, but his parents have sheltered him from the possible cruelties of the real world and have provided him with the best teachers of the deaf. Doug signs and reads lips fluently.

Case 8.

Julio comes from a low-income family in the inner city. He is a good student and is determined to earn lots of money. He doesn't want to start at the bottom of the employment ladder. He figures that, with his skills and drive, he can start at the top—or pretty close to it.
Section 7:

TECHNIQUES FOR TEACHING
EMPLOYABILITY SKILLS
TECHNIQUES FOR TEACHING EMPLOYABILITY SKILLS

Preparing students for the world of work involves more than training them in the technical skills required. Students with Special Needs tend to require additional help in locating and obtaining employment and in adjusting to the world of work. These students may have problems such as the following:

- Poor work attitudes
- Cultural differences (traits, life-styles, characteristics)
- Lack of basic skills (reading, writing, arithmetic, physical dexterity)
- Lack of knowledge about the world of work
- Lack of job-seeking/obtaining skills

Some students have a poor understanding of the concept of work; they do not understand the benefits of working. This could be due to any number of reasons. The student may come from a home where the income results entirely from welfare monies, perhaps because the father is disabled or the mother is unskilled and is raising the family alone. Thus, the student has no role model for working as a necessary daily activity.

Or the student may be a newly single woman--either as a result of a divorce or death--who has never thought of herself as a breadwinner. Or the student could be mentally or physically disabled and unused to the idea that he or she has anything to contribute in the world of work.

Other students may not understand the need for developing cooperative working relationships in their places of employment. They may feel that it is necessary only to do their jobs, and they may not feel that being compatible with their co-workers is part of those jobs. However, many jobs require that several people work together in order to complete a task.

For example, on the assembly line each employee must perform at a certain rate of speed so the item can move on to the next phase. If some workers spend their time arguing or joking, they slow down production and create an uncomfortable environment for everyone.

Another problem may be that some students are unaware that their attitudes toward themselves and employment are reflected in their appearance and attire. For instance, if a young man attends an interview wearing jeans and with dirty, uncombed hair, the employer may feel he has a low regard for himself that will carry over to the job. Although the student may be very capable, his appearance tells the prospective employer the opposite. Some students, perhaps because of their social or economic backgrounds, may not understand the importance of good grooming in the world of work.

Praise and Encouragement

There are several techniques you can use to help students develop a positive work attitude. One way to promote acceptable behavior is with praise and encouragement. For example, assume that you have a student who is consistently late for class. You need to point out that an employer will expect him to be on time every day. When he is prompt, you should mention it and encourage him to continue. However, you should be careful not to overdo the praise, thereby embarrassing the student or appearing to make fun of him.
Perhaps another student neglects her appearance. You should explain the need for good grooming on the job and compliment her when she is properly dressed. Also, you can praise students for attending class regularly and for maintaining good relationships with others. Constant encouragement from you will make students more aware of what behavior-indicative of work attitudes-is acceptable.

You should also help students with Special Needs to understand the need for responsibility in class and how it relates to employment. The auto mechanics instructor should require students to care for their tools and clean up their work area. He or she should explain that employers will expect them to perform such tasks on the job.

Perhaps a drafting instructor has a mentally retarded student in a class. She may not be able to do detailed drawings but can handle other necessary phases of the job. The instructor could place her in charge of one aspect of the class, such as operating the blueprint machine. Having sole responsibility for that task should help her develop pride in her work and prepare her for employment.

In addition, you should encourage students with Special Needs to accept responsibility for their actions in class. If they arrive late, make them responsible for finding out the homework assignments and the material already covered. Set a due date for a project or report but don't remind them of it every day.

Some students may need your direction for a longer period of time; however, you need gradually to increase their level of responsibility. By helping them to assume more control over their lives, you will be preparing them for the responsibilities they will have to shoulder in the work world. Explain that employers will not tolerate tardiness or having work assignments completed late. In class they are only reprimanded for such behavior; on the job they may be fired.

You as Role Model

Another technique you can employ is to be a role model for positive behavior. You may be an important adult in the lives of your students with Special Needs. As such, you exert a great deal of influence on them. Your attitude and the way you act in class are constant examples of behavior on the job, either good or bad. Regardless of what you say, your actions will probably make a lasting impression on your students.

Your performance in class should demonstrate the type of behavior that is acceptable in the world of work. For example, you should use proper English and communicate at an appropriate level. If you speak ungrammatically or use slang terms, you are telling students that such language is acceptable.

Also, you should dress appropriately for your position as teacher. You have told them that they need to be concerned about their appearance. If you are poorly groomed and dressed, you are contradicting yourself.

You can also help your students develop a positive attitude toward work if you show enthusiasm for your own job. You should show that you enjoy your occupation and act interested and motivated in class. As a role model, you should obey the school rules and policies and avoid criticizing the administration or other teachers. You can show respect for yourself and others by being pleasant and controlling your temper.
In addition, you should act confident about your knowledge and abilities but be willing to admit that you don't have all the answers. Your positive attitude will be apparent to students, who will probably equate it with the way they should relate to employment.

To help you in attempting to create a positive environment, you might want to develop and use a checklist in class (see Sample 1). You could fill out the checklist every day for one week and then evaluate your performance. You can use the sample checklist as is or as the basis for preparing your own.

**Lessons Covering the Concept of Work**

A third technique for helping students with Special Needs to develop positive work attitudes is to prepare lesson plans that include specific information about why people work and the need for positive work attitudes. For example, you might want to develop a lesson that describes the benefits of work--earning a living, gaining personal self-respect, and building self-confidence.

You could explain that the nation cannot function without qualified people to produce the goods and services that are consumed daily. Students need to understand that everything they buy--food, clothes, jewelry, records--is manufactured by people just like themselves. Also, they need to realize that working provides the money to buy these items, support oneself, and be financially independent.

Furthermore, you could discuss the feeling of accomplishment a person can attain by being an active participant in the adult world. For example, working can allow the mentally retarded to be a part of society and to be accepted by others. They can gain permanent independence to live their own lives and not have to rely on parents or guardians.

For the economically disadvantaged, working can offer an escape from poverty and state subsidies. The elderly can reenter the mainstream of life by working either full- or part-time. Recent studies indicate that people who stay active often live longer and are in better physical condition.

Included in the lesson could be a discussion of how working contributes to an individual's personal growth. Students with Special Needs can gain confidence by dealing with problems on the job and by associating with others. Assume that one of your students is a middle-aged woman who plans to reenter the labor force after an absence of many years. She is recently divorced and must support herself for the first time. As a result, she is unsure of her abilities and worries about competing in industry. By pointing out the skills she will possess after completing your program, you can do much to ease her feelings of inferiority and build her self-esteem.

Since some students with Special Needs may tend to enter the work force in menial, low-paying jobs, your lesson should help them develop a firm understanding of their capabilities. For example, if lower-level jobs are all they will ever be able to handle, they need to know that, in performing those jobs, they will be contributing, useful members of society. The mentally retarded student who learns only to operate the blueprint machine well has an important role to play in the world of work.

On the other hand, if these students have more advanced skills, you may need to help them (1) accurately identify the higher level of jobs they should be seeking and (2) prepare to successfully compete for those jobs.
In some cases, however, students with more advanced skills may need to learn how to "play the game"—entering at the lower level and then working hard and striving for the upper limits. A person can stay unemployed a long time looking for the perfect job, whereas he or she could be gaining valuable experience in a lower-level position and paving the way to advancement.

As a productive member of the work force, you are aware of the need for good grooming on the job, but as mentioned previously, some students with Special Needs may require help in this area. You could prepare a lesson on the dress and cleanliness requirements of industry.

Such a lesson might include films that show the proper attire for interviews or that depict how the appropriate clothing can be used to help minimize physical disabilities. These types of films may help a student who is confined to a wheelchair understand that wearing a suit or a sports coat can (1) boost his morale and self-confidence and (2) encourage employers to view him in the same way as other applicants.

Similarly, a student who is a member of a minority group or who is economically disadvantaged may not be quite in tune with the dress standards of business and industry. Use of films can point out that being neatly dressed can help open the door for an interview so that the student has an opportunity to describe his/her skills.

The good grooming lesson also could include examples of what many businesses expect of employees. For instance, restaurants often require workers to wash their hands frequently and to wear hair nets, while doctors and dentists want their assistants to maintain strict personal hygiene.
**SAMPLE I**

**POSITIVE ENVIRONMENT CHECKLIST**

<table>
<thead>
<tr>
<th>Name:</th>
<th>Date:</th>
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<tbody>
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</table>

**Directions:** Fill out the following checklist every day for one week. Place an X in the box beside each item that you accomplished on a given day. If an item was not applicable, place an N/A in the box. One column of boxes has been provided for each day of the week, Monday through Friday.

