

North Carolina Vocational Education

PERFORMANCE REPORT

Program Year 1986-87

**North Carolina State Board of Education
North Carolina State Board
of Community Colleges
Raleigh, North Carolina
27603-1712**

"It is the intent of the General Assembly that vocational education be an integral part of the educational process." The State Board of Education and the State Board of Community Colleges shall administer, through local boards, a comprehensive program of vocational education which shall be available to all students who desire it without regard to race, sex, national origin, or handicap.



A. Craig Phillips
State Superintendent
Department of Public Instruction

Vocational education is intended by the General Assembly of North Carolina to "be an integral part of the educational process." This is significant to understanding the performance of vocational education in this state. Just as we espouse a comprehensive approach to vocational education through a standardized course of study within secondary education, so do we promote a comprehensive approach to secondary vocational education that complements the work of postsecondary vocational and technical education.

To these ends, the North Carolina Vocational Education Performance Report is presented to demonstrate not only how the performance of vocational education meets the standards set forth in the federal Carl D. Perkins Act, but also to show it complements and contributes to the whole educational process for the youth of our state. We encourage you to read the document carefully.



Robert W. Scott
State President
Department of Community Colleges

The North Carolina community college system was created to give adult citizens opportunities to obtain the technical, vocational and basic academic education they need to be full participants in the economic and social life of the state. From its beginnings as a system of industrial education centers and junior colleges, it has focused on that primary mission. Today, over 620,000 individuals are enrolled in all programs, 384,000 in curriculum or continuing education programs which provide specific preparation for an occupation. Institutions provide assessment, counseling and support services to increase student success. College faculty and administrators work closely with business leaders to insure that programs are teaching students what they need to know to become valuable employees. The system's record in vocational education has made it one of the state's major economic development assets.

CERTIFICATION

The State Board of Education, sole state agency, has the authority under Public School Law 115C - 153, to approve and submit the PY 1986-87 Performance Report for Vocational Education. This report has been prepared in compliance with OMB circular No. 1830-0503 and is authorized by 34 CFR 74.82. The report covers the twelve month program year July 1 to June 30.

NORTH CAROLINA STATE BOARD OF EDUCATION
(Official Name of State Board)

(Date)

Chairman, N.C. State Board of Education

(Date)

State Superintendent of Public Instruction

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INTRODUCTION

This Performance Report presents the services and activities provided the youth and adults in secondary and postsecondary vocational education in North Carolina from July 1, 1986 to June 30, 1987.

It is more than a compliance document for the U.S. Department of Education. It represents the continuous efforts at all levels to improve the quality of education and training for participants in vocational education.

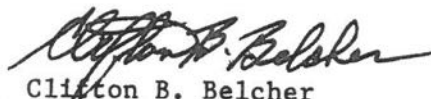
Data are provided to reflect services to special populations, trends, growth in enrollment, student and employer assessment of the value of vocational education, and business/industry participation and contribution to quality control.

The report addresses secondary vocational education and postsecondary vocational education. The federal grant of \$24 million dollars (PY 1986-87) was shared two-thirds for secondary and one-third for postsecondary. This sharing of federal resources is pursuant to North Carolina General Statute 115C-158. The contents of the report reflect this two-thirds/one-third split and the appropriate clientele served at each level of vocational education.

The report is divided into two parts--secondary and postsecondary. The secondary education part contains three sections (I, II, III). The first section (I. Vocational Education Opportunities Accomplishments) contains information on secondary vocational education services and activities for handicapped, disadvantaged, limited English speaking, and sex equity. The second section (II. Program Improvement Accomplishments) contains information on secondary vocational education in the area of new programs, expanded programs, career guidance, personnel development, curriculum development, equipment, research, and other improvement activities. The third section (III. Consumer and Homemaking Accomplishments) contains information on home economics services and activities in secondary education.

The postsecondary education part contains two sections (I, II). The first section (I. Vocational Education Opportunities Accomplishments) contains information on handicapped, disadvantaged, limited English speaking, adults in need of training and retraining, single parents and homemakers, sex equity, and criminal offenders in correctional institutions. The second section (II. Program Improvement Accomplishments) contains information on postsecondary education accomplishments under a category where limited resources were available for the stated purpose.

We congratulate all parties concerned not only in the high level of performance indicated in this report, but also in the sincere desire to coordinate efforts to provide maximum results for the clients served by vocational education.


Clifton B. Belcher

Division of Vocational Education

NORTH CAROLINA
ANNUAL PERFORMANCE REPORT
FOR THE VOCATIONAL EDUCATION STATE-ADMINISTERED PROGRAM
UNDER THE CARL D. PERKINS VOCATIONAL EDUCATION ACT
P.L. 98-524

This report is authorized by 34 CFR 74.82 and covers the twelve month program year July 1 to June 30. It has been prepared in compliance with OMB Circular No. 1830-0503.

Program Year 1986-87

STATE BOARD OF EDUCATION
RALEIGH, NORTH CAROLINA
27603-1712

Results and Accomplishments of Expending
Title II - Part A Federal Funds
VOCATIONAL EDUCATION OPPORTUNITIES

The numerical data on special population students enrolled in vocational education that are assisted with federal funds under Title II, Part A and matching state/local funds where required or optionally provided are reflected in Table 1.

