

DOCUMENT RESUME

ED 290 922

CE 049 618

TITLE Vocational Education and the Low Achieving Student. A Study of Vocational Education. Report #3.

INSTITUTION South Carolina State Council on Vocational and Technical Education, Columbia.

PUB DATE Feb 86

NOTE 52p.; For related documents, see ED 282 983-984 and CE 049 620.

PUB TYPE Reports - Research/Technical (143)

EDRS PRICE MF01/PC03 Plus Postage.

DESCRIPTORS Career Counseling; *Counselor Attitudes; Educational Attitudes; Educational Diagnosis; *Educationally Disadvantaged; Educational Needs; *Low Achievement; Program Effectiveness; Program Improvement; Secondary Education; Student Placement; *Teacher Attitudes; *Vocational Education

ABSTRACT

This report, the third in a series of studies of South Carolina's vocational education system, summarizes the results of a statewide survey of approximately 350 vocational center directors, guidance and placement personnel, and vocational teachers on the issue of how vocational education can best meet the needs of some 30,000 low achieving students who do not pursue postsecondary education. The results of the survey revealed that (1) low achieving students are being served primarily in trade/industry and occupational home economics; (2) there are no specific guidelines regarding assessment and counseling about programs that offer the most realistic opportunities for success and job placement; (3) vocational center directors typically have higher expectations about the training and placement of low achievers than do counseling and placement staff; (4) the most useful aspects of the vocational curriculum for low achievers are the hands-on instructional approach, career exploration and more individualized attention, and the development of positive work habits and attitudes; and (5) available resources are not being used effectively to help low achievers. Recommendations were made on developing policy for early and systematic assessment and placement of low achievers in remediation and employability skills programs, developing alternative programs, providing incentives for employers, and expanding counselors' roles in assessing and counseling low achieving students. (KC)

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EXECUTIVE SUMMARY

This report to the General Assembly, compiled and prepared by the State Council on Vocational and Technical Education, is the third in a series of reports on an 8-part study of the state's vocational education system, as mandated in the EIA of 1984. This report addresses the issue of how vocational education can best meet the needs of low achieving students who do not pursue postsecondary education. The Council's recommendations are based largely on the findings from a statewide survey of approximately 350 vocational center directors, guidance and placement personnel, and vocational teachers. As a background for discussing the survey results and subsequent recommendations, the report reviews briefly: a) the characteristics and special needs of low achieving students, b) programs and techniques found to be successful with low achievers, and c) programs and services provided through the state's vocational education system to enable disadvantaged and handicapped students to succeed in vocational programs.

In this report, the term "low achiever" refers to students who, for whatever reasons, have educational deficits and are behind their age group in academic and/or vocational achievement. In a broad sense, these students include the academically disadvantaged, learning disabled, socially and economically disadvantaged, and poorly motivated. They typically score low on standardized achievement tests, and many come from deprived or disadvantaged homes. Although not applicable in every case, most low achievers have deficiencies in one or more of the academic basic skill areas (reading, writing, math), lack job and employability skills, and are at great risk of dropping out of school because of academic failure, poor motivation to stay in school, or personal problems. In addition to the obvious need for remediation, low achievers have a host of special instructional and counseling needs.

Because of its emphasis on job preparatory training and the applied method of instruction, vocational education is often viewed as both a salvation and a "dumping ground" for low achievers and non-academically oriented students who will not be pursuing postsecondary education. While the state's vocational education system does not use the term "low achiever," a certain percent of its federal funds must be set aside to provide extra supportive services for handicapped and for disadvantaged students. These services are intended to enable eligible students to succeed in vocational education programs.

Of the approximately 125,000 students enrolled in vocational (occupational and non-occupational) courses each year in South Carolina, over 30,000 -- about 25 percent -- are classified as disadvantaged or handicapped. Many of these students, particularly the academically disadvantaged, would be considered "low achievers" in

the broad sense of the term. The survey was designed to identify and clarify their needs, and to determine how vocational programs are currently serving those needs.

The results of the survey revealed that:

1. Low achieving students are being served primarily in Trade/Industry (especially brick masonry, construction, and industrial sewing) and Occupational Home Economics (especially food services) programs.
2. There are no specific guidelines regarding how and when low achieving students are assessed and counseled about programs that offer the most realistic opportunities for success and job placement.
3. Vocational center directors are typically more optimistic and have higher expectations about the successful training and placement of low achievers than do counseling and placement staff.
4. Respondents feel that the most useful aspects of the vocational curriculum for low achievers are: the "hands-on" instructional approach, the opportunity for career exploration and more individualized attention, and the development of positive work habits and attitudes.
5. Administrators and educators feel that the best ways to prevent dropout among low achievers are to provide practical skills instruction, remediation through vocational assistance labs, and pre-screening for appropriate placement in vocational courses. Counselors added the importance of early career exploration, building an improved self-image and learning important "life skills."
6. Most vocational administrators and counseling staff feel their schools do have the resources to meet the needs of low achievers, but in some cases, they are not being used to the student's full advantage.
7. While most vocational teachers feel they are not well prepared to teach basic skills within their classrooms, many of them are attempting to do so.
8. Administrators and counselors feel that basic reading and math remediation are necessary for low achieving students. They are concerned, however, that students not be discouraged by an over-emphasis on remediation that could force them to drop their vocational electives or to drop out of school altogether. While recognizing the importance of basic skills remediation, many of those surveyed felt that occupational skill training should be the instructional priority for low achievers. These opinions, however, may have been influenced by lack of familiarity and experience with various remedial programs and services.
9. According to teachers, the most effective course designs for low achievers are those that provide remediation within the context of vocational courses (i.e., vocational assistance labs) and self-contained classes. Although it is widely used in S.C., mainstreaming was rated as a less effective approach.
10. According to teachers, the most effective instructional techniques for working with low achievers are work-study arrangements, special tutoring or one-on-one instruction, and competency-based instruction with clear goals.

Over one half of the teachers surveyed were unfamiliar with computer-assisted instructional techniques.

11. According to teachers, the support services most needed by low achievers if they are to experience success and be motivated to stay in school are realistic job counseling and testing-evaluation for appropriate placement in vocational courses.
12. Teachers pointed out the need for improved vocational guidance and pre-vocational experiences for low achievers, as well as greater efforts to involve parents.

On the basis of its review of relevant research findings and the results of the survey, the Council formulated the following **recommendations**:

- * Develop a policy and set of acceptable practices for the early and systematic assessment, counseling, and placement of low achievers in programs in which they can receive both remediation and employability skills.
- * Develop a "profile" of the low achieving student that can be used to identify students at risk of dropping out of school before benefiting from occupational training. Ideally, such a profile would include the results of an assessment of occupational training, remediation, and guidance needs, and a brief set of realistic academic and employment goals. This profile could serve as a common focus for teachers, counselors, parents, and the student.
- * Encourage the development of individualized education-training plans for disadvantaged students and require periodic updating and evaluation of these plans to determine the extent to which the student's goals are being achieved.
- * Compile and disseminate information about the effectiveness of various remedial and instructional techniques, course designs, materials, and non-traditional approaches to serving low achievers.
- * Emphasize and expand the use of vocational math and reading resource labs that focus on the application of "basics" to work-related tasks in a variety of occupational areas.
- * Provide additional teacher training to assist vocational instructors in working more effectively with low achievers, and to enable academic and remedial teachers to make instruction and materials more relevant to occupational areas and interests.
- * Develop alternative programs for low achieving students who are at risk of dropping out, such as making occupational training available earlier in the high school curriculum, and allowing those who are failing academically to remain in their vocational courses.
- * Provide incentives that will encourage employers to become more involved in the training of low achievers through special cooperative education programs.
- * Place greater emphasis on the role of counselors in providing assessment and career counseling services for low achievers, and in involving parents in the counseling process.

BACKGROUND

The South Carolina Council on Vocational and Technical Education is a 13-member board appointed by the Governor to meet the federal requirements of the Carl D. Perkins Vocational Education Act (P.L. 98-524). The majority of the members of the Council represent the private sector. The Council operates as a state agency, with a small staff, and is funded by a federal allocation and a state appropriation. The State Council has responsibility for evaluating and making policy recommendations to the vocational and technical education systems, as well as the Job Training Partnership Act (JTPA) program. Compliance with these duties is required to ensure the state's eligibility to receive federal funds for vocational education.

The Education Improvement Act of 1984 (Subdivision A, SubPart 5, Section 2) directed the State Council on Vocational and Technical Education to conduct an intensive study of how the state's vocational education system can best prepare young people with skills employers will require between the years 1990 and 2000. The intent of the study was to provide information that would assist the General Assembly and the Governor in reviewing vocational education in Grades 9 through 12, as part of a statewide reassessment of job training efforts.

For the purpose of this and subsequent reports, the term "vocational education" is defined in South Carolina as an instructional program designed to provide high school students with occupational skills needed for paid or unpaid employment, or for additional preparation for a career field. Vocational programs fall into six major occupational fields and several non-occupational fields. The occupational fields include: Agriculture, Marketing and Distribution, Secondary Health Occupations, Occupational Home Economics, Business Education, and Trade and Industry. Programs considered non-occupational include Consumer and Homemaking Education, Prevocational, Industrial Arts, and Personal Typing or Notehand courses.

Although the stated purpose of the study was to project future job markets and skills, and recommend ways in which the vocational education system can best meet these needs, the wording of the Act specified eight (8) key elements about which information was requested:

- 1 - ENROLLMENT PATTERNS: data on and analysis of students' use of the vocational education system;
- 2 - INFORMATION MANAGEMENT: recommendations for the creation of a new management information system that would provide more timely, accurate, and useful information on vocational enrollments, completions, and placements;

- 3 - STUDENT CHARACTERISTICS: a demographic and achievement profile of vocational students;
- 4 - EMPLOYER PERCEPTIONS: a report of employers' expectations of and experiences with the vocational education system;
- 5 - STUDENT PERCEPTIONS: a report of students' perceptions of and experiences with the vocational education system;
- 6 - NEEDS OF LOW ACHIEVERS: recommendations for how the vocational system can best meet the training and employment needs of low achievers;
- 7 - IMPROVED COORDINATION: recommendations for how the programs of the vocational education system can be better coordinated with other education, training, and employment agencies; and
- 8 - LABOR PROJECTIONS: a report on the state's labor needs for the coming decade that can be met by vocational program graduates.