<table>
<thead>
<tr>
<th>Mon</th>
<th>Tues</th>
<th>Wed</th>
<th>Thur</th>
<th>Fri</th>
</tr>
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</table>

1. I praised students for the following accomplishments:
   a. coming to class on time
   b. attending class regularly
   c. being well groomed
   d. dressing properly
   e. maintaining good relationships with others
   f. completing projects on time
   g. participating in class
   h. following directions
   i. accepting criticism well
   j. speaking grammatically correct English

2. I insisted that students accept responsibility for the following tasks:
   a. completing assignments on time
   b. putting away tools and equipment
   c. keeping the work area clean

3. I acted as positive role model by:
   a. speaking grammatically correct English
   b. dressing appropriately for my position
   c. showing enthusiasm for my job.
   d. obeying school rules and policies.
   e. not criticizing the administrator or other teachers
   f. controlling my temper.
   g. being polite to others
   h. admitting when I’m wrong acting like an adult
Recognizing Cultural Differences

The United States has always been the "melting pot" of the world--the place where people of many nationalities live together. As a result, there are students from a variety of backgrounds and cultures attending schools in this country. These students may have unique attitudes toward work and may not understand the taboos related to employment.

Therefore, you should become aware of the attitudes of the various cultures toward work so you can prepare students for life in the American work force. For example, in certain Indian and Hispanic cultures there is no competition because cooperation is stressed. American businesses, on the other hand, generally consider competition to be healthy, and they often encourage it among employees. Consequently, Indian and Spanish students may have difficulty participating in the competitive world of American business without adequate preparation.

Furthermore, the Chinese have a strict hierarchy and power structure in which their leader has the authority. Thus, these students may tend not to respond to your directions or to the directions of a supervisor in the work force.

Also, you should identify possible conflicts between certain careers and students' cultural backgrounds. For example, assume that a teacher of food preparation has a student who is a Muslim. Since Muslims are forbidden to touch pork, this student may refuse to make any dishes that require the use of pork.

Therefore, the teacher would need to explain that many American restaurants serve pork and that the student will have to deal with that situation on the job. Or the teacher might suggest that the student specialize in an area not involved with meat, such as pastry chef.

A postsecondary instructor, who is trying to place students in medical assisting jobs in local hospitals and convalescent centers, could have trouble if one student is from a culture in which the elderly are kept at home and cared for by the family. This student might have difficulty working in a nursing home, where treatment of the aged could be completely unacceptable to him.

Furthermore, students from different cultures may not understand that some types of behavior are frowned on and could cause problems for them with management and with their peers. To make students more aware of acceptable and unacceptable work behavior, you could hold class discussions on the subject.

For example, you could talk about the morning and afternoon coffee breaks as a traditional part of the workday. In some cultures, taking a work break is unheard of, and employees from these cultures may want to work through their breaks-to keep the adrenaline flowing. American employees, on the other hand, tend to look forward to those two 15-minute periods as a rest from the routine and may resent co-workers who do not follow tradition. To reinforce the behavior, you could build a short break into class time.

Or you might need to discuss the restrictions against drinking alcoholic beverages on the job or arriving for work under the influence of alcohol. Businesses expect employees to be sober and capable of doing their jobs. The same restrictions apply to the use of other drugs in the work setting.
Also, certain cultures place a different emphasis on time; no one is offended if appointments or meetings run up to an hour late. However, American businesses tend to live by the clock; employers will expect workers to arrive and leave at the appointed hour. Some students may have difficulty in relating to this concept because of their backgrounds.

For example, in many American businesses, employees work from 8:00 a.m. to 5:00 p.m., with an hour off for lunch. The Irish, on the other hand, begin their workday at 10:00 a.m., and the Spanish close offices for two hours every afternoon for a leisurely lunch and siesta. Thus, you may need to explain American work schedules and point out the consequences of being habitually late-termination.

Some students from different cultural backgrounds may have difficulty in accepting constructive criticism or the authority of the boss. Other cultures do not accept women as supervisors although that is a more common situation here.

To help these students understand the realities of the American work world, you can have role-playing sessions in which students act out both acceptable and unacceptable behaviors. They can practice giving and taking criticism and then comment on each other's performance. Such activities can help them understand what will be expected on the job.

**Developing Additional Employability Skills**

Many occupations require skills in addition to those taught in most vocational programs. For example, construction workers often need physical strength and stamina. Manual dexterity and coordination are important for jobs such as typist, machinist, or meat cutter.

Reading, writing, and oral communication are skills necessary for practically every occupation. Knowledge of basic mathematics is a valuable skill for jobs involving measurement and jobs involving money. Also important are those skills that supplement work, such as planning free time, organizing a household, preparing meals, or finding childcare.

Some of your students with Special Needs may need help in developing certain of these skills--skills that can make them more attractive to employers. You should identify any additional skills your students may need and refer them to appropriate programs to gain these skills and, thus, to increase their employability.

**Physical Strength**

In the logging industry, for example, it requires stamina and strength to climb trees and cut wood. Students interested in such careers may need to participate in special physical education courses to increase their strength. You could refer students to such courses, or you can encourage the school to offer such a course, if one does not exist.

Perhaps several female students are in vocational programs that require strength and good physical coordination. Many women can improve their coordination and strength by participating in sports. They can jog, swim, or play tennis or basketball to build muscles and develop stamina.

You should make students aware of the physical characteristics that they can change as well as those they cannot change. For example, the highway patrol has minimum height and maximum weight limits. The military requires eyesight that is good or correctable with glasses to a specified level. Students who do not meet these standards will not be able to work in those occupations. To
ensure that students know these requirements, you may want to invite guest speakers from several
different occupational areas to discuss the physical requirements of jobs in their industries.

**Academic Skills**

Improving students’ academic skills is very important. Many employees need to be able to read
written instructions or safety signs to perform their jobs properly. They also need to read
company memos, bulletin boards, hospitalization and insurance forms, and brochures explaining
benefits, vacation schedules, and retirement plans.

In many cases, employees must fill out time sheets, order forms, customer invoices, and requests
for supplies. Also, it is necessary for employees to talk to each other and to their supervisors.
They may need to answer questions, give directions, and greet customers.

Many employees also need basic math skills. Cashiers must make change, mechanics must
prepare bills for customers, and shop owners must pay for their merchandise. All employees
should be able to add, subtract, multiply, and divide so they’ll know if their paychecks are correct.
In their private lives, they'll need to make rent payments, buy food and clothing, and pay taxes.

As part of your regular vocational instruction, you should be helping students improve their basic
academic skills. However, some students with Special Needs may require more help than you can
provide. There are at least two ways in which you can get these students the help they need.

Many schools offer remedial classes in reading, writing, and mathematics. You should identify
the students with Special Needs in your program who may need to improve greatly in these areas
in order to be employable. You should then refer them to such courses. For example, assume that
a student in an auto mechanics program has difficulty with reading comprehension. In order for
her to perform in an actual job, she will need to be able to read work orders.

Or perhaps a student in a machine shop program has difficulty with simple mathematics. As a
machinist, he will need an understanding of math in order to use precision measuring instruments
for checking work. By referring such students to remedial classes, you will be helping them
improve in the academic skills that are important in many occupations.

Another option is to arrange for tutoring in certain subjects for those students with Special Needs
who need additional assistance. Your school may maintain lists of qualified tutors. Or you could
use the more advanced students in class to work with others on a "buddy" system. The "buddies"
can read together and discuss the assignments and directions you may give.

**Supplemental and Vocational Skills**

Some students with Special Needs may need help in developing survival skills-those skills
needed to organize their time and manage their personal lives. They may not realize that their
home lives can affect how well they perform their jobs. For example, students who live with their
parents may be unaccustomed to doing the shopping, cleaning the apartment or house, or washing
clothes. When called on to perform those tasks and go to work every day, they may feel
overwhelmed.

You could invite a time management specialist to speak to the class on how to schedule these
activities. Perhaps he/she could also talk about why working parents need to share household
responsibilities and reserve time for the children. Or he/she might explain how people schedule their outside activities--sports, hobbies, leisure time--around their work.

Students also may need help in perfecting the vocational skills required in their chosen careers. For example, a mentally retarded person who is studying auto body repair might need more instruction in identifying tools. You can spend additional time with him in class or appoint another student to work with him. Or you could prepare a simple chart, which pictures and names each tool, for the student to use in class.

Furthermore, women in nontraditional courses, such as auto mechanics, may need help learning technical terminology with which they are not familiar. You could suggest books to read on the subject and give them extra assistance in class. Also, you could show a film about auto mechanics or invite a local mechanic to talk to the class about his/her occupation. Such presentations would be of interest to all students.

In some cases, leadership skills may be necessary for employees in business and industry--for example, in positions that require supervising others or giving directions to co-workers. People who pursue a nursing career, for instance, will need to assign tasks to aids and volunteers and deal with patients. In a hospital setting, they may need to supervise other nurses and take command in crisis situations.

If you have secondary students who are lacking in leadership skills, you can recommend that they participate in vocational student organizations or in other youth organizations such as Junior Achievement, Boy Scouts or Girl Scouts of America, or church associations. These groups are designed to cultivate leadership, build responsibility, and provide a bridge to adulthood.

You can direct postsecondary students to vocational student organizations, assertiveness training programs, Dale Carnegie courses, or public speaking classes. Also, you can promote leadership in class by having students work in-groups and give oral presentations.

In most cases there are special programs available to help students improve their academic, vocational, and leadership skills. You should make yourself aware of the resources in your school and community and use them. Your students will benefit from the additional training and, as a result, will be better prepared to enter the world of work.

**Introducing the Realities of Employment**

Life on the job will be a new experience for many students with Special Needs. Those who have worked part-time will have some concept of what is expected, but others will need a full explanation. For example, students from different cultures may not be familiar with working conditions or their rights as employees. They may not know that industry must provide them with safety equipment, if necessary, and protect them from injury on the job.

Furthermore, older women entering the employment market for the first time may have no knowledge of typical salary ranges or opportunities for advancement. As a result, women tend to receive lower wages than men do. Research indicates that one reason for this occurrence is that women ask employers what salary they will receive, whereas men state what salary they will accept. Women have assumed that they must take what is offered just to get the job.

Thus, you need to plan experiences that will introduce students with Special Needs to the realities of the employment situation. Numerous techniques can be used for this purpose. Former students
and other representatives of the work force--employers, employees, and union representatives--can be asked to speak to the class. Students can be taken on field trips to various companies so they can see workers actually performing on the job.

Students can also be encouraged to attend school open houses, where they can meet and talk to local employers and employees. They can be informed about local trade shows that they could attend to learn about a particular business or industry.

You could present short units of instruction concerning the realities of employment. You can identify literature and audiovisuals that describe and explain employment conditions, and you can make this material available to your students. And, probably most effective of all, you can arrange for students to gain actual work experience on a limited basis (e.g., through part-time jobs, work-study programs, early placement, shadowing, or volunteer work).

Through the use of techniques such as these, students can get answers to their questions about employment. They can find out specific information, such as the following, about the job for which they are training:

- What the job involves
- What the physical facilities are like
- What products are produced and what they look like
- What related jobs are available within the occupational area
- Employer and employee rights and responsibilities
- Working conditions
- Salary schedules (e.g., minimum wage, pay scales, starting salaries)
- Prospects for advancement
- Attitudes of employers and employees toward persons with Special Needs

In addition, students can learn more about themselves and their role in the world of work through these experiences. If, for instance, you ensure that at least some of the employees whom you invite in as guest speakers--or whom students observe on the job--have Special Needs, students with Special Needs can learn that one reality of the employment situation is that they can succeed in it.

Having firsthand experiences in actual jobs, too, can be valuable for students with Special Needs, who may be apprehensive about competing with others. For example, a Puerto Rican girl, who understands English but has some difficulty in speaking the language, may be fearful of being ridiculed by co-workers. Similarly, an economically disadvantaged boy may have a poor concept of his abilities and feel inferior to others. Providing these students with early, carefully planned and supervised work experiences can help them overcome their fears and doubts so that they can function effectively in their chosen careers.
Looking for employment takes time and may be a difficult process, particularly for students with Special Needs. They may need additional instruction in how to locate job openings, how to fill out paperwork, and how to interview. For example, an older woman reentering the work force may have no idea of the jobs available to her. A student who speaks English as a second language or a mentally retarded student may have difficulty understanding the questions on job application forms. You need to help these students develop their job-seeking skills. You may also need to make students aware of various job opportunities that might not occur to them. For example, for those whose native language is not English, their bilingual ability can be a real asset in the employment market. They could work (1) for government agencies that deal with minority groups, (2) for businesses that employ limited-English-speaking workers, (3) for companies that do business with foreign countries, or (4) as aides or paraprofessionals with bilingual children at the preschool and elementary levels.

**Locating Jobs**

First, you may need to explain to your students how to locate job openings. Some of them may have very little idea of how to go about seeking employment. For example, a girl enrolled in auto mechanics might think that working in a gas station is her only option. She needs to understand that many agencies—such as automobile dealerships, cab companies, state governments, and universities—hire mechanics. An older person reentering the labor market might need a refresher about where to look for work.

You can provide these students with a list of possible job leads, which might include the following:

- State bureau of employment services
- City, state, and federal government offices
- Community organizations
- Special interest groups such as National Association for the Advancement of Colored People (NAACP) or National Organization for Women (NOW)
- Labor unions
- Committees on employment of the disabled
- Newspaper want ads
- Yellow Pages of the telephone directory
- Family and friends
- Vocational rehabilitation counselors
- Private employment agencies

In presenting these options to students with Special Needs, you may need to be quite specific, indicating not only where information is available but also how to go about getting that information: What types of job-seeking help does each organization provide? Whom do you contact? Are there costs involved? What steps must you follow? In the newspapers, where are the want ads located? How are they organized? How do you read them? How do you find employers in the telephone book?

With students who need help in this area, clear, simple, thorough information is crucial. Explain fully. Be specific. Bring phone books and newspapers to class and show students with Special Needs how to use them.
Filling Out Paperwork

Second, you may need to help students with Special Needs develop their ability to complete the paperwork necessary to apply for a job. They will need to prepare letters of application and resumes, fill out application forms, and apply for social security cards and union memberships. However, they may have difficulty with this process.

For example, mentally retarded students might need assistance in understanding and formulating answers to some of the questions that appear on the application form. One way is to assist these students is to help them prepare a list of answers to common questions, which they can take with them when applying for jobs. Another way to improve their skills is to spend a longer amount of time explaining the application form and then to work with them on only one section each day in class.

Do not assume that these forms are simple; for some students they are not. You may need to have students practice filling out the forms so they will become familiar with the types of questions normally included. You might also help them formulate answers to questions that concern their disabilities. For example, they may need to be able to explain briefly why their particular disability does not affect their ability to work.

You may also need to help students with Special Needs prepare resumes that stress their talents and accomplishments. They may be overly conscious of their disabilities and not see the positive side of what they can do.

Assume, for example, that one of your students is an older man who lost his job because of technological advances. He is concerned about starting over at his age and doubts that his previous experience will be of any help in finding work in his new occupation. You can help him select the items from his past that will be the most impressive to new employers, for example:

- Employed continuously for 20 years with one company
- Maintained excellent attendance record
- Served on employee/management committees
- Honored by company for money-saving suggestion

Such a student may also need to be reminded of other experiences that should be included in the resume (e.g., community or charitable activities, additional education or training).

Interviewing

Third, students with Special Needs may need assistance in developing effective job interview skills. There are several excellent techniques you can use to prepare students for the job interview. You could develop a list of possible questions an employer might ask and then have the students practice interviewing each other. If possible, you should videotape their performances so they can view them later and discuss what they did well and what needs improvement.

Also, you can show films on the interview process to make students more familiar with the procedure. Or you could invite a professional interviewer from a business or an employment agency to conduct a realistic interview in class. This would allow students to ask questions about the qualities an employer looks for in an applicant.
Students will need to know that they must prepare for the interview by gathering specific information about the company and the job for which they are applying. You can give students with Special Needs an edge by helping them locate such information or by referring them to the library or to someone who works on the job.

Since the point of an interview is to find out why an applicant should or should not be hired, you will want your students to understand that they should describe their skills right away—to discuss the experiences, training, and personal qualities that qualify them for employment. You can spend time in class helping your students with Special Needs to prepare this information about themselves.

You should also explain that, during the interview, employers will look at an applicant's ability to talk and listen. Some students with Special Needs may have difficulties in these areas, but you can help them by offering valuable tips, such as the following:

- Speak as clearly as you can. Don't mumble.
- Listen carefully to what the employer says. The employer will usually lead the interview; you should follow his/her lead.
- Don't interrupt, but do ask questions if you don't understand something.
- Look at the employer, not at the floor. "Eye contact" is an important way of showing that you're paying attention.

You should point out to students that they can emphasize their abilities by presenting them in the best possible way.

Students with obvious disabilities need to know that they should not wait to be asked by the interviewer for an explanation of the disabling condition. In the first few minutes of the interview, they should explain to the employer why their disability will not interfere with their ability to do the job. In addition, they should be told to answer any additional questions as truthfully as possible. The interviewer should respect their honesty and, therefore, be more likely to view them on the same basis as other applicants.

Also, you will want students with Special Needs to understand that "open-ended" questions require job-related answers. For example, when the interviewer says "tell me about yourself," he/she does not expect the applicant to talk about personal or financial matters. Students need to understand that they should always answer in terms of the job and their qualifications.

Finally, you may need to point out that, following the interview, an applicant should write a follow-up letter thanking the company for its time and consideration.

You can help students with Special Needs to practice writing such letters in class. Perhaps you can show them examples of good follow-up letters and make a list of the important points that the letter should cover.
Being Rejected

Fourth, you should prepare students for the possibility that they will be rejected for a job. Most people contact quite a few employers and are turned down several times before being hired. Students with Special Needs may encounter rejection more often, so you want them to understand the need for persistence.