Only the last element, labor projections, addressed the original charge in the legislation. Therefore, it was the Council's understanding that the eight specified elements of the study constituted a framework for collecting information which could then serve as a basis for more comprehensive recommendations. For this reason, the overall approach taken in the study was one of meeting the requirements of each element even though, collectively, they might surpass the general charge. The Council's intent is to provide objective, descriptive information and constructive recommendations, not to evaluate the vocational education system.

Reports are issued serially, as each element of the study is completed, with an overall completion date of April, 1986. Each report consists of both a detailed description of study activities and findings, and a brief summary. A final report will contain the combined findings from all study elements, and a set of comprehensive recommendations.

This report to the General Assembly documents the basis, methods, results and recommendations of study element #6 - NEEDS OF LOW ACHIEVING STUDENTS. The report contains specific recommendations for how the vocational education system can best meet the needs of low achieving students who do not pursue postsecondary education. These recommendations are based on findings from surveys of vocational administrators, guidance and placement personnel, and teachers regarding current practices, resources, expectations, and effective techniques in serving low achieving students in vocational programs.

INTRODUCTION: THE NEEDS OF LOW ACHIEVERS AND CHARACTERISTICS OF EFFECTIVE PROGRAMS

In a widely publicized report issued recently by the Committee for Economic Development on private sector concerns about education,⁽¹⁾ emphasis was given to the need to confront the special education needs of low achieving students. The study report pointed out that some of the most difficult educational problems are posed by low achievers who are at greatest risk of dropping out or who remain in school without acquiring basic competence in reading, writing, and mathematics. Many of these students never learn the basic skills and work-related behaviors that are necessary for success in the labor market. While these students often have the most to gain from what schools can provide, they are the most likely to drop out before they can benefit from educational programs.

Although it is true that many low achievers do graduate from high school, and conversely, many students drop out for reasons other than academic failure, low achievement and dropping out are highly correlated. Boyer⁽²⁾ reports that the main reason students want to leave school is that they are discouraged and doing poorly. The problem is of great concern in the South, where youth continue to drop out of school at a higher rate than the national average.

Regardless of the reasons, high dropout rates among low achieving students are a major concern for parents, educators, the business community, and state officials. Dropouts are not only deprived of a full education, but they suffer in the labor market. Those who fail to complete high school are more likely to experience unemployment, not only because they lack basic literacy skills but because they often lack fundamental familiarity with the world of work. The unemployment rate for youth who lack a high school diploma is an alarming 32 percent, and the unemployment rate for black youth who have dropped out is even higher -- nearly 50 percent.⁽³⁾ Even when they do find employment, high school dropouts are often restricted to unskilled, menial jobs with little hope of advancement and low motivation to return to formal education.

As expensive as education and special training may be, the consequences of unemployment are even more costly in both social and economic terms. Unemployment leads to boredom, frustration, poverty, and sometimes criminal behavior. States suffer from lost production, increased welfare expenditures, and lower tax receipts.

Given the changing nature of South Carolina's economy, and the declining proportion of young adults (aged 16-24) entering the labor force, it is becoming even more important for youth to be well prepared for work. While unskilled jobs will

continue to be available, most will still require basic reading, writing, math, and communication skills. Employers also need people who are familiar with workplace norms of behavior (e.g., punctuality, dependability, flexibility, grooming). For some youth, these skills must also be learned in school.

Characteristics of Low Achievers

Although they may vary widely in many ways, most low achieving students share three major characteristics: they are deficient in one or more of the basic skill areas, they are at great risk of dropping out of high school, and they often lack job and employability skills. Recent research has identified several factors that are associated with low achievement. Whether the low achiever is black or white, whether rich or poor, whether an underachiever or working generally to capacity, whether from a "white middle class background" or a different cultural heritage, whether highly motivated or indifferent about school, certain attitudes and behavior patterns seem to be common among low achieving students. Although they may not apply to each student, Roloff⁽³⁾ summarized these characteristics as:

- * A low self-concept within the framework of school. With a history of academic failure or "squeaking through," they view themselves as academically "second class" and are suspicious of situations in which they are successful.
- * Backgrounds that are economically, intellectually, and/or culturally deprived. Many grow up and live in a limited world with little exposure to community involvement, books, art, and role models who value these things. Their parents are often indifferent about academic achievement.
- * Little value placed on academic or intellectual achievement. They are usually pre-occupied with their subculture and the values of their peers, and suspicious of academic and social goals.
- * Non-verbally oriented. Although they are fluent in conversation, they have great difficulty with the words they are expected to use in an educational curriculum. It is in the area of verbal and writing skills that they achieve at the lowest levels.
- * Unrealistic notions about achievement and work. They think of school as lessons in memorization, not thinking. They view correct writing and speaking only as something required in school, not in the "real" world. They often aspire to jobs that exceed their capabilities, and are likely to become discouraged and drop out when basic skills deficits limit their achievement.
- * Little value on education for education's sake. These students have difficulty understanding and setting long range goals. They are very much oriented towards the present -- what will I get out of it now? Motivational techniques seem to work best when the focus is on the present, such as how learning a skill will help them get a (better) job.

The paradox is that many of these students are operating at a higher level than academic evaluation would indicate. Their aptitudes may lie in areas outside the traditional academics. Otherwise, how could one explain a student who cannot calculate using fractions in a classroom, but who can dismantle and reassemble an automobile transmission?

For this and other reasons, vocational education has been viewed as both the salvation and the "dumping ground" for low achievers and non-academically oriented students who will not be pursuing their education beyond high school. The general thinking is that vocational education will, at the very least, provide occupational skills that will enable these students to function as independent adults in the labor force. Equally important is the fact that the hands-on method of instruction used in vocational programs can also be effective in teaching the application of basic skills in an occupation. Unfortunately, the vocational educator's first contact is long after students with special needs have entered the school system, and they are no better equipped to cope with these needs than any other teacher.

Reducing Dropout

Vocational education is also expected to reduce the chances of dropout among students who might otherwise become academically disinterested and discouraged. But the National Center for Education Statistics (NCES) has reported that dropout is also a problem in vocational education.⁽⁴⁾ The relatively high dropout rate in vocational education has several causes:

- compared to general or college-prep courses, vocational courses contain a higher number of non-academically oriented students, low achievers, and students with a history of academic failure who are likely to drop out because of poor overall academic performance;
- scheduling conflicts arise at a time when it becomes apparent that students can't get all the credit needed to graduate and take vocational courses; poor performance in academic subjects forces failing students to drop out even though they may have benefited from vocational courses;
- low achievers are sometimes "set up to fail" by being placed in vocational courses that, despite common misperceptions, require high levels of math and reading comprehension skills for success; when students fail these courses, they become very discouraged and are at high risk of dropping out;
- many students begin taking vocational courses just at the time when the age for optional school attendance is reached and the decision to leave school may already have been made.

Contrary to NCE's report are findings that indicate vocational education is often successful in retaining potential dropouts by providing a reason to stay in school -- to learn an occupational skill. Others feel that while vocational education is an essential alternative for those who will not be going on to postsecondary study, it is often available too late for youth who are at greatest risk of dropping out of school.

Given that low achievers may represent a substantial proportion of students enrolled in vocational programs, and that some percentage is at risk of dropping out, the central issue is how to better meet the needs of low achievers currently in school. What programs and techniques are most effective with low achievers? What aspects of the vocational system are most helpful in preventing dropout? The following sections review briefly the types of programs and instructional approaches that traditionally have been found to be successful with low achievers.

Types of Programs for Low Achievers

Although a variety of program designs have been developed for low achievers, two basic options, mainstreaming and self-contained classes, are most widely used. Opinions vary, however, as to which method best serves the needs of low achievers, and how various approaches affect other students in a class. Those who believe low achievers should be mainstreamed (enrolled in a regular class with additional help when needed) argue that these students get good role models and motivation from interacting with high achievers. Those who argue for self-contained classrooms say that the presence of low achievers in the regular classroom tends to pull down the level of achievement of an entire class and forces the teacher to decide where to focus instructional effort.

In fact, there is no sound evidence to support either position. Schools must make the decision about what method to use, with which students, depending upon their philosophy, staff, student needs, and resources. Typically, most low achievers are mainstreamed into regular vocational classes, with remedial and special assistance provided through classroom aides, resource teachers, and labs. The emotionally disturbed and mentally handicapped are usually served in self-contained classes.

Another type of program that has been relatively successful is computer-assisted instruction (CAI). These mastery programs are typically individualized, self-paced, structured, and sequenced to permit students to make up deficiencies at their own pace. The impact of this style of education is only beginning to be felt.

Systems like PLATO, a curriculum program, and the Comprehensive Competencies Program (CCP) being tested at the San Diego Urban League Training Center,⁽⁵⁾ offer much potential for providing remedial education.