They may also be more sensitive to rejection and feel that they are turned down because they are special. You should explain to them that, if they become discouraged and give up, they will never find a job. The key to successful job hunting is optimism and determination. They must keep trying and expect that the next employer will hire them. Also, they should keep in mind that they might be second choice for a job and could get the position with the next vacancy.

Leaving a Job

Once students are employed, they need to consider the possibility that they may leave that job some day. There is a professional way to do it, and some students will not know the correct procedure to follow. You need to make sure that they know that they should give their employers at least two weeks' notice so that the employers have the opportunity to hire replacements.

In addition, they need to understand that it is important to continue to do their job as usual and avoid criticizing the company, since they may want a recommendation sometime in the future. Remind students that frequent job changes look bad on their employment record and might cause employers to think they are unreliable.

Placing Students

One final test of any vocational program is whether the students are prepared to obtain employment. Finding that first job is generally the most difficult, so any assistance you can provide will be very beneficial. Students with Special Needs may need more help in getting jobs, and there are several ways you can assist them.

As a vocational-technical instructor, you should have contacts within the industry. This gives you an opportunity to place or help place students in jobs of their choice. If you have worked to develop good working relationships with local employers, you will hear of available positions and can recommend qualified applicants. Your referral can be a positive influence on employers. Also, you may be in a position to encourage employers to give students with Special Needs a chance on the job. You could visit several companies that have positions available and promote the hiring of your students.

During the job-finding process, employers often will contact you for recommendations or information about students. You should give them an honest appraisal of each individual's capabilities. You should be sure to stress the students' abilities and talents. You have trained them well--let employers know that they are ready and able to join the workforce. However, you should also tell a prospective employer of the students' limitations so he/she doesn't have unrealistic expectations.

For example, consider the case of a mildly retarded student who is applying for a job as a production welder. The welding instructor should be sure to explain to prospective employers (1) that the student does excellent work on simple, routine welds, (2) that since routine welding is an
important industrial task, the student is qualified for the job, but that (3) the student cannot handle complicated projects.

Once students with Special Needs have obtained employment, they may need your help in making the transition from school to work. The environment and daily routine will be different—longer hours, less personal attention—and some workers with Special Needs might experience apprehension. You can help by providing follow-up services and by encouraging new workers to use them.

For example, if they are having difficulty in adjusting, you can visit them on the job, try to answer their questions, and assure them that soon they will feel very comfortable. Perhaps you can talk to employers, if they are willing, to find out about students’ progress. You could also offer to help with any problems. Another possibility is to contact the new workers by phone or mail. You can survey their reactions to employment and locate trouble areas.

However, you should remember that, although many schools offer follow-up services, former students often do not take advantage of the program. For whatever reasons, they choose to "go it alone." They do not seek the help that could make their early working life much easier. As a result, you need to keep in mind that you can help only those who come to you. It is not realistic to seek out all former students, even though you know that some could benefit from the follow-up services.

On the other hand, your follow-up activities will be valuable to the students who participate and also will be helpful to you. You will be able to track the success of your students and pinpoint topics that you may need to spend more time on in class. The result will be a well-designed program that produces workers who are prepared to follow their chosen careers.

**Having Those Jobs At Hand**

In working with students with special needs, it is often helpful to have additional employment information on hand. Therefore, you may wish to start a file of the special programs in your school or community that are available to help students with special needs to improve their skills. Also, you may wish to develop a list of jobs in your occupational area that are available in your community. You can accomplish these tasks by contacting community service organizations, supplemental educational institutions, and local businesses and industries.
Read the following three case situations describing the educational backgrounds and personal lives of three students with Special Needs. As you read each situation, identify the student's employability needs. Then describe in writing what techniques you would use to meet those needs and to prepare the student to obtain employment.

Case 1

Julie Wilkins is a tall, shy 19-year-old who is presently enrolled in the regular home economics program. However, since she has been diagnosed as mentally retarded, she receives her academic instruction (e.g., math, English) through the special education department. Her goal is to be an elementary school teacher.

Julie is 20 pounds overweight for her 5'8" frame. Her clothes always look somewhat rumpled, and she tends to slouch in an effort to appear smaller than she really is. Julie's physical awkwardness and slow, stuttering speech have contributed to her social maladjustment. The other students tease her for being slow, and their teasing has been difficult for Julie to take as she is very sensitive about being in the special education classes.

Julie's father, Dr. Edward Wilkins, is a NASA scientist, and her mother is a college graduate. Both parents have had unrealistically high expectations for Julie because her older sister, Carrie, has excelled both scholastically and socially. They have found it difficult to accept Julie's slowness and social backwardness and have pressured her to "do better" in school.

Julie feels that, to gain the acceptance and approval of her parents, she must perform well. Her parents have never been demonstrative in their affection toward her or Carrie, but Julie feels that they love Carrie more than they love her.

Julie's IQ has been tested at 63 on the Wechsler Adult Intelligence Scale, and her verbal ability is higher than her numerical ability. Her cumulative records indicate that she has a short attention span and prefers to take an inactive role in class. When called on to answer a question, Julie will frequently need to be reminded what the question is by the teacher. She appears to be daydreaming much of the time in her classes. When something holds her attention, however, Julie does creditable work.

Julie has always preferred to work independently with tutorial assistance from the teacher. She does very poorly in-group sessions involving discussion because she is not a good listener and does not like to speak before groups. Individualized learning packages involving a good deal of "hands-on" activity appeal to Julie. She enjoys working on these projects and actively seeks the teacher's assistance when she doesn't understand the directions.

Julie has always been comfortable in working with her teachers on a one-on-one basis. Her present special education teacher feels that Julie regards her as a mother figure and that she looks to her for some of the attention and affection that she doesn't get at home.

Julie has spent a great deal of time at the neighbor's house helping the mother with daily chores and taking care of the four children. Her neighbor has gained a great deal of confidence in Julie's ability to take care of the children responsibly and has paid her for babysitting for the past year. Julie is good with children and enjoys spending time with them, often participating with them in their games. She is affectionate with the children and enjoys fixing them snacks and changing the baby's diaper.
Case 2

Barbara Johnson is 17 and the youngest of seven children. Her parents’ youngest child was 15 years old when Barbara was born. In many ways, she is an only child. Her mother is 50; her father is 55. All her siblings live away from home, but they come home often to visit.

The Johnson family home is located in a neighborhood where all the homes are moderately priced. Barbara was born in a low-income neighborhood, but Mr. Johnson was able to buy a nice home for the family six years ago after all the other children had left home. The children occasionally send money to help support their parents.

Mrs. Johnson worked as a maid for several years. She stopped working when Barbara was three years old. The two families for whom she worked became disturbed over the involvement of Barbara’s brother Wendall in the civil rights movement and felt it would be best if Mrs. Johnson did not work for them anymore. Wendell was pleased that his mother was no longer working for the white families. He had long resented the hand-me-downs they would give his mother at Christmastime.

Mrs. Johnson had not been trained for any other work and remained unemployed for many years. For the past three years, however, she has served as a driver delivering meals to individuals participating in the Meals-on-Wheels program. Mr. Johnson has always supported his family through his employment as a mail carrier. He has worked as a mail carrier for the past 30 years and plans to retire in a few years. However, he wants to be sure Barbara is out of school before he retires. He describes her as being a bit “hot-headed” at times, and he doesn’t want to retire without knowing that she is trained for suitable employment.

Barbara makes average grades, but many of her efforts are hampered due to her prominent use of nonstandard English. Her cultural awareness has heightened her racial pride, and many of the black students look to her as their spokesperson when they have grievances.

Barbara wears a short-cropped Afro hairstyle and shuns conventional jewelry and dress. She feels her use of nonstandard English is a natural part of her heritage and, although it has interfered with her schoolwork, she does not wish to abandon it. Her teachers become upset over Barbara’s use of nonstandard English, and their attitudes only serve to convince Barbara that she must retain the language, which she feels is uniquely black.

Many of the students in Barbara’s class have always lived in her neighborhood. The middle-class life-style has exposed most of them to books, cultural activities, and so on. They speak fluently and write well. At first Barbara tried to conform, but she has found that nonstandard English—the language that she knew for the first 12 years of her life and that is spoken by many of her friends in her old neighborhood—cannot be forgotten. Barbara does not want to lose her standing among her peers in the old neighborhood and is afraid of appearing snobbish if she does not continue to speak their language.

Mr. and Mrs. Johnson keep track of Barbara’s progress in school, and they have been concerned over her grades in English and literature. Their conference with her teachers revealed that Barbara just doesn’t try and her attitude is distasteful to them. Barbara claims, however, that the teachers just don’t like her because she is assertive. She looks forward to completing high school so that she can complete her training and get a good job.
Section 8:

CAREER PLANNING FOR STUDENTS
WITH SPECIAL NEEDS
CAREER PLANNING FOR STUDENTS WITH SPECIAL NEEDS

Marion likes to work with cars, so she has enrolled in auto mechanics. She isn't sure she wants to spend her life doing tune-ups, but she knows very little about other kinds of work that would involve cars.

Sarah, a former homemaker, is taking courses in business education. She has thought very little about what kinds of work she likes best. She hopes to get a better feel for the personal rewards of business by trying out different areas. Harry is enrolled in electronics. He really likes troubleshooting and making repairs on TVs. But, because of a moderate hearing loss, Harry doesn't think he could ever get a job in TV repair. Consequently, he is planning to look for a job working on an electronics assembly line after he graduates.

John, a mentally retarded student with a tentative career goal in food service, has taken many home economics courses. He has liked some courses, disliked others. Some skills were very hard for him to learn; for others, all it took was a little extra time. Each of John's courses has included information on related occupations. Now there are so many things for John to think about that he can't sort out all the information. He doesn't know what he wants to do.

Carlos wants to be an emergency medical technician. His science and math skills are excellent, and he is levelheaded in a crisis. However, his spoken English is somewhat limited and hard to understand. Under pressure, he often reverts to his native Spanish. Carlos does not see a need to improve his language, since he can read English well enough to understand his textbooks.

Each of these students brings a different set of skills, knowledge, interests, and needs to your program area. All of them need to develop their career planning skills.

Most of your students will have some idea of what they want to do when they leave school. They made one career-related decision when they chose an occupational area and enrolled in your program. Career planning goes beyond that first decision, however.

Students must learn to (1) make realistic decisions about what kinds of work they would like and can learn to do, (2) set goals that reflect those decisions, and (3) make plans that will enable them to reach their goals.

If you are or will be teaching in a secondary program, any handicapped student who enrolls in your program will, by law, have an Individualized Education Plan (IEP). The IEP, which is jointly planned by the student, parents, teachers, and others, includes a career goal. It also specifies an educational program to meet that goal.

However, having an IEP that contains a career goal does not necessarily mean that a student has career planning skills. To make long-range career plans, students need decision-making and goal-setting skills. And to decide on and pursue realistic career goals, they must know a lot about themselves and about the world of work. They need to think about their interests, needs, abilities, values, attitudes, and self-concepts. They need corresponding information about careers.

All students need these career planning skills. Making long-range career plans while in school will help them channel their in-school efforts toward specific goals. And having developed career planning skills, they can use them throughout their lives, whenever personal growth or changing conditions cause them to reevaluate their goals.
For students with special needs, developing career planning skills is even more crucial. Since their special conditions may put them at a disadvantage in the world of work from the start, careful planning is extremely important for them. However, some of these students may lack basic information and skills necessary for career planning.

One area in which they may be lacking is self-awareness. Some students with special needs lack objectivity about themselves and their special conditions in relation to work. Sometimes, their experiences have produced very negative self-concepts. They may think in terms of what they can't do instead of what they can do.

A young man in a wheelchair, for example, for whom self-care and getting around have always been a challenge, may think that getting a good job is beyond his reach. A homemaker entering the labor market for the first time may focus on her lack of work experience and ignore the many job-related skills she has developed through managing a home and family.

Such students need to develop a sense of reality about themselves in relation to work. They need to develop a self-concept that neither restricts their career goals too much nor ignores their limitations.

Another area in which students with special needs are sometimes at a disadvantage is career awareness. They may lack knowledge and experience that other students bring to career planning. For example, you might have a severely hearing-impaired student who has not acquired much of the information about work that hearing students pick up casually. She may not realize, for instance, that a friend's mother is a bank officer, that the person driving the bus is working at a paid job, that her sister got a raise, or even that when her own father leaves home every day he is going to work.

Most people learn this kind of information incidentally, through oral clues. Earnings and raises are processes that are not visible outside the work setting. Thus, without having heard discussions about everyday aspects of work, such a student may lack the whole framework for career information that you usually assume that your students have.

Similarly, an economically disadvantaged student might not have been exposed to many different occupations. You might have a Native American student who has lived on a reservation where job choices were limited. Or you might have a student from a depressed urban area whose role models have more often been unemployed than employed. These students need to learn about the many career choices that are open to them. They need to look at careers in terms that are meaningful to them: what the work would require of them, what rewards it would bring, and where it could take them in the future.

Finally, some students with special needs have had very little experience in decision making and goal setting. Most secondary and postsecondary students are used to making everyday decisions—what to wear, how to tackle a minor problem, and so on. But you might have a mentally retarded student, for example, who has missed such experiences. Well-meaning parents, wanting to protect their handicapped children, sometimes shelter them from problems and make even simple decisions for them. Or, as another example, you might have a displaced homemaker who developed a habit of relying on her husband for decision making.
Such students would bring limited experience to the larger task of career decision making. They would need to learn that decisions and plans can be made through simple problem-solving techniques.

You can probably think of many examples of students with special needs who might lack goal-setting skills for career planning. Imagine, for example, a woman who was encouraged, as a child, to dream about marriage and parenthood while her brothers were asked what they wanted to be when they grew up. Or picture a gifted student for whom learning and achievement have always come so easily that he has seldom had to set goals and work toward them. Such students would be poorly prepared for setting realistic career goals.

As a vocational-technical teacher, you would naturally encourage your students to think about occupations related to your service area. And you would look for ways to help students see how their interests and abilities relate to the skills you are teaching. Let’s explore some additional ways to develop your students’ career planning skills.

Career decision making is basically a problem-solving process. Briefly, the following steps are involved in solving a problem:

1. Define the problem.
2. Identify relevant factors.
4. Examine possible solutions.
5. Select a tentative solution or alternative solutions.
6. Evaluate the solutions and assess the results.
7. Take action to achieve the solution.

If students with special needs lack problem-solving skills, you can teach them these skills using career choice as the central problem. The same techniques can be used to solve almost any kind of problem, but given a career focus, they will provide the framework for your instruction on career planning.

As we discuss problem solving, you will see how each step relates to career planning and how you can help your students with special needs complete the steps.

**Step 1. Define the Problem**

Defining the problem is simply a matter of stating the problem clearly and concisely. For most students, the problem is to identify a realistic career goal and a plan of action to achieve that goal. A realistic career goal is one that will satisfy the student and that he or she can achieve.

Later, as the students compile more information about what would be satisfying and achievable, they can refine their problem statements to make them more precise.

Some students with special needs may need help in focusing on the real problem. They may see their special condition as the problem when, in fact, it is only one factor to consider in solving the problem.

Blindness, age, or cultural difference, for example, might seem to be the central problem because it looms large in the student's self-image. The real problem, nonetheless, is making career plans that are compatible with these and other aspects of the total person.
Step 2. Identify Relevant Factors

In the second step, students decide what factors they will need to consider in their career planning. In general, the factors will relate to their personal characteristics and to occupations. For example, the following factors may be included:

- The kind of vocational-technical training in which the student is enrolled
- Short-term employment goals and tentative long-range goals, if any
- Work-related strengths and weaknesses (e.g., skills, abilities, aptitudes; attitudes, limitations, and experience)
- Interests, needs, types of rewards sought from work, and priorities
- Factors that affect access to further training, education, or other means to advancement (e.g., time, money, motivation, academic ability, transportation, health, and family situation)
- Occupational requirements, rewards, and opportunities
- Career ladders

The relevant factors will differ for each student. A physically handicapped student, for example, might focus on occupational requirements. He or she might look at what kinds of work are compatible with the disability, what adaptations can be made to make occupations accessible, and so on.

A displaced homemaker might focus on transferable skills—what home management skills are related to work and how to capitalize on them. An economically disadvantaged student might look at career paths that permit full-time earning while preparing for advanced positions.

One way to help students identify factors that are personally relevant is to pose questions that will start them thinking about such matters as the following:

- What do they want out of a long-range career?
- What do they already know about themselves and work?
- What do they need to find out in order to make intelligent decisions?

Sample 1 presents some questions related to self-awareness and corresponding questions related to work. Questions such as these, or others more closely related to your service area and your students' needs, can be put in the form of a questionnaire or asked orally to stimulate students' thinking.
### CAREER QUESTIONS

<table>
<thead>
<tr>
<th>Self Questions</th>
<th>Career Questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>What vocational or technical program are you in?</td>
<td>What career areas are related to your vocational or technical program?</td>
</tr>
<tr>
<td>What kind of job do you hope to get after you finish?</td>
<td>Where can you go from your entry-level job?</td>
</tr>
<tr>
<td>Do you want to stay in that type of work? Do you have any long-range goals in mind? (What do you see yourself doing in 5 years? 10 years? 20 years?)</td>
<td>What would it take to advance?</td>
</tr>
<tr>
<td>What do you like to do? What do you do really well? What are your weak areas? What experience do you have that relates to work? What do you hope to get out of work? What is most important to you (e.g., high pay, responsibility, challenge, security, pleasant atmosphere, sense of accomplishment, and a feeling of helping others)?</td>
<td>How does your entry-level job relate to your long-range goals? What career paths could lead to your career goals?</td>
</tr>
<tr>
<td>Are you willing and able to go through more training or education to achieve your career goals?</td>
<td>What occupations include work that you would like? In what occupations would you have opportunities to use your skills and experience? In what occupations would your weak areas not be a problem? Or, how can you improve in your weak areas?</td>
</tr>
<tr>
<td>Are there any special factors that might affect your employment (e.g., handicaps, transportation problems, lack of money, lack of paid experience, communication problems, or sex nontraditional for the occupation)?</td>
<td>What careers offer the rewards you want?</td>
</tr>
<tr>
<td></td>
<td>What training or education would you need in order to get ahead in careers that interest you?</td>
</tr>
<tr>
<td></td>
<td>What kinds of work are compatible with your special needs (either as the work is traditionally done or through adaptation)? What barriers would you need to overcome?</td>
</tr>
</tbody>
</table>

### Step 3. Gather Information

At the third step, the students are ready to gather information about themselves and about careers. Career-related self-awareness requires an objective view of one's strengths, weaknesses, abilities, aptitudes, interests, and other characteristics. A student with special needs also needs to assess what kind of impact the special condition is likely to have on career choice and achievement.