Characteristics of Effective Programs

Regardless of whether low achievers are mainstreamed, given structured remediation within a regular classroom, or placed in self-contained classrooms, research has shown that the most effective approaches to teaching low achievers are those that involve:

- **Flexibility:** Because there are no techniques, methods, or materials that are consistently effective with low achievers, programs must be open to experimenting with a variety of approaches.
- **Counseling:** Attitudinal problems such as low self concept, unrealistic expectations, personal and family problems, and the tendency to become discouraged easily can be as significant as skills deficits in causing low achievement. Remediation of skill deficits is unlikely to occur without improving the attitudes of some low achievers.
- **Individualized help:** Low achievers need a low teacher-student ratio and intensive individual help to overcome their pattern of low achievement. Such special help can be expensive. Lack of commitment (people and money) will doom a special program -- if there isn't enough money to do any good, not much good is done, so administrators conclude that since it isn't that good anyway, why continue to fund it?
- **Early evaluation and placement:** Careful and comprehensive assessment of the low achiever, early in the educational process, is the only way to assure a sound basis for counseling, planning, remediation, and placement in programs that match the student's potential.
- **Remediation:** Remediation of specific skills deficits should focus on two basic areas -- verbal and quantitative -- with an emphasis on skills over content. This is often referred to as "applied" remediation.
- **Trained instructors:** Whether regular faculty or "special personnel" are to work with low achievers, all must have some knowledge of student characteristics, learning styles, effective teaching methods, and special problems in working with low achievers.

Effective Techniques

In addition to these characteristics of effective programs, various studies and teacher reports have identified a number of specific techniques that have been found to be effective in teaching low achievers. Techniques often mentioned include:

- a) Using a variety of media. Today's students get most of their information from television, so pictorial and auditory aids are very effective. Audio-visuals are also more effective with poor readers and those with a short attention span.

- b) Large amounts of individual help. This is usually an indication to the low achiever that someone cares. After years of failure, this is an important factor for the poorly motivated student.
- c) Use of teacher aides. These paraprofessionals are valuable sources of assistance in providing one-on-one instruction and good role models.
- d) Self-help devices. Computer programs that offer flexibility, independence, and immediate feedback can be very effective in reasonable doses.
- e) Success situations and reinforcement. Success breeds success, and situations that make failure improbable can begin to change patterns of negative experience. Success must be followed by strong reinforcement.
- f) Student interaction. Peer pressure and encouragement are extremely effective. Paired study, team study, and peer tutoring have all produced positive results with low achievers.
- g) Intensive practice. Skills of reading, writing, listening, and computing require intensive practice and repetitive drill.
- h) Strict boundaries. Some low achievers have become adept at rationalizing and finding excuses to "get by." Strict boundaries in terms of attendance and assignments are needed to improve self-responsibility.
- i) Ongoing evaluation. Regular assessment must be made of improvements in skills, attitudes toward school, concepts of work, improvements in self image, goal setting, etc. This can be done on a formal or an informal basis, but it is necessary in order to determine the effectiveness of methods being used, and to detect signs of potential dropout.

Non-traditional Approaches

Not all of the special problems posed by low achievers can be addressed in a traditional academic setting. A recent publication by the Southern Growth Policies Board⁽⁶⁾ described four non-traditional, model programs that have successfully tackled the problems associated with youth unemployment among high school dropouts. Emphasis in these programs was on early detection and intervention of students at risk of dropping out, and on preparing school age youth for the working world. These highlighted projects included an alternative school program for youth who have already dropped out, a special summer program for developing improved self-concepts, a high school program that focuses on early detection and intervention with at-risk youth that begins in the elementary grades, and a school-to-work transition program for students who seem headed for trouble.

These four programs were not intended to fully represent all of the exemplary projects dealing with youth at risk in school (or prematurely out of school and unemployed). But they have certain elements in common that appear necessary for success:

1. some emphasis was placed on repairing the student's self-image, which is generally poor for low achievers, dropouts, and those from disadvantaged homes;
2. opportunities were provided for immediate increments of success, beginning with work in the classroom to a successful transition to an actual job setting;
3. students were given experiences in the world outside their family life by providing exposure to a larger community (employers, trainers, job service personnel, etc.); and
4. students were encouraged to broaden their vision of their own potential and overcome past "labels".

Several other projects have linked basic education and employment needs to gain success with low achievers and at-risk youth. A Summer Training and Education Program (STEP), funded jointly by Public/Private Ventures and local JTPA money at various sites, is an experimental summer program that combines jobs with remedial education for potential dropouts.⁽⁷⁾ The goals of the program are to reduce dropout rates among disadvantaged youth, reinforce learning gained in regular school, and emphasize responsible behavior. Under STEP, students are placed in part-time jobs, but must also take reading and math classes and a "life planning" course. The majority of STEP participants are eighth- and ninth-graders. The project is being expanded to several other pilot sites across the country.

The Role of the Private Sector

The report of the Committee for Economic Development cited earlier⁽¹⁾ also emphasized the need for a closer collaboration between business and education in meeting the needs of low achievers. The report proposed that these students are served best by programs that combine work experience with education. The work-school combination for many of these high risk students provides an important motivational force. It teaches them about working, helps them earn extra money, and shows that they can be successful in a job. The report pointed out that the business community has much to offer and much to gain from collaboration focused on employability, and that business has traditionally had an active interest in programs to reduce dropout rates, provide work experience, and improve basic skills. One excellent example of this is cooperative education -- one of the oldest forms of partnership involving high schools and business. The report strongly recommended that work-study approaches be the major emphasis in strengthening programs for low achievers.

NEEDS AND SERVICES IN SOUTH CAROLINA

The Extent of the Problem in South Carolina

Although labels are of limited practical use, and often over-generalized, the term "low achiever" is frequently used to describe students who fail to meet educational achievement standards. In 1984, about one-third of all Grade 11 students in the state's public schools did not meet statewide standards in reading, mathematics, and writing tests of the Basic Skills Assessment Program.⁽⁸⁾ In Grade 10, student performance on the Comprehensive Test of Basic Skills (CTBS) was below the national median in reading, language, mathematics, reference skills, and science; performance was above the national median only in social studies.⁽⁹⁾ The state's Youth Employment Coordinating Council reported that during school year 1983-84, nearly 10,000 secondary students dropped out of school and nearly one thousand were expelled.⁽¹⁰⁾ This represents about six percent of total public secondary enrollments.

The Need for Remediation

One of the most obvious needs of low achievers is for academic basic skills remediation. Twenty years ago, the only remediation available to low achievers was that provided at the initiative of individual teachers. In the past two decades, South Carolina has initiated and participated in a variety of remedial programs in an effort to improve the basic skills (reading, writing, mathematics) of young people. Programs and funding have included:

- * Nearly \$62 million of the approximate \$200 million first-year appropriations provided by the EIA of 1984 were earmarked for activities to improve the academic performance of students. The Compensatory and Remedial Education component of the EIA provides funds for remediation for students in grades 8-12 whose scores fall below the 25th percentile on state-administered tests of basic skills.
- * Chapter 1 of the Education Consolidation and Improvement Act (ECIA) provides approximately \$50 million each year to school districts, based upon each district's concentration of low income families, for use in remediation of basic skills.
- * The Chapter 2 block grants program of the ECIA also provides about \$200,000 each year for basic skills remediation activities.
- * For school year 1985-86, 32 percent of the Title II federal funds for vocational education (approximately \$4 million) are "set aside" to provide services for handicapped and disadvantaged students enrolled in vocational courses. These funds are available to provide supplemental services such as basic skills development, counseling, equipment, and classroom aides needed to improve the chances of success in regular vocational education programs.

* Over \$4.5 million of Job Training Partnership Act (JTPA) funds in South Carolina are designated for remediation initiatives over a three year period, beginning in 1984.

In addition, remedial programs are offered by the technical colleges, the Office of Adult Education, and local school districts. Unfortunately, many of these programs are relatively new and their effectiveness and impact cannot yet be gauged. However, opinions are mixed about the long term effect of mandatory basic skills remediation on vocational education enrollments. Some feel it will ultimately upgrade the basic skill level of low achievers and enhance their chances of success in occupational programs. Others feel it will further restrict opportunities for student electives in vocational programs, and perhaps further discourage the academically handicapped.

Some Important Definitions

Because of its focus on occupational training for employment, vocational education is a highly appropriate program for low achievers and others who will not be pursuing their education beyond high school. While there are no vocational programs designated specifically for "low achievers," special services for handicapped or disadvantaged students are a significant component of the vocational education system.

The provision of services to low achievers enrolled in vocational programs is governed largely by the new Carl Perkins Vocational Education Act (VEA), which specifies the percent of federal funds that must be set aside to assure equal opportunity for disadvantaged and handicapped students in vocational education programs. These percentages are higher than in previous federal legislation. The Perkins Act specifies how these federal funds may be spent, and it requires schools receiving these funds to provide certain assessment and counseling services to eligible students. Unlike previous legislation, the new Act also specifies criteria which must be met in order for students to be classified as handicapped or disadvantaged.

In the new VEA, the term "disadvantaged" refers to students who have economic or academic disadvantages and who require special services and assistance in order to succeed in vocational courses. Included are students from low income families, migrants, those with limited English proficiency, potential dropouts, and secondary dropouts. An "academically disadvantaged" student is one who scores below the 25th percentile on a standardized achievement test, whose grades fall below 2.0 on a 4-point scale (below a "C"), or who fails to obtain minimal academic competencies. Federal set-aside funds in vocational education can be used only for supplemental staff, equipment, materials and services that are not provided to other vocational

enrollees ("excess costs"). In order to receive these funds, schools must also provide a variety of services to disadvantaged students (information about vocational program opportunities, assessment, counseling, etc.)

Many of these requirements also apply to the use of federal set-aside funds for handicapped students. Handicapped students (mentally retarded, speech or hearing impaired, visually or orthopedically handicapped, emotionally disturbed, or learning disabled) are those who, because of their condition, cannot succeed in a vocational program without special assistance.

According to the state's Vocational Education Data Systems (VEDS) reports, nearly 25 percent of all vocational enrollments in school year 1984-85 -- slightly more than 31,000 students -- had special needs. Over 23,000 of these students were classified as economically or academically disadvantaged; the remainder were classified as handicapped. Over 90 percent of these students were mainstreamed in regular vocational classes; less than 10 percent were served in self-contained programs.