Some of your students may never have thought about themselves in these terms. Others may feel that they know themselves pretty well; they may not realize that their outlook is unrealistic. There
are a variety of ways in which you can help your students develop, expand, or adjust their career-related self-awareness. Let's examine some of these ways.

Review diagnostic information. You will be much better able to help students with special needs to develop self-awareness if you have career-related information about them. You may wish to review student records to obtain the following kinds of information:

- **Academic information**—For example, courses taken; grades received; academic strengths, weaknesses, and interests; special tutoring, remediation, or counseling received
- **Vocational information**—For example, aptitudes, interests, skills, work experience, occupational goals after training
- **Physical capabilities**—For example, manipulative skills, mobility, physical or sensory impairments, health limitations
- **Life skills**—For example, money management, hygiene, grooming, social awareness, maturity, cultural awareness, communication skills, inter-personal skills

This information will also help you determine how many careers planning work they need and whether the career decisions they make are realistic.

If you need additional information, you may wish to use other sources. For example, teachers and other professionals may be able to provide information about a student's performance, aptitudes, attitudes, and other work-related skills such as following instructions or getting along with others. The students themselves are apt to be very good sources of information. By watching, listening to, and talking to your students, you may gain some valuable insights that relate to career planning.

It may also be helpful to examine your own attitudes for any biases or stereotypes that would lead you—either unconsciously or consciously—to limit students’ horizons or to mislead them about their career potential. Provide self-awareness activities. You can assume that your students with special needs have some awareness of their occupational interests because they have chosen a vocational-technical area. Presumably, they know they like and can learn to do this type of work. They may need help, however, in order to see how their interests, abilities, and other characteristics relate to a long-range career goal.

Where do they want to go from that first job? In what direction? How far? Are they destined for management or shop work? Are they happiest as leaders or followers? Do they seek a long-term, stable job or the challenge of rapid advancement? Is self-employment the ultimate goal? They will need to answer such questions before they can decide upon their career goals.

Some students with special needs may have another, even more difficult, task to accomplish in developing self-awareness. They may need to improve negative self-images in order to assess their career potential fairly. You can help them by providing activities through which they can identify their vocational interests, abilities, values, and other career-related characteristics objectively.

If your students have not already taken interest inventories, this would be a good time for them to do so. Standard inventories, such as the Kuder, the Ohio Vocational Interest Survey (OVIS), and
the Strong Vocational Interest Blank (SVIB), should be available through the guidance or counseling office at your school or college.

Some students who have poor self-images automatically rule out ambitious career goals because they sound hard or frightening or beyond their grasp. A vocational interest inventory could help such students to assess their interests without linking them to any particular kinds or levels of work.

An interest in planning and scheduling, for example, might relate not only to a displaced homemaker's family management skills but also to supervisory work. Recognizing this could help the student see the transferability of interests from one type of work (homemaking) to another (office management or line supervision, for example).

Interests can also shed light on abilities in many cases. Often a person will like something because he or she is good at it, or a person will become good at something because he or she likes it. As you discuss the results of interest inventories with your students, you can help them look at whether their abilities coincide with their interests.

Completing checklists of abilities and aptitudes can help students with special needs to assess their strengths and weaknesses as they relate to career choice. You can prepare an informal checklist for your vocational-technical area on the basis of occupational analyses and your own experience. In preparing such a checklist, you should consider abilities and aptitudes in the following areas:

- Occupational skills
- Related academic abilities
- Personal work habits (e.g., punctuality, diligence, ability to work independently, and mature deportment)
- Related study habits (e.g., getting assignments done on time, ability to manage time, and accuracy)
- Interpersonal skills

As you review the results with students, it is important to emphasize the positive to encourage a stronger self-image. For example, a student whose academic record is mediocre might gain confidence from noting that he or she is good at getting assignments done on time, getting along with other students, and following instructions. It might help an older student, who focuses on how rusty his or her learning skills are, to see that he or she has other vocationally important skills such as working independently, explaining things clearly, or being diplomatic and courteous.

Use of values clarification games and materials can help students with special needs think about what is important to them. You can use commercial materials designed to help students think about work values. Such materials may be available at your public, school, or college library or through the guidance or counseling office.

If you prefer to focus more closely on your own service area, you can create your own values clarification activities, such as the following:

- Present short case situations or role-playing situations in which different values are in conflict. The situations should require the students to think about work values in order to
decide what to do. Such values as a desire for status, money, pleasant working conditions, job security, challenge, and satisfaction in a job well done could be included.

- Prepare a list of career characteristics related to different career levels in your service area. For example, working with your hands, solving problems, working alone, working with people, supervising other workers, and checking other people's work might relate to automotive mechanics. Students could indicate their preferences by rating or ranking each characteristic. You can help the students interpret the results by pointing out the relationships between school and work activities.

Relate course requirements to careers. Students' performance in your program can, to some extent, predict their success in the world of work. As they complete the course requirements, they are testing themselves against the demands of the career world. Their successes and failures in class will affect their self-images and their career aspirations. The more closely the environment and the demands of your program resemble those of the world of work, the more accurate these self-assessments will be.

If your program is competency-based, your students will already have objective measures to use in this process. However, there are other ways you can give your students such measures, whether or not your program is competency-based.

First, spelling out course requirements clearly and explaining their relationship to the world of work can help students with special needs to evaluate their career potential fairly.

Second, sequencing learning activities to build upon success will help students develop a healthier self-image while improving their competency. For example, you might begin a mentally retarded student at a point-no matter how basic--where he or she can succeed. By then proceeding in small, achievable increments, you might enable that student to reach skill levels that would not otherwise be possible.

This approach can also help a student who simply lacks some basic skill or information. For example, perhaps you have a woman in auto mechanics who has had no prior exposure to automotive tools. Beginning her instruction at the level of "What is a wrench?" could give her the missing link that would enable her to succeed at using wrenches properly.

Third, making your class reflect the real world of work will help students with special needs to examine their career preferences and potential. For example, you might build work pressures, such as tight schedules and quality control, into your more advanced program requirements. Behaviors required on the job, such as being on time, punching a time clock, checking with the supervisor, behaving maturely, and cleaning up after a job, could be required in class. Supervisory or quality control roles could be set up for some students.

By comparing their abilities, interests, and work values with real work requirements in this way, students with special needs may be able to see themselves more clearly in career terms. Furthermore, seeing how success in the classroom relates to work can be very helpful to students who underestimate their career potential.

Be honest about students' special conditions. It is important to be honest about your students' special conditions in relation to career requirements. You would not be doing a deaf student any favor, for example, by glossing over any barriers he or she may meet in trying to advance to a supervisory position in food preparation.
An adult being retrained in your electronics program needs to realize that, at least at the beginning, he or she may be taking orders from much younger people. A student from another culture should understand how differences in language, mannerisms, interpersonal relations, or grooming could affect success in a field such as merchandising.

These are realities that students with special needs must face in coming to honest terms with themselves and work. But they need not be discouraged by them. A sensitive approach can help these students accept such realities at face value. By the same token, students who aspire beyond the barriers caused by their special conditions should be encouraged to persevere if their goals are reasonable. In many cases, sheer motivation and the encouragement of others can be the deciding factors that enable a person to overcome obstacles.

Provide career information. As students with special needs learn about their interests, abilities, and potential, they need to be able to relate this information to work. What kinds of jobs relate to their vocational-technical area? What kinds of work would they like? What kinds of work could they learn to do? How are the jobs related to each other and how do workers move from one job to another? How much more training, education, or experience would they need in order to advance? Are there obstacles they would need to overcome because of their special? Is special assistance available to help them advance?

These are questions you can help your students answer by providing information about careers and career ladders. You can provide career information in various forms and through a variety of techniques. You probably already provide career information to your students in one or more of the following ways:

- Printed materials such as Occupational Outlook Handbook, Encyclopedia of Careers and Vocation Guidance, information from vocational organizations related to your service area, and career information kits
• World Wide Web such as *Virginia View* ([http://vaview.vavu.vt.edu](http://vaview.vavu.vt.edu))
• Oral presentations by you or by workers serving as guest speakers
• Audiovisual materials such as films, filmstrips, slide shows, tape recordings, and videotapes
• Field trips to work sites
• Career simulations and games
• Class environment designed to reflect on-the-job working conditions

The information that you traditionally have provided about careers in your service area will also be useful for students with special needs. There are ways, however, to ensure that the information will meet the needs of these students.

The information should be organized to help students see career paths. The career information materials you ordinarily use may be organized into career clusters to help students see the relationships among different careers. Or, since you are talking primarily about careers within your vocational-technical area, you may have found that a full clustering system is unnecessary.

It is important in either case for your students with special needs to understand the concept of career ladders—the paths by which one can advance through a sequence of jobs toward a career goal. As you talk about careers, you should discuss these vertical relationships. You may also want to prepare charts or diagrams of job relationships within your vocational area to help your students with special needs see the career ladders more clearly.

The information should be complete. Your students will need the following kinds of facts about the occupations they study:

• Description of the work—For example, tasks, working conditions, atmosphere, relationships to other workers, or work pressures that may be encountered
• Qualifications—For example, education, training, experience, examinations, or other preparation required for the occupation
• Worker traits required or desired—For example, abilities, aptitudes, temperament, or physical conditions
• Rewards and benefits provided—For example, tangible rewards such as salary and intangible rewards such as worker satisfaction
• Future trends—For example, employment growth or reduction, or technological changes

For some students with special needs, you may need to include information that seems fairly obvious. Students who lack a basic level of career awareness might not realize, for example, that they will take orders from the person in charge, that they will be expected to do some jobs on their own, that sometimes they will have to work very fast, and so on. So you should be sure that your career information includes facts about a full range of jobs, at all levels, and in full detail.

The information should be relevant to the special needs of your students. For example, you should point out worker requirements that may relate to their special conditions, job adaptations that could be made to accommodate their needs, and other factors pertinent to special needs.

In discussing what will be required of the worker, either on the job or as a means to advancement, it is again important to be straightforward without being discouraging. For example, is limited English proficiency likely to hold back a Chicano student who wants to go into sales? How much language improvement would be needed to overcome that obstacle?
What kinds of adjustments could a student from another culture make in order to fit better into a chosen field? What will it be like on the job for a woman in construction or a man in clerical work? If transportation is a problem for a student in a wheelchair, how might this affect his or her choice of a specific job or training program? What kinds of adaptations of the work place or equipment are possible to make it accessible to a handicapped student?

Will an economically disadvantaged student have to buy expensive tools or equipment before he or she can get a good job or advance to a better one? How much money would someone have to save to be able to set up that private business he or she is dreaming about?

The information should be accurate, up to date, and free of bias. If you are using prepared informational materials, are they from reliable sources? Do they present an objective view of the work? Were they recently prepared? Do the text and illustrations avoid racial, cultural, and sex-role stereotyping? Are people with handicaps included?

The materials should be at the appropriate level and in a usable form for your students. Students with low reading skills, for example, might be turned off by a lot of printed information, especially if the reading level is too high or if they are easy to read but too juvenile. A student with limited English proficiency might need information written in his/her native tongue or audio-visual materials or help with specific vocabulary.

If you have a visually impaired student, you may need to provide tape-recorded, large-print, or Braille versions of the printed materials. Or you could present the information orally or have another student read important information to the student.

If you have a hearing-impaired student, you might provide a script or an interpreter for the audio portion of a career film. Or perhaps a captioned film is available on the same subject. There are many captioned career films that would be suitable for both deaf and hearing students.

**Step 4. Examine Possible Solutions**

As students with special needs gather information about themselves and about careers, they will be thinking about possible solutions, or tentative career goals. Most students will do this gradually, as they get the information, not as a separate step. You can help students with special needs to widen, rather than narrow, their possible choices during this step by encouraging them to expand their horizons and by providing information on employment rights and opportunities. Let's examine how you can do this.

Encourage students to expand their horizons. Because of negative self-images, some students with special needs will tend to set goals for themselves that are unrealistically low. They may reject a career because it sounds too hard or because they are afraid to risk failure.

One way to help these students is simply to be supportive and encouraging. For example, you might have a woman in a construction trades program. Being supportive of her choice of a career that is nontraditional for her sex could help her to maintain high career expectations of herself. It might even be appropriate to suggest that she think about a specific long-range goal, such as teaching in the chosen field. Students with special needs who become teachers in their areas become role models. They can influence large numbers of students, who have similar special needs, with the skills they demonstrate.
Or you might have a student with low math skills who is interested in being self-employed someday. Rather than pointing out the folly of his ways, you could show him how to improve his skills in order to meet such a goal.

Another way to encourage your students is to provide role models with special needs. In the case of the woman in construction, for example, you could have a successful woman from the field speak to the class. This might help the student to realize that a similar goal for herself might be realistic.

Using the career ladder concept, you can build upon students' interest in the vocational-technical area to encourage them to aim higher. For example, you might have a student in nurse's aide training who has greater career potential than remaining in a nurse’s aide job. You could show how her interest in nurse’s aide work also relates to other occupations in health. While becoming a nurse's aide might be an appropriate short-range goal for the student, it could also be a step toward a higher goal, such as becoming a Licensed Practical Nurse. The student could build on the achievement of one goal to gain confidence to aim higher.

Provide information on employment rights and opportunities. Some students with special needs may focus unnecessarily on barriers to their career progression. An economically disadvantaged student, for example, may assume that he could never afford advanced training. A woman might feel that she could never compete with her male peers for higher-level jobs. A paraplegic student might assume that working on an assembly line would be out of the question because he couldn't even reach the equipment in a typical workstation.

These students need to be aware of their employment rights and of assistance they can get that would open up opportunities for them. Depending on the needs of the particular student, you might provide information in the following areas:

- Affirmative action programs and policies
- Protections under Title IX
- Legislation (AHEAD) providing for access by those with disabilities to education and work
- Financial assistance programs for economically disadvantaged, minority, culturally different, handicapped, and other students with special needs
- Modifications to work situations that can be made to accommodate special needs

This information can be obtained from such sources as your state Civil Rights Commission, Sex Equity Coordinator, and Governor's Committee on Employment of the Disabled; community action programs; and school or college guidance or counseling office.

**Step 5. Select a Tentative Solution**

Completion of the first four steps should prepare students with special needs to make some tentative career decisions. They will need to put together all they have learned about themselves and about careers. If your students have been objective in their assessments, they should have some pretty good ideas about how to answer the following questions:

- What do they want to do, and in what jobs they can do it?
- What do these jobs require, and how can they as workers measure up?
- How far can they reasonably aspire to go, and how can they get there?
They should be ready to decide on tentative career goals, or perhaps alternative goals, that should be satisfying and achievable.

Your students with special needs will have to make their own decisions about their career goals. After all, it is their future, and the satisfaction and the motivation to achieve will have to come from within. But you can help them in several ways. You can help them define short- and long-range goals, and you can encourage them to keep their options open.

Help students define short- and long-range goals. A career plan should include the ultimate goal and a plan for getting there. The path to the long-range goal is usually made up of short-range goals, and there may be more than one way to reach a particular goal. You can help students with special needs to see the different possibilities and to examine them in terms of their special needs.

For example, you might have an economically disadvantaged student in legal secretary training. Perhaps the student would like to become a lawyer. But because he or she isn't sure about this goal and couldn't afford law school anyway, the student is inclined to give up on it. You could point out a possible plan for reaching the long-range goal such as the following:

- Get a job as a legal secretary.
- Use this job to gain experience and to observe the legal profession.
- Use the experience (1) to get a job with a firm that will let you work toward becoming a legal assistant and (2) to prepare to take the Law School Aptitude Test.
- Apply to an evening law school program that provides financial aid.
- If admitted, work days as a legal assistant and go to law school evenings.
- Finish law school, pass the bar exam, and set up or join a law firm.

Encourage students to keep their options open. Students with special needs have to realize that they are always changing. They are learning, maturing, and reacting to the world around them. The persons they will be five years from now may be very different from the persons they are today. Therefore, their needs and their goals may change. It is important in career planning to avoid narrowing one's options too early. It is often possible for a student to select a career path that will let him or her change direction at some point, without wasting a lot of time and effort.

The student in legal secretary training, for example, might decide after seeing lawyers in action every day that he or she does not want to be a lawyer after all. The career plan outlined above would leave several good options open at this point: (1) remain a legal secretary, (2) become a legal assistant, or even (3) leave the field of law and become a secretary in another field. Sometimes a student will not be able to decide between two or more career goals. It may be possible to set some short-range goals that will move the student toward both career goals so that he or she can decide later.

**Step 6. Evaluate the Results**

An important step in career decision making is testing the solution to see if it still seems like a good one. This is an especially important step for students with special needs, who very often are hampered from the start by low self-esteem.
One student might work so hard not to underestimate her abilities that she ignores some real limitations. Another might protect himself from potential failure by setting such easy goals that he couldn't possibly fail to achieve them.