In school year 1985-86, approximately \$4 million in federal vocational education funds will be used to provide supplemental services to handicapped and disadvantaged students enrolled in vocational courses. Allocation of these funds to local school districts is based on a formula that takes into account prior levels of service to these groups and area economy. The decision about how and where these funds will be spent rests with the school district. Possible services include, but are not limited to:

- * surveys to identify disadvantaged populations and employment opportunities available to them;
- * special counseling services for disadvantaged students;
- * staff development activities required to prepare personnel to work with disadvantaged and handicapped students in vocational programs;
- * supplemental services such as remedial education, psychological services, and testing programs;
- * scheduling modifications needed to provide additional time for personnel to assist disadvantaged and handicapped students;
- * curriculum modifications required to enable disadvantaged and handicapped students to succeed in regular vocational classes;
- * curriculum development required to provide students with specially designed programs to suit their individual needs; and
- * resource centers designed to provide remediation and supplemental help to disadvantaged and handicapped students enrolled in vocational courses.

Meeting Special Needs in Vocational Programs

The first priority for vocational programs serving disadvantaged or handicapped students must be job skill training coupled with supplemental assistance on an individual need basis. However, since "remediation" in vocational education is any supplemental activity needed to successfully complete a vocational program, it is in most cases a necessary program element. Because it is provided on an as-needed basis, supplemental activities or remediation can vary from a few hours of individual assistance in learning to read a ruler, to an extensive computer assisted program designed to raise a student's level of math competence.

In practice, three basic types of program designs are used in providing remedial services to disadvantaged students enrolled in vocational courses throughout the state:

- * Separate, self-contained vocational classes that are specially designed to meet the unique needs of disadvantaged or handicapped students.
- * Regular vocational classes in which supplemental assistance is provided. The special assistance may take the form of help in math or reading, individual counseling, special supplies, and/or special materials and aids. This arrangement is usually called "mainstreaming" because the student is enrolled in a regular class, with special assistance provided by the instructor or a teacher's aide on an as-needed basis.
- * Resource centers that are available to disadvantaged students enrolled in vocational courses who need remedial or supplemental help. These centers may involve curriculum modifications, remedial instruction, the use of special materials and teaching aids, and vocational assessment. Such an arrangement is sometimes called a "pull-out" program because it is provided in addition to, or in place of, a regular vocational class.

South Carolina's Office of Vocational Education has recently funded computer-assisted remediation programs at six sites across the state. The major emphasis in these programs is math remediation. Since the systems have been in operation less than a year, their effectiveness has not yet been assessed.

A variety of remedial materials and other publications designed to assist instructors in working with low achievers have been developed by the State Office of Vocational Education. Three widely-disseminated publications are: "Working with Handicapped and Disadvantaged Students in Vocational Education" (1983), "Teaching Reading in Vocational Education" (1983), and "Applied Vocational Mathematics" (1984).⁽¹¹⁾ Although the effectiveness of these materials and the extent to which they are systematically used is not known, the Vocational Curriculum Development Section of the OVE indicates that the demand for these and related publications has been high.

Career Counseling Services

The type and amount of student assessment, career exploration, and counseling provided to low achievers undoubtedly varies from school to school, depending upon available resources, the general makeup of the student body, and the school's philosophy regarding the importance of these services. However, the new Perkins Act now requires that schools receiving federal set-aside funds for disadvantaged and handicapped students must:

- * provide information to disadvantaged and handicapped students and their parents concerning the opportunities in vocational education no later than the beginning of the ninth grade (how this must be done is not specified);
- * provide assessment services, guidance and career development activities, and services designed to facilitate the school-work transition for each disadvantaged or handicapped student who enrolls in a vocational program; and
- * document each handicapped and disadvantaged student's needs and goals, and make this information available for monitoring purposes.

These new requirements will substantially increase the counseling and accountability demands placed on vocational programs. Since most vocational programs are just beginning to make the adjustments specified in the new Act, it is not known how schools will meet these requirements.

A Team Approach to Serving At-Risk Youth

South Carolina is currently carrying out a demonstration project, "State Employment Initiatives for Youth," that focuses on 14-21 year old youth who are at risk in the labor market (low achievers, unemployed youth, dropouts and expelled youth, juvenile offenders, unmarried parents). The main goal of the project is to develop a statewide comprehensive system that will enable these at-risk youth to receive the quality education and training they need, when they need it, to become employable. With a focus on linking together resources that already exist, the project involves local representatives from school systems, the Department of Youth Services, and the Employment Security Commission. The 30-member Youth Employment Coordinating Council is developing the policies, programs, and demonstration models, with funding from the state's JTPA program.

Focus of the South Carolina Study

Although the vocational education system in South Carolina is already serving a substantial number of low achievers in various occupational and non-occupational

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programs, some services are undoubtedly more effective, or more in need of improvement, than others. The purpose of the Council's study was to obtain information about current resources, practices and instructional techniques, as well as to solicit suggestions about how services might be expanded or improved. The survey results, reported in the following sections, serves as the basis for the Council's recommendations regarding how the vocational education system can best serve the needs of low achieving students who do not pursue postsecondary education.

METHODS USED IN THE STUDY

Although the EIA legislation required only recommendations on how the vocational education system could better serve low achievers, the Council needed some facts and opinions on which to base its recommendations. It was determined that the best sources of information concerning the needs of low achieving students were the vocational directors, guidance counselors, placement coordinators, and teachers who work with these students on a daily basis. Specifically, the study was designed to assess: 1) opinions regarding the extent to which vocational education is serving low achieving students, 2) the extent to which adequate resources are available to provide programs and services for this student group, and 3) strategies and techniques that have been most useful in teaching low achievers in vocational programs.

There was also some interest in determining the degree to which vocational teachers perceive themselves as prepared to teach basic skills within the context of vocational classes, and the amount of training they had received in working with low achievers. Suggestions and alternatives were also to be solicited. It was decided that this information could be best collected through a mail survey using a semi-structured format.

For the purposes of the study, a "low achiever" was defined as a student who, for whatever reasons (e.g., educational deficits in basic academic skills, low intellectual ability, and/or lack of motivation), is at least two grade levels behind his or her age peers in academic classes and has difficulty achieving skill competencies in vocational classes. Although poor grades may not always reflect ability deficits, nor is "low achiever" synonymous with "dropout," it was apparent from the survey findings that the respondents understood the definition provided. That is, comments from respondents reflected concern not only about handicapped and academically or economically disadvantaged students, but also the poorly motivated.

Consultant Role

To facilitate the study, the Council engaged the assistance of Dr. Delinda Cannon in developing the survey procedures and forms. Based on her extensive experience as an educational consultant to many school districts throughout the state, and her work on remediation programs, Dr. Cannon isolated the major issues and concerns regarding low achieving students, and helped to focus the study on those elements that were within the Council's resource capabilities. Dr. Cannon drafted the questionnaire items, drew the sample to be surveyed, and summarized the

findings. Preparation of this report, including conclusions and recommendations, was completed by the State Council.

Survey Questionnaires

Two different survey questionnaires were designed for use in the study. The first one focused on the perspectives of vocational center directors, guidance counselors, and placement coordinators concerning:

- a. programs currently serving low achieving students;
- b. counseling and registration practices;
- c. achievement expectations for low achievers;
- d. components of the vocational curriculum that are most useful to low achieving students;
- e. assistance available for students at risk of dropping out of high school;
- f. resources and instructional priorities; and
- g. perceived preparedness of vocational teachers to serve low achievers.

Using primarily open-ended questions, this survey asked for opinions as well as practices, and allowed for maximum flexibility in responding. An initial draft of the questionnaire was pre-tested with 15 vocational directors and counseling staff chosen at random from a list of schools in the state. Revisions and refinements were made following the pre-test. A copy of the final form, referred to as the "administrator/counselor survey," is in Appendix A.

The second questionnaire followed a more structured format. Most of the items asked vocational teachers to rate the effectiveness of various course designs, instructional approaches or techniques, and support services (counseling, testing, remedial activities) in serving low achievers. In addition, respondents were asked to describe any other resources or teaching methods found to be successful in working with low achieving students, and to provide opinions and ideas on several open-ended questions. Items regarding teacher preparedness to provide remedial assistance were included.

A draft of the survey was pre-tested with 15 teachers selected at random from a listing of all vocational teachers in the state. Following review of the pre-test feedback, the form was revised. Appendix B contains a copy of the final "teacher survey" form.

Since mail surveys usually result in relatively low return rates (about 30 percent), several steps were taken to encourage responding: the questions were parsimonious and limited in number, the purposes of the survey and intended use of

results were made clear, terms were clearly defined, and a self-addressed envelope was provided for returning the form. Also, response confidentiality was assured, as no names were requested on the forms.

Survey Sample

The sample of participants for the administrator/counselor survey was drawn from lists of vocational center directors, vocational counselors, and vocational placement coordinators. The random 50 percent selection of directors and support staff resulted in a sample of 28 directors and 59 guidance/placement personnel.

The sample of participants for the teacher survey was drawn from lists of all teachers in the six occupational areas, prevocational instructors, and teachers and aides working with disadvantaged and handicapped students. A random 10 percent sample was identified in each of the eight areas, with a minimum of 25 per group, resulting in a total sample size of 316. All survey forms were mailed in May, with a June 1 deadline. Reminders were sent about 10 days after the initial mailing.

Limitations of the Study

It was not the purpose of this study to make a comprehensive evaluation of services to low achieving students, nor to compile statistics on the effectiveness of various instructional techniques. Rather, the purpose was to collect information and ideas from a sample of educational staff that would be useful in identifying techniques that appear to be effective with low achievers, as well as areas that may need further exploration or development. The sample was drawn to ensure that a variety of perspectives could be expressed, not to satisfy statistical measurement criteria. For this reason, sample sizes and data analysis techniques were less rigorous than in other studies the Council has conducted. This in no way diminishes the value of the findings.

FINDINGS OF THE ADMINISTRATOR/COUNSELOR SURVEY

Response Rates

The response rate to the administrator/counselor survey was higher than expected. Of the 28 vocational center directors contacted, 19 (68%) completed and returned the survey. Of the 59 guidance and placement counselors contacted, 43 (73%) returned the survey. Since the survey form did not ask for any identifying information, it is not possible to determine the geographic representativeness of

the sample that returned the survey. However, postmarks indicated that surveys were mailed from cities and towns all across the state.

Programs Currently Serving Low Achievers

Survey participants were asked to indicate the occupational areas that seem to serve the majority of low achieving students. As Table 1 illustrates, the areas most frequently mentioned were Trade/Industry programs (particularly building construction, masonry, and industrial sewing). Occupational Home Economics (especially food services) and Agriculture courses were also listed fairly frequently. The vocational areas that administrators and counselors felt served the fewest number of low achievers were Business Education and Marketing/Distribution.

Table 1: Vocational Programs Serving Low Achievers

<u>Area</u>	<u>Number of Times Listed</u>
Trade/Industry	(115)
Building Construction	27
Masonry	27
Industrial Sewing or Textiles	20
Auto Body or Auto Mechanics	15
Welding	6
Non-specific or other	2 ^r
Occupational Home Economics	(19)
Food Services	12
Non-specific	7
Agriculture	(12)
Horticulture	7
Non-specific	5
Health Occupations	(2)
Business Education	(1)
Marketing/Distribution	(1)

() Numbers in parentheses indicate total for the occupational area

According to these findings, the occupational areas that seem to serve the majority of students considered to be "low achievers" are those that produce skilled and unskilled laborers, and service workers. If the term "low achiever" is used by educators primarily in reference to handicapped and disadvantaged students, this

finding corresponds with enrollment information. An earlier Council report (Report #1) indicated that handicapped and disadvantaged students represented a significant percentage of the enrollments in Trade/Industry, Occupational Home Economics, and Health Occupations courses. The one discrepancy is that although disadvantaged students made up 60 percent of last year's enrollments in Health Occupations, this area was not perceived by the survey respondents as one that serves a large number of low achievers. This may be due to the relatively small enrollment in Health Occupations, and to the more rigorous requirements in this program area.

The Enrollment Process

Many people have raised the question as to why some programs tend to serve more low achievers than others. Do low achievers self-select into these programs or are they counseled into programs that are believed to be less demanding, academically? According to the survey respondents, both of these situations occur.

Nearly half (47%) of the vocational directors and 53 percent of the counselors and placement coordinators who responded said that low achieving students usually select their own courses. The remainder said low achievers are usually advised to enroll in certain courses, or that the process varies from student to student. The pattern of responding indicated that there have been no specific guidelines for assessing and counseling low achieving students regarding appropriate vocational courses that are based on individual capabilities for success.

Future Job Prospects and Earning Potential

Several critics of vocational education argue that such programs track students, particularly low achievers, into low-status dead end jobs. For this reason, administrators and counselors were asked their opinion about the future job prospects and earning potential for low achievers who completed programs in which they typically enrolled (e.g., trade and industry, food services). Their responses are summarized in the following table.

	Directors (N=19)	Counselors/ Placement Staff (N=37)
Good (with reservations)	63%	41%
Fair (better than without training)	15%	46%
Slim to none	5%	8%
Varies from student to student	16%	5%

Directors had a somewhat more optimistic view than did placement and counseling staff, and they emphasized more frequently that job prospects and earning potential for low achievers often depend on the individual's attitude toward work. Over one half of the counselors and placement coordinators who responded to this question felt that job prospects for low achievers were fair or slim.

One respondent made an important point about the difference between "job prospects" and "earning potential." While students who complete programs such as masonry and building construction may have more earning potential in the long run, there are more local job opportunities in lower-paying jobs such as food service and industrial sewing. This raises the important issue of what should be emphasized in the counseling process.

Mastery of Skills for Today's Workplace

Given the current emphasis on the growing use of technology in the workplace, survey participants were asked to rate the extent to which low achieving students could be expected to master the occupational skills needed for most technical jobs. Although counseling and placement staff tended to be slightly more optimistic than directors on this item, there were no significant differences between the two groups.

Overall, only one out of 62 respondents felt low achievers could master these skills to a "great extent." The majority of those who responded (63% of the center directors and 74% of the counselors/coordinators) felt that such skills could be mastered to "some extent." About one fourth of the respondents felt that low achieving students had little or no chance of mastering occupational skills needed in a technology-oriented workplace.

Most Useful Curriculum Components

Survey participants were asked to give their opinions about which component of the vocational curriculum seemed most useful to the low achiever. Table 2 lists those elements indicated most frequently by directors and counseling/placement staff. These are not discrete categories, but logical groupings suggested by the wording of the respondents' replies.

"Hands-on activities" was listed most frequently by both directors and counseling staff as the most useful aspect of vocational education for low achievers. Over one third of the counselors who responded to this item indicated that "Trade and Industry" courses were most useful, but none of the directors identified a specific program or course. This finding may reflect differences in the way that

Trade/Industry courses are perceived by the two groups. Center directors may view such courses as requiring a fairly high level of math and reading skills, while counselors tend to perceive them as a "learn by doing" approach that is effective with low achievers.

Table 2: Most Useful Components of the Vocational Curriculum

	All Respondents (N=52)	Directors (N=17)	Counselors/ Placement Staff (N=35)
Hands-on activities	42%	35%	46%
Trade/Industry programs	25%	--	37%
Individualized instruction	8%	18%	3%
Development of positive attitudes toward work	8%	18%	3%
Prevocational training	8%	12%	6%
Emphasis on basic skills	4%	12%	3%
Development of social skills and self esteem	4%	6%	3%

Due to rounding, column totals may not equal 100 percent.

It is also noteworthy that directors cited a variety of elements that are useful to the low achieving student (e.g., instructional methods, development of positive attitudes, etc.), while counseling staff tended to focus on the "manual skills" aspect. This finding suggests that counseling and placement staff may have a more narrow view of the purposes and benefits of vocational education programs than do vocational center directors. Several directors commented that counselors in feeder high schools can sometimes "undermine" the outcomes of vocational programs by steering less able students into them, and more able students away from them. As was pointed out in the Council's Report #1, this is partially the result of the low image and "stigma" frequently associated with vocational education.

Preventing Dropout

Since low achievers are often at high risk of dropping out of high school, survey participants were asked what assistance vocational programs could offer to encourage these students to stay in school until they had learned sufficient skills to function as independent adults. Directors who responded to this question offered a variety of suggestions, such as:

1. **Remediation:** give additional help as soon as a student begins to fall behind (don't wait until they are in trouble in vocational classes); provide ongoing assistance to low achievers through "vocational assistance labs" for remediation of basic skills deficits; provide proper guidance for remediation.
2. **Hands-on Training:** make courses 90 percent "non-classroom" training; offer manual skills training as early as grades 9 and 10; provide cooperative work experience to build self esteem and provide financial rewards; offer a "reason to learn" -- application of reading and math.
3. **Early Screening:** offer pre-screening (prior to grade 9) for appropriate placement in vocational programs; give aptitude tests for placement to avoid "setting up" a student to fail.

Guidance and placement staff listed some of the same suggestions, but their responses tended to put more emphasis on career awareness and the development of improved self-perceptions. Comments from these staff included:

1. **Early Counseling and Career Exploration:** provide exposure to vocational training opportunities much earlier (elementary and middle school); begin prevocational education in grade 7 for all students; offer more courses on career awareness and exploration; discuss job opportunities and options to traditional education with low achievers at risk of dropping out.
2. **Build Improved Self Image:** offer opportunities for success as opposed to the failures these students often experience; put increased emphasis on developing a healthy self-concept; provide a "life skills" class for every student at grade 10; provide patience and encouragement.
3. **Focus on Relevant Learning:** provide a learning environment that relates to the world of work; place as many of these students as possible in cooperative education programs; provide more "low tech" programs.

The suggestions offered by directors and counseling/placement staff placed considerable emphasis on remediation, applied learning, use of support services (guidance, placement, screening, evaluation), early exposure to vocational education, and building an improved self-concept as ways in which vocational education can help prevent dropout. One respondent made an important observation in the following comment (paraphrased):

"Many students drop out of school because of problems at the home high school (academic or other reasons). Usually they don't want to drop their vocational courses, but they have to because state funding applies only to full time students. If these students could continue their vocational classes, we could still provide an education that is worthy of our time and expense. Limited state funding for this type of part-time student would be a solution."

Resources to Provide Assistance

Directors and counseling staff were asked to rate the extent to which schools have the resources and knowledge to encourage low achievers to complete their education. There were no appreciable differences in the response patterns of the two groups. About one fourth of the 60 respondents felt that school districts had the needed resources "to a great extent." Slightly more than half of those who responded to this question said resources were already available "to some extent," but that schools would need additional personnel or funds to be effective in this area. Seven respondents felt their schools simply lacked the resources and knowledge to provide the kinds of assistance indicated in the previous section -- guidance, screening, and evaluation.

Services That Cannot be Provided

Further information was gathered regarding services needed by low achieving students that respondents felt could not be provided by secondary vocational programs. A wide variety of services and assistance were identified as necessary, but beyond the capability of vocational programs (for a variety of reasons):

- * classroom and shop aides to assist instructors with low achievers
- * proper preparation in basic skills in lower grades; concentration on math and reading skills; extensive remediation;
- * human relations training;
- * more apprentice and helper-level programs that would deal with general rather than technical skills;
- * an alternative program within the school for teaching occupational skills;
- * intensive work-related activities;
- * more counseling and placement coordination;
- * psychiatric assistance for emotionally troubled students;
- * increased variety of programs;
- * joint planning of academic and vocational training;
- * one-on-one individualized instruction;
- * closer follow-up after leaving school;
- * vocational classes designed solely for low achieving students.