Or you might have a student who has done a pretty good job of self-assessment and fact finding but who doubts whether the goals he or she has set could really be feasible. Testing them out could add an important element of confidence to the student's career plans. How your students with special needs test their solutions will depend on the kinds of goals they have set.

Trying it out is one of the best ways of testing a solution. Real practice situations such as internships are very valuable. Many activities that a student regularly takes part in can provide opportunities to try out some aspects of a chosen career.

For example, volunteer work, scouting projects, or working on committees may require some of the same skills as those in the student's chosen occupation. A part-time job can also give a student a chance to experience a particular work environment, watch other workers, and ask questions. You can help students with special needs to identify activities in which they can try out aspects of their chosen careers.

You may be able to arrange experiences in which students can observe workers in their chosen fields of work. For example, visits to business or industry, where a student can watch workers in action, may help that student see what the work would really be like, how it would feel, and how the workers deal with day-to-day problems.

You can set up other experiences in the classroom. You can invite guest speakers to the class. For example, workers with special needs could talk about their jobs. They could also tell about special problems and rewards for people with special conditions who are trying to advance in the occupation.

You can set up simulated work situations in the classroom to give the students a taste of the real challenges of the job. For example, in a machine shop you might set up a production line with stringent standards for output and quality of work. Students could assume roles as machinists, supervisors, quality control checkers, and so on. Problems related to supervision, interpersonal relations, and other job factors could be introduced to simulate on-the-job pressures. Later, the class could discuss how they felt about the situations.

Another way of evaluating career plans is through mental testing and discussion. Through your knowledge of the students' interests, abilities, and limitations, you can help them to examine their goals objectively. You might, for example, guide a student in reviewing the requirements for a chosen occupation and comparing them with his or her own abilities and aptitudes.

There are apt to be times when a student with special needs has set unrealistic goals. When a student's goals are clearly beyond his or her reach, you will need to help the student see this and set goals that are attainable. Often, this is simply a matter of explaining the requirements of the job. The student may realize on his/her own that he/she could not meet the requirements. It might be very helpful in this kind of situation for you to suggest a related job that the student could do—one that would provide the same kinds of satisfaction.

On the other hand, you may have students whose goals are unrealistically low. You might need to point out to one student that his or her special condition is not really a barrier to success in a given career. Another student might need to see that by changing career goals only slightly,
he/she could go much further because the special condition would no longer be an obstacle. Or you might have a student who needs to be shown that, by getting some remedial training early, he/she could go much further later.

Helping a student accept realistic goals can be a delicate situation. You must be straightforward without crushing a desire to achieve. You need to respect the person’s pride without misleading him or her.

In some situations, it may be helpful to talk to the student’s significant others to gain their support in your efforts. Sometimes parents or a spouse need help in seeing the student's potential or limitations clearly.

Talking to students' significant others may be especially helpful in a secondary program. For example, you might have a physically handicapped student whose parents discourage her from aiming very high because they want to protect her from disappointment. Or you might have a gifted student whose parents push him toward high-earning professions, although what he finds really rewarding is something less prestigious. Gaining the family's support can help you redirect the student to career goals that are more likely to be satisfying and achievable.

You cannot, of course, force a student to see things "your way." Nor should you. There are times when you must accept a student's "right to fail." You may have a student who persists in aspiring to levels you know is beyond his or her reach. This student may need to go ahead and try and perhaps learn from the failure. (Or perhaps the student will prove you wrong.) It would be very important, however, to help the student see that he or she will need to reevaluate his or her goals and plans periodically. Perhaps later the student will gain courage to aim higher or will be able to accept the need to settle for less.

**Step 7. Take Action to Achieve the Solution**

The career plan should include the steps to be achieved, so the student should know what he or she needs to do to start toward the goal. The first step may, in fact, be completing your vocational-technical program. Or there may be things the student can do while still in school—a part-time job, volunteer work, club activities, tutorial help, and so on. You may be able to help students with special needs define what other steps they need to take in order to achieve their goals.

For example, one student's plan might call for working full-time while taking evening courses in business management. You could help the student identify what he/she needs to do to make these things happen (e.g., find out what schools teach business management in the evenings, apply for admission, look for a job, and so on).

The student would also need to consider any other special factors related to his or her special condition. For example, if the student is in a wheelchair, is transportation a problem? What business schools are accessible to people in wheelchairs? How close would the job and classes have to be for the student to get from work to school on time? If the student is economically disadvantaged, what kind of financial aid is available?

You may even want to help the student initiate some of these steps. For example, you might help locate school catalogs or information on financial aid. You might check into special transportation services for people in wheelchairs.
The Result

In-depth career planning doesn't necessarily take place within any given instructional unit. It takes patience and introspection. The students need time to think and to digest information. They need time to "try on" ideas to see how they feel. They need time to "live with" their decisions to see whether they are really right for them.

By the time your students have completed the problem-solving process, they should at least have a tentative set of goals and plans. More important, they will have developed skills with which they can refine their career plans over time. With these same skills, they will be able to make decisions and solve problems all their lives, whether they relate to career planning or other concerns.

As you review with your students the skills they have been developing, you should help them see that career planning is a lifelong process. As they live and work and grow, they should be constantly using their new skills and understanding to reevaluate their career decisions and, if necessary, adjust their goals.
The following case study describes how a vocational-technical instructor helped a student with special needs to develop career planning skills. **Read the case study and then critiqued in writing the performance of the instructor described.** Specifically, you should explain:

1. the strengths of the instructor's approach
2. the weaknesses of the instructor's approach
3. how the instructor should have helped the student develop career planning skills.

**Case**

Diane Wayne, a hearing-impaired student in Mr. Thedford's graphic arts program, was artistically quite talented. But the career goal listed in her IEP was paste-up artist, which would involve primarily cutting and pasting up basic parts of advertisements.

Wondering about this, Mr. Thedford reviewed Diane's school records. He found that, in elementary school, Diane's teachers had thought she was a slow and disinterested student. She had trouble paying attention and keeping up with the rest of the class. In the fourth grade, they found she had a moderate hearing loss, which explained her behavior in class.

Since then, Mr. Thedford discovered, Diane had used a hearing aid. She had also received speech therapy and instruction in lip-reading and sign language. By talking to the speech and hearing therapist, Mr. Thedford learned that the hearing loss was worsening. Diane was expected to be profoundly deaf by the time she was an adult. However, according to the therapist, her speech had greatly improved since she had begun therapy. By means of her hearing aid, lip-reading, and front-row seating in class, Diane had been able to get along so far without an interpreter.

The records further showed Mr. Thedford that Diane was very intelligent. Because her hearing loss had been discovered late, however, her reading and math skills had suffered. She had never totally overcome this early lag in her basic skills development.

Diane's performance in Mr. Thedford's graphic arts program had been above average thus far, although assignments that required a lot of reading tended to give her trouble. Her real talent was illustration. She was always sketching the people and scenes around her, and she seemed to love this form of expression.

Mr. Thedford had watched Diane with the other students. He had noticed that she was shy and withdrawn most of the time. Only with her artwork did she reach out to the other students. Sometimes she gave them portraits she had done of them, and she seemed to enjoy their reactions.

But, afraid of seeming foolish because of her hearing and speech impairments, she seldom spoke out in class or talked with the other students. Her actions showed that she felt inferior to the other students socially and intellectually.

Mr. Thedford asked Diane about what plans she had concerning looking for a job as a paste-up artist after graduation. He learned that, while she found paste-up a little boring, she thought a deaf person would be lucky to get any job at all. She also thought that, as a paste-up artist, she wouldn't have to interact much with her co-workers. Besides, she knew very little about other occupations in the graphic arts.
Mr. Thedford felt that Diane underestimated herself. She focused on the impediments to career success rather than on her talents. She also seemed to see her interests as being totally separate from her career goals.

To help Diane gain some objectivity about herself and see the relationship between her interests and work, Mr. Thedford gave her a vocational interest inventory and a work values checklist. Together they reviewed the results, which were as follows:

- Interest in art, creative work, presenting ideas visually
- Preference for working independently, quickly, even under pressure
- Dislike for repetitive work, lack of challenge, giving oral presentations, and working in team situations

Mr. Thedford and Diane also reviewed her academic strengths and weaknesses. Mr. Thedford pointed out Diane's limited skills in reading and math. He emphasized her artistic talent and good performance in graphic arts. Being aware of Diane's sensitivity about her speech and hearing, he decided not to embarrass her by bringing them up.

Mr. Thedford recognized that Diane's career awareness was very limited. To correct this, he used several strategies to provide her with career information. He showed a film on graphic arts careers, gave Diane several books to read on art occupations, and brought in a hearing-impaired artist to talk about his own career experiences.

Seeing that Diane was still unmoved, Mr. Thedford decided to be frank. He told her that she should consider becoming an illustrator or something else that would make use of her talents.

But Diane persisted, saying that she could never get a job as an illustrator because she was deaf. Mr. Thedford realized that he couldn't force her into a goal she didn't want. Consequently, he decided that Diane would just have to make her own decisions.