Even though many areas were identified as lacking in terms of potential for service to the low achiever, over one half of the respondents were either unable to identify an area in which services could not be provided in vocational programs (left the question blank), or they indicated adequate services could be provided if resources were more fully utilized.

Instructional Priority for Low Achievers

The issue of what should be the educational priority in teaching low achievers in vocational programs is a critical one. Many educators feel that a vocational skill, without an underlying mastery of the basics, is of little long term value. Others feel that many low achieving students may never master basic academic skills in high school, but that they can master certain vocational skills that are essential if they are to function as independent adults. Vocational directors and counseling/placement staff were asked to give their opinions regarding the educational priority for low achievers: basic academic skills (reading, writing, math) or basic occupational skills for employment.

Again, there were no appreciable differences between the responses of directors and those given by counseling and placement staff. The majority of respondents in both groups (42% of the administrators and 44% of the counseling staff) said basic occupational skills for employment should be the instructional priority. The following comment (paraphrased) was typical of those who gave occupational training top priority:

"There are many people who, despite academic deficit, in some areas, have made a good living at their trades. If that is true of them, it can also be true of students. Some students will never learn basic academic skills. Let them learn something that will help them be productive citizens."

About one third of the respondents held the opposite view and said basic skills such as reading and math should take precedence over occupational training. Their comments reflected the opinion that vocational programs should be viewed as an adjunct to, not a substitute for, basic skills remediation. The remaining 23 percent said that a balanced combination of both academic and occupational courses is needed to prepare students for long-term success in the job market. In reality, however, such a combination may be difficult to achieve, as one respondent pointed out (paraphrased):

"Remedial classes in math and language arts are making it difficult for the academically disadvantaged student to enroll in vocational courses. Since both remedial and vocational courses are electives, enrollments in vocational courses will decline among students requiring remediation. My concern is that a small gain in academic achievement will not offset the loss by these students of acquiring a marketable skill before leaving high school."

Best Instructional Settings

Vocational center directors and guidance/placement personnel were asked what instructional setting was most appropriate for teaching academics and providing occupational training to low achieving students. Many options were suggested, including:

- elementary and middle schools (for teaching academics)
- traditional high school classrooms (for teaching academics)
- vocational classrooms and labs (for occupational training)
- prevocational classes
- vocational schools with facilities to teach academic basic skills
- self-contained or small group settings
- vocational classes with labs for teaching relevant basics

The traditional vocational classroom was the most frequently mentioned setting for teaching basic occupational skills. Several counselors suggested alternatives such as on-the-job training, special labs, smaller classes, and competency-based vocational instruction. The vocational classroom was also cited by many respondents as the most appropriate setting for providing a combination of occupational and academic instruction.

One vocational administrator felt strongly that it is a mistake to separate basic skills instruction from occupational training. The respondent stressed, "I'm not convinced students need additional services. Our academic teachers need some vocational training, and our vocational teachers need some training in basic skills instruction." The point made is that there is a need to better coordinate academic and occupational instruction, and this can be accomplished best through increased awareness and perhaps some cross-training of academic and vocational teachers.

Preparedness to Teach Basic Skills

Center directors and guidance/placement staff were also asked to rate how well prepared they feel vocational instructors are to teach basic skills to students with low academic aptitude. Thirty seven percent (37%) of all the respondents -- 42 percent of the vocational center directors and 35 percent of guidance and placement personnel -- felt vocational teachers were "poorly" prepared. Another 53 percent (33 out of 62 total respondents) said teachers were "somewhat" prepared. Only 3 percent said vocational teachers were "very well" prepared to provide basic skills instruction.

Some of the comments provided along with these ratings indicated that many administrators and guidance personnel feel vocational teachers (particularly those in Trade/Industry programs) need special training themselves if they are to teach basic skills within the context of their classes. Specific comments were that teachers need inservice training in how to prepare tests and remedial drill and practice activities that can be used with low achieving students.

Additional Comments

Most of the comments provided by vocational directors and counseling staff have been discussed in the sections above. Some additional remarks relevant to the general issues raised in the survey are paraphrased below. An asterisk following a comment indicates that more than one respondent made a similar notation.

"The new graduation requirements should be reconsidered for the low achiever. These stiffer requirements may be better for the average student, but they will probably cause the low achiever to drop out of school before acquiring the skills needed for employment." (*)

"More money needs to be spent on prevocational courses. A prevocational track at the junior high school level would help. This could be used to help prepare individualized programs (IEPs) for low achievers." (*)

"Low achievement among vocational students is caused by the student's inability to handle the theory part of the required coursework. This all reverts back to the lack of basic skills (reading, math) among students coming into vocational classes." (*)

"Line funding at the state level would be helpful. The state needs to recognize that it costs more to train a vocational student than to provide basic education to the general curriculum student."

"We need to concentrate on teaching basic vocational skills, and stop trying to graduate fully trained mechanics, welders, etc. We should concentrate on students with individualized plans and lists of competencies they have achieved."

FINDINGS FROM TEACHER SURVEY

Representativeness of the Sample

An average of 54 percent of the 316 vocational teachers surveyed returned a completed, usable form. Across the eight areas, return rates varied from 24 percent of the Prevocational and Remediation/Resource teachers surveyed, to 92 percent of the Health Occupations teachers in the initial sample. However, many teachers indicated they taught courses in several areas. For purposes of tabulation, the first course listed was used to classify the teacher's area. Appendix C contains the complete list of areas, sample sizes, and return rates.

Of the 172 teachers who returned the survey form, slightly more than one half (52%) described the composition of their classes as "mixed" -- containing students with various academic abilities and socio-economic backgrounds. About 25 percent of the respondents said the composition of their classes paralleled the student body (i.e., predominantly black students if school was predominantly black, etc.). The remainder of the respondents said they taught disadvantaged and/or handicapped students primarily.

Effectiveness of Course Designs

Teachers in the survey were asked to rate the effectiveness of three commonly used vocational course designs for teaching low achievers. On a four-point scale, respondents were asked to rate:

- 1) regular vocational classrooms in which the teacher or aide provides remedial math and/or reading instruction if needed (mainstreaming);
- 2) special remediation programs such as vocational reading labs that are provided in addition to or in place of the regular vocational class (pull-out program for basic skills remediation);
- 3) separate vocational classes for low achievers in which academic and skill requirements are lower than for students in regular vocational classes (self-contained).

Respondents could also indicate they had no knowledge about a particular course design, and omit the rating. Teacher ratings are summarized in Table 3.

Of the 172 teachers who responded to the survey, 25 percent said they had no knowledge of "pull-out" designs, and 28 percent were unable to rate "self-contained" designs because they were unfamiliar with them. Teachers were most familiar with "mainstreaming" as a program design.

**Table 3: Teacher Ratings of the Effectiveness of
Three Vocational Course Designs (N=172)**

	<u>Mainstreaming</u>	<u>Pull-Out</u>	<u>Self-Contained</u>
Had No Knowledge and Did Not Rate	15%	25%	28%

Had Knowledge and Rated:	(N=147)	(N=129)	(N=123)
Very effective	14%	43%	43%
Some effect	48%	40%	32%
Little effect	27%	12%	14%
Not effective	11%	5%	11%

Of those who had knowledge and provided ratings, the most effective course designs were "pull-out" and "self-contained." Eighty three percent (83%) of the 129 teachers who had knowledge of pull-out program designs rated them "very" or "some-what" effective in teaching low achievers. Three fourths (75%) of the teachers who were familiar with self-contained classrooms rated them as effective, compared to 62 percent of the teachers who were familiar with mainstreaming. Mainstreaming was considered by the respondents to be the least effective of the three course designs. This is an interesting finding, given that most disadvantaged and handicapped students are mainstreamed in vocational courses.

In addition to the three designs listed, teachers were asked to describe any other vocational program designs that were being used effectively in their school or school district to teach low achievers. The most frequently mentioned approaches were "vocational assistance or resource labs," and "remedial math and reading labs" that emphasize teaching applied basic skills to supplement regular vocational courses. A number of respondents also cited the use of special teachers (resource, special-vocational), aides, and tutors, either within the vocational classroom or as an external resource. Other designs mentioned were:

- * Individualized Educational Plans (IEPs) for low achievers;
- * performance-based vocational education classes;
- * "Time on Task" programs;
- * rotation through major areas of course content, with students selecting areas of interest and focusing on quality of accomplishment within each area.

One respondent suggested that a combination of course designs seemed to be the most effective. Special groupings of low achievers can be assigned to a shop and a self-contained reading class, while being mainstreamed into the vocational class. Another teacher described a very different approach that was being considered:

"...developing a different set of competencies for the handicapped and other low achievers who are mainstreamed into regular programs. These competencies would be related to realistic occupational goals such as 'helper' rather than 'mechanic', and could center around development of good work habits and 'assisting' skills."

Effectiveness of Instructional Techniques

Teachers were asked to use a similar scale in rating the effectiveness of four commonly used instructional techniques for teaching low achieving students. The methods to be rated included:

- 1) special tutoring to reinforce learning;
- 2) computer assisted instruction on an independent study basis;
- 3) individualized, competency-based instruction based on skill level;
- 4) work-study training in an actual job setting.

Again, respondents could indicate lack of knowledge about a particular instructional technique and omit the rating. Teacher responses are summarized in Table 4.

Table 4: Teacher Ratings of the Effectiveness of Various Instructional Techniques (N=172)

	<u>Special Tutoring</u>	<u>Computer- Assisted</u>	<u>Competency Based</u>	<u>Work- Study</u>
Had No Knowledge and Did No Rate	12%	46%	15%	23%

Had Knowledge and Rated:	(N=152)	(N=93)	(N=146)	(N=133)
Very effective	44%	29%	37%	62%
Somewhat effective	45%	39%	53%	25%
Little effect	8%	18%	7%	9%
Not effective	3%	14%	3%	4%

This table indicates that a relatively high proportion of the vocational teachers surveyed (46%) had no knowledge about computer assisted instructional techniques. Also, a fair number of teachers (23%) were unfamiliar with the work-study approach that enables students to receive training in an actual job setting for part of the school day (also called "cooperative education").

Among those who had knowledge, work-study was rated "very effective" by a higher proportion of respondents than any other technique. When the ratings of "very" and "somewhat" were combined, this difference disappeared. Over 85 percent of all respondents who had knowledge of the techniques rated special tutoring, competency-based instruction, and work-study as effective techniques. In comparison, only 68 percent of the respondents familiar with computer-assisted instruction (CAI) rated it very or somewhat effective in teaching low achievers. This result may be due to the fact that relative to other instructional techniques, vocational teachers in general have had less experience with CAI.

Respondents were given the opportunity to describe any other instructional methods they had found to be effective in teaching low achieving students. Consistently, teacher comments focused on four techniques:

1. individualized instruction and immediate reinforcement;
2. peer teaching (pairing more and less able students together);
3. repetition;
4. hands-on instruction (practical demonstrations, work simulations).

One respondent summed up these descriptions by saying that the most effective technique was one which "individualized instruction through demonstration, application, drill, and hands-on experience."

Another respondent described a technique that is obviously more demanding and time consuming, but apparently very successful when it can be done. This teacher attempted to meet with the parents of low achievers to identify their areas of skill and interest, and to encourage them to provide higher expectations for achievement, interest, and tutoring for their children in these areas.

Effectiveness of Support Services

Using the same four-point scale, teachers were asked to rate the effectiveness of various support services in meeting the needs of low achievers and reducing the chances of dropout. Four major types of support services were described:

1. vocational counseling about realistic job opportunities;
2. testing and evaluation for appropriate placement in vocational courses;
3. basic skills remediation after hours (after school, during summer);
4. placement in vocational courses as early as Grade 9 or 10.

As before, teachers could omit rating any particular service about which they had no knowledge. Table 5 summarizes the ratings given by respondents.

Of the support services listed on the survey form, the one most teachers had knowledge of was "job counseling about realistic job opportunities" (91%). Nearly 40

percent of the respondents had no knowledge of after school or summer remediation services, and nearly 20 percent were unfamiliar with testing/evaluation services and early vocational enrollment.

Table 5: Teacher Ratings of the Effectiveness of Various Support Services for Low Achievers (N=172)

	<u>Job Counseling</u>	<u>Testing/Evaluation</u>	<u>After hours Remediation</u>	<u>Provide Earlier</u>
Had No Knowledge and Did Not Rate	9%	21%	38%	19%

Had Knowledge and Rated:	(N=156)	(N=136)	(N=106)	(N=139)
Very effective	43%	39%	29%	23%
Somewhat effective	40%	38%	35%	46%
Little effect	12%	12%	17%	15%
Not effective	5%	11%	19%	16%

Among those who had knowledge of the services listed, testing/evaluation for placement and job counseling were rated "very effective" by a higher percentage of respondents than were after hours remediation or early placement in vocational courses. Related comments supported these ratings (paraphrased):

"I agree wholeheartedly with vocational job counseling. Students want to know where and when they can go to work for a salary as soon as possible after graduation (or during weekends) in this rural community."

"Students should be given some type of pre-entrance test to see what courses they may have abilities for."

The service area in which the highest proportion of respondents rated effectiveness low -- "little" or "no" effect -- was remediation after school or during the summer (36%). Apparently, while many vocational teachers are aware of the importance of remediation for low achievers, they are either unaware of after-school remediation programs, or have found them to be relatively ineffective because attendance is typically poor. One teacher commented that a voluntary reading class offered in the evening for slow readers was poorly attended, but was very effective for those who participated. While after-school remediation programs offer one solution, they apparently pose additional problems for students (transportation, conflicts with after school working hours, etc.).

In an open-ended question, teachers were asked to describe any additional services they considered necessary to meet the needs of low achieving students and others at risk of dropping out of high school. Many respondents said that motivational activities were very important. As one respondent stated:

"Find out what they can do, let them do it, and praise them for good work. Use this as a base to move them to other related, more complex tasks and help them decide that learning is a good experience."

Several respondents commented that teachers were important role models in motivating students if they took the time to show their interest in the student.

A significant number of teachers said that improved vocational guidance and prevocational experiences were needed in order to better serve low achieving students. Several went so far as to suggest that prevocational courses for low achievers be mandatory; several said that improved guidance was a glaring need. One respondent suggested why counseling and guidance services were insufficient: "Our counselors are bogged down with paperwork and do not have enough time for students."

A relatively large number of teachers also pointed out the need for increased parental involvement: closer home/parent contact and follow-up, parent training programs to teach them how to motivate and encourage their children in school, and parent-teacher conferences on career possibilities. As one teacher stated, there is a need for "motivational activities, activities that ensure success, goal setting according to individual ability, and more parental support."

Effective Activities with Low Achievers

Teachers were asked to indicate the single most effective instructional activity they used in teaching low achievers. More than one half of all responses related to some sort of personalized attention: individual reinforcement, one-on-one demonstrations, special tutoring, individualized instruction, or gaining the student's confidence by showing patience and support.

Also mentioned frequently were hands-on practice, illustration followed by repetition, use of audio-visual materials, and team studying. One instructor commented that a lot of math skills were taught during the summer when students maintained record books, pointing out a possible role for student organizations in providing opportunities for applied learning.

Several teachers indicated that oral (as opposed to written) presentations were very effective. Examples given included role playing, discussions, and reading new material aloud so students could learn to pronounce words.

Preparedness to Teach Low Achievers

On a four-point scale, respondents were asked to indicate how much training they had received on teaching low achieving students. The ratings were:

	<u>Number</u>	<u>Percent</u>
Great deal	17	10%
Some	70	41%
Little	53	31%
None	29	17%

Nearly five out of every ten vocational teachers who responded to the survey said they had received little or no training to work with low achievers. Four out of every ten respondents said they had "some" training, and only one in ten said they had received a great deal of training (most of these were resource teachers).

Respondents were also asked their opinion about how well prepared vocational teachers were, in general, to teach basic skills remediation within the context of their classes. Twenty seven of the 170 respondents (16%) said they didn't know or had no basis on which to form an opinion. Among the 143 teachers who expressed an opinion, the responses were:

	<u>Number</u>	<u>Percent</u>
Very well prepared	19	13%
Somewhat prepared	67	47%
Poorly prepared	57	40%

As would be expected, those teachers who indicated they had gotten little or no training felt teachers were poorly prepared to provide basic skills remediation within vocational courses. Several teachers pointed out that lack of training was not the only reason why low achieving students did not always receive the special assistance needed, as the following comments indicated:

"Large classes make it difficult to give individual help."

"Working with students on a one-to-one basis takes away instruction time for the rest of the class."

"We are furnished with supplementary materials, but some students who need them most resent them."

"More equipment and tools are needed so each student can stay busy."
(Implied that waiting stifles interest and momentum.)

"Teachers working with low achievers can burn out, too."

What Teachers Did Not Say

As interesting as various teacher ratings are the comments that were notably absent from the survey forms. No teacher expressed the opinion that low achievers were incapable of learning. Rather, respondents focused on methods and techniques that were useful and that helped maximize the low achiever's potential. Even though one half of the vocational teachers surveyed felt poorly prepared to teach low achievers, all were able to describe specific techniques they had learned somewhere and were using in the classroom. Although most teachers were aware that a central problem of low achievers is basic skills deficits, most were of the opinion that each student's strengths could be identified and reinforced, within the context of remedial education. The general tone of responses was that teachers genuinely cared about these students and wanted to provide the necessary one-on-one attention needed. As one teacher said, "I show them a lot of love and patience."

CONCLUSIONS AND RECOMMENDATIONS

CONCLUSIONS

A review of some basic information about low achievers and the results of surveys completed by vocational administrators, guidance/placement staff, and teachers indicate rather clearly that low achieving students have a multiplicity of needs. While some of these needs -- employability and occupational skills, job counseling, hands-on instruction, remediation with an applied focus -- can be addressed by the vocational system, others require the assistance of and coordination with academic teachers, counselors, and school administrators.

Specific conclusions drawn from survey results and other sources are that:

- * Low achieving students are being served largely in Trade/Industry courses, especially brick masonry, building construction, and industrial sewing. While there is considerable demand for these workers in various areas of the state, there has been no systematic attempt to determine the job placement success of low achieving students completing these programs.
- * Prior to the new Carl Perkins Act, there was no uniform policy regarding how or when low achieving students were assessed and/or counseled regarding programs that offered the most realistic opportunities for success and job placement.
- * Compared to vocational administrators, vocational counselors seem to hold different conceptions of how vocational educational programs can serve low achievers. These conceptions may be detrimental to both students and programs.
- * The most valuable aspects of vocational education for low achievers appear to be the "hands-on" approach that emphasizes "learning by doing," and the opportunity to acquire skills for trade and industrial occupations.
- * Vocational teachers are not well prepared to teach basic skills within the vocational classroom. While basic skills remediation should not be the responsibility of vocational teachers, they do need inservice training on how to modify instructional and testing materials to increase their effectiveness with low achievers. At the same time, academic and remedial teachers need staff development on how to make instruction more relevant to the occupational interests and courses of low achievers.
- * While many administrators and counselors feel that basic reading and math remediation is necessary for low achieving students, they are concerned that students not be discouraged by an over-emphasis on remediation that would limit opportunities for the kinds of hands-on experiences in which they excel. The issue appears to be one of how to balance the need for basic skills remediation and the realistic need for employability and job skills training.

- * According to teachers, the most effective course designs for working with low achievers are those that provide for special remediation within the context of vocational training (vocational assistance labs, etc.) and self-contained classes. Although it is most widely used, mainstreaming was reported to be less effective than either of these two approaches.
- * According to teachers, the most effective instructional techniques for working with low achievers are work-study arrangements, special tutoring, and competency-based instruction.
- * According to teachers, the support services most needed by low achievers if they are to experience success and be motivated to remain in school are realistic job counseling and testing/evaluation for appropriate placement in vocational classes.
- * Many teachers are unfamiliar with teaching strategies that have proven to be effective with low achievers. Part of the problem is that some of these techniques have either not been tried or the results have not been adequately disseminated and promoted.

RECOMMENDATIONS

In order for South Carolina to address the needs of low achievers and maximize the opportunities available to them in vocational education programs, the Council recommends the following activities be undertaken:

- * Develop a statewide policy and a set of acceptable practices for the early (pre-high school) assessment, counseling, and placement of low achievers in programs in which they can receive necessary remediation, as well as employability and job skills.
- * Develop a profile of the low achiever/potential dropout and isolate predictors that can be used to identify "at risk" students early in the educational process. Train instructors and counselors in the use of the profile as a guide in the the early identification of "at risk" low achievers, and in specifying appropriate assessment, training, remediation, counseling, and job placement activities and goals that will serve to unify academic and training efforts.
- * Encourage the development of individualized education-training plans for disadvantaged students in the early grades. These plans should be updated on a regular basis, and systematically evaluated to determine the extent to which goals and objectives for the student are being met. Occupational training goals should be made a part of each plan at the pre-high school level.
- * Provide funding for a variety of experimental programs designed to evaluate the effectiveness of various screening, counseling, remediation, and work-study programs in serving low achievers and retaining potential dropouts.
- * Emphasize and expand the use of vocational math and reading resource labs that offer specialized, practical, individual instruction for low achieving students. These labs should focus on application of the "basics" to job-related tasks and should be integrated into existing vocational programs, not developed separately.

- * Provide vocational education earlier in the high school curriculum for those at risk of dropping out. This would provide greater assurance that IF the student drops out, he or she will at least have some marketable skills.
- * Develop, on an experimental basis, some non-traditional vocational programs that would allow students who are failing academically and about to drop out, or those who have already dropped out, to remain in school for vocational training and remediation only.
- * Direct higher education institutions to include teacher training in remedial instruction methods within the vocational curriculum.
- * Require staff development for all teachers and counselors in the areas of:
 - a) improved screening and placement of low achievers in appropriate vocational programs, b) planning for individual student needs, c) motivational techniques that are effective with low achievers, d) improved guidance services for evaluation, placement, follow-up, and parental involvement, and e) modification of instructional materials to enhance their occupational relevance.
- * Develop incentives that will encourage employers to become more involved in the training of low achievers through special cooperative education programs. Encourage the Private Industry Council and the various youth projects of the JTPA to develop additional programs for youth who have already dropped out of school that would combine occupational training and basic skills remediation.

REFERENCES

- (1) Investing in Our Children: Business and the Public Schools. New York: Committee for Economic Development, Research and Policy Committee, 1985.
- (2) Boyer, E.L. High School: A Report on Secondary Education in America. New York: Harper & Row, 1983.
- (3) Roloff, J.G. Proceedings from the Conference on Compensatory and Remedial Education. University of Washington, 1973. (Henry R. Fea, Editor)
- (4) Reported in "Manpower and Vocational Education Weekly," December 8, 1983.
- (5) Reported in "Vocational Training News," July, 1985.
- (6) Foresight. Southern Growth Policies Board, Volume 3, Number 1, 1985.
- (7) Reported in "Vocational Training News," May, 1985.
- (8) Report on the Implementation of the Basic Skills Assessment Program: 1983-84. South Carolina Department of Education, November, 1984.
- (9) South Carolina Statewide Testing Program: Summary Report 1984. Office of Research, South Carolina Department of Education, Volume 1, Number 75, August, 1984.
- (10) "Issue Agenda" of the South Carolina Youth Employment Coordinating Council. Office of the Governor, February, 1985.
- (11) Available through the S.C. Department of Education, Office of Vocational Education, Vocational Curriculum Development Section.

APPENDIX A

**Low Achieving Students
in Vocational Education Programs**

The questions below ask for your opinions and recommendations on how the state's vocational education system can best meet the training and employment needs of low achieving students who may not complete high school or will not be pursuing post-secondary education. Your responses will be used to develop a report for the General Assembly, but confidentiality is assured.

Please answer the questions below with as much explanation as possible. Return the completed form to: State Council on Vocational and Technical Education, 2221 Devine Street, Suite 420, Columbia, SC 29205 by MAY 13. Thank you.

1. What occupational clusters seem to serve the majority of low achieving students?

2. Do students usually choose to enroll in these courses, or are they advised to enroll in them?

3. In your opinion, what are the future job prospects and earning potential for students who complete these programs?

4. To what extent can low achieving students be expected to master the occupational skills needed for many jobs in today's technology-oriented workplace?

Great extent ____ Some extent ____ Little or none ____ Don't know ____

5. What components of the vocational curriculum (or specific courses) are most useful to the low achieving student?

6. What assistance can vocational programs provide (and when should such assistance be provided) to help prevent low achieving students from dropping out of high school before they have learned sufficient skills to function as independent adults?

7. To what extent do the school systems in this state have the resources and knowledge to provide such assistance?

Great extent ____ Some extent ____ Little or none ____ Don't know ____

8. What services and training do low achieving students need that cannot be provided by secondary vocational programs?

9. What should be the instructional priority for students with low academic aptitude?

- Basic academic skills (reading, writing, math)
- Basic occupational skills for employment
- Other: (specify) _____

10. What instructional setting is best for teaching the skills you indicated in Question #9?

11. How well prepared are vocational instructors to teach basic skills to students with low academic aptitude?

Very well ____ Somewhat ____ Poorly ____ Don't know ____

12. Please add any other comments, explanations, or recommendations you feel would contribute to this study:

13. Indicate your professional position:

- Vocational Center Director
- Vocational Guidance Counselor
- Vocational Placement Coordinator
- Other: (specify) _____

APPENDIX B

Effective Strategies for Teaching Low Achieving Students

The questions below relate to the effectiveness of vocational course designs, instructional methods, and support services in meeting the needs of low achieving students. Your responses are important and will be treated confidentially. Please return the completed survey by MAY 13 to: State Council on Vocational and Technical Education, 2221 Devine Street, Suite 420, Columbia, SC 29205. Thank you.

VOCATIONAL COURSE DESIGNS

Rate the effectiveness of these vocational course designs in teaching low achieving students by circling the appropriate number after each statement. (Rating Scale: 1= not effective; 2= little effect; 3= somewhat effective; 4= very effective; NK= no knowledge)

1. Remedial reading and/or math instruction in the regular vocational class provided by the classroom teacher or teacher's aide (mainstreaming) 1 2 3 4 NK
2. Special remediation programs such as vocational reading lab or other remedial program for the vocational student that is provided in addition to or in place of a regular vocational class (pull-out program for students who cannot succeed in regular vocational class without basic skills remediation) 1 2 3 4 NK
3. Separate vocational class for low achieving students in which skill and academic requirements are lower than for students in regular vocational classes (self-contained) 1 2 3 4 NK
4. Other: Describe any vocational program designs being used effectively in your school or school district to teach low achieving students:

INSTRUCTIONAL TECHNIQUES

Rate these instructional methods on their effectiveness in teaching the low achieving student. (Rating Scale: 1= not effective; 2= little effect; 3= somewhat effective; 4= very effective; NK= no knowledge)

5. Special tutoring to reinforce the learning of a concept or skill 1 2 3 4 NK
6. Independent study activities using Computer Assisted Instruction (CAI) 1 2 3 4 NK
7. Individualized, competency-based instruction designed for the student's projected skill level 1 2 3 4 NK

8. Work-study training in an actual job setting 1 2 3 4 NK
9. Other: Describe any instructional method you have found to be effective in teaching low achieving students:

SUPPORT SERVICES

Rate the effectiveness of these support services in meeting the needs of low achieving students and reducing the chances that they will drop out of high school. (Rating Scale: 1= not effective; 2= little effect; 3= somewhat effective; 4= very effective; NK= no knowledge)

10. Vocational counseling about realistic job opportunities 1 2 3 4 NK
11. Testing and evaluation for placement in appropriate vocational courses 1 2 3 4 NK
12. Basic skills remediation after school or during summer 1 2 3 4 NK
13. Placement in vocational courses by Grade 9 or 10 1 2 3 4 NK
14. Other: Describe any additional services you consider necessary to meet the needs of low achieving students and help prevent drop-outs:

GENERAL QUESTIONS

15. What is the single most effective instructional activity that you use in teaching low achieving students?
-
-
16. How much training have you gotten on how to teach the low achieving student?
Great deal ____ Some ____ Little ____ None ____
17. In your opinion, how well prepared are vocational instructors to teach basic skills remediation? Very well ____ Somewhat ____ Poorly ____ Don't Know ____
18. What vocational courses do you teach? _____
19. What is the general classification of students you teach (e.g., handicapped, disadvantaged, regular, mixed)? _____
20. Approximately what percent of students in your classes are non-white? ____ %
21. Approximately what percent of students in your classes are female? ____ %

APPENDIX C
POPULATION, SAMPLE SIZE, AND RETURN RATE OF
VOCATIONAL TEACHERS SURVEY

<u>Occupational Area</u>	<u>Total in State</u>	<u>Sample Size*</u>	<u>Response Rate</u>
Agriculture	155	25	60%
Business Education	708	68	54%
Marketing/Distribution	78	25	68%
Health Occupations	76	25	92%
Occupational Home Economics	75	25	60%
Trades/Industrial**	808	81	58%
Prevocational	417	42	24%
Special Disadvantaged Labs	192	25	24%
TOTAL/AVERAGE		316	54%

* Random 10 percent sample of total number of teachers in each area with a minimum of 25 teachers for small groups

** All specialties within Trades/Industrial were represented in sample