I. Vocational Education Opportunities Accomplishments

A. Handicapped - Secondary

1. Number of handicapped receiving additional services in mainstream programs. (See Table 1)
2. Number of handicapped served in separate programs. (See Table 1)

Table 1

ENROLLMENT BY CATEGORY
PY 1986-87
SECONDARY - POSTSECONDARY

<u>Category</u>	<u>Level</u>		<u>Grades 7-8</u>	<u>Grades 9-12</u>	<u>Post- secondary/ Adult</u>	
<u>Total</u>						
Handicapped	Sec.	M.S.*	3,588	6,688	N/A	10,276
		S.P.**	447	1,739	N/A	2,296
	P-Sec.	M.S.*	N/A	N/A	3,692	3,692
		S.P.**	N/A	N/A	4,337	4,337
Subtotal						
Disadvantaged	Sec.	M.S.*	8,533	19,241	N/A	27,774
		S.P.**	237	1,756	N/A	1,993
	P-Sec.	M.S.*	N/A	N/A	31,890	31,890
		S.P.**	N/A	N/A	8,394	8,394
Subtotal						
LEP	Sec.	M.S.*	13	80	N/A	93
		S.P.**	1	18	N/A	19
	P-Sec.	M.S.*	N/A	N/A	508	508
		S.P.**	N/A	N/A	3,797	3,797
Subtotal						
Adults	Sec.	M.S.*	N/A	N/A	N/A	N/A
	P-Sec.	M.S.*	N/A	N/A	68,536	68,536
Subtotal						
Single Parents	Sec.		N/A	N/A	N/A	N/A
	P-Sec.		N/A	N/A	21,414	21,414
Subtotal						
Non-Traditional Programs	Sec.				N/A	N/A
	P-Sec.		N/A	N/A	2,200	2,200
Subtotal						
Incarcerated	Sec.		N/A	N/A	N/A	N/A
	P-Sec.		N/A	N/A	1,479	1,479
Subtotal						
Totals	Sec.	M.S.*	12,134	26,009	N/A	38,143
		S.P.**	795	3,513	N/A	4,308
	P-Sec.	M.S.*	N/A	N/A	104,626	104,626
		S.P.**	N/A	N/A	16,528	16,528
				12,929	29,522	146,247
Totals Other Programs	Sec.		100,136	230,483	N/A	330,619
	P-Sec.		N/A	N/A	N/A	N/A

* Mainstream with support services

** Separate program

137839
37305
227,465
402,609

I. Vocational Education Opportunities and Accomplishments

A. Handicapped - Secondary

3. Throughout the 1986-87 school year local school units initiated an aggressive program of supplemental services for handicapped students. The number of students electing to enroll in vocational programs increased as did the number of professional and paraprofessional staff employed to provide services. Local units worked to strengthen the quality of services provided in the following areas:

- a. Equal Access and Recruitment

All local school administrative units provided assurances in their annual application for funds that handicapped students would be recruited for and enrolled in the full range of vocational education program offerings. This goal was accomplished through orientation activities for parents and students during individual or small group counseling sessions, career day exploration classes by vocational teachers and students, written communication, and home visitations.

The overall enrollment of handicapped students enrolled in vocational programs (with and without additional support) increased from 14,944 during 1985-86 school year to 26,360 during 1986-87 school year.

- b. Least Restrictive Environment

Each LSAU assigned at least one individual to work as Vocational Support Service Coordinator. It was the responsibility of this individual to work with the placement committee to ensure that students were placed in the most appropriate and least restrictive environment. All vocational placements and supplemental services were planned and coordinated with special education teachers.

- c. Assessment and Career Planning and Development

Handicapped students being considered for vocational placement and those already enrolled in vocational programs were given a vocational assessment to determine their strengths, weaknesses, and special needs. Each local unit developed an assessment process that included two phases - basic assessment and formal assessment. All students were given a basic assessment. The primary purposes were to:

- (1) assess academic abilities, vocational programs, interest, and learning needs and styles;

- (2) develop an individual career and vocational plan; and
- (3) determine whether a comprehensive or formal vocational assessment was needed.

If educational placement and instructional needs could not be determined at the basic assessment level, students were referred for more indepth assessment either at the high school or vocational rehabilitation units.

After completion of the assessment process a career plan was developed cooperatively with all services provided including special education teachers, vocational teachers, vocational handicapped support personnel, and vocational rehabilitation if applicable.

d. Transitional Services and Job Placement

The state level Transition Task Force continued its work to implement a statewide transition model. Sixteen (16) model transition projects were initiated through the Division of Programs for Exceptional Children. The Division of Vocational Education worked cooperatively to ensure that services provided through these projects were not duplicative.

Workshops were held in all eight educational regions to plan strategies for implementing an intra-agency approach to providing transitional services.

Most LSAU's included work experience as a component of their service continuum. By utilizing JTPA resources, Vocational Rehabilitation services and Work Study, more handicapped students were afforded work experience prior to graduating from high school.

4. Description of Successful Activities That Served Handicapped - Secondary

The following projects reflect the services and activities provided handicapped students in a variety of schools.

Currituck County - Estimated Expenditures (all fund sources) - \$23,258

DESCRIPTION OF SERVICES:

Federal vocational education funds were used to provide assessment and support services to eligible students. In addition, state and local funds were also used to provide special vocational training for the target group. Handicapped students who are enrolled in regular vocational programs and are not succeeding are provided supportive

services that include: vocational assessment; vocational remediation (as needed); instruction in basic skills; modification/adaptation of curriculum, materials, and equipment; guidance counseling; and job placement services. Students who are in need of a special vocational program are receiving in a separate lab instruction that capitalizes on their strengths and their interests. The instruction/training provided includes special attention on communication and computation skills as they relate to the work world, employability skills, and guidance. Students are given, through work study funds, the opportunity to demonstrate the skills learned through on-the-job work experience.

IMPACT OF USE OF THESE FUNDS ON THE TARGET POPULATION:

Federal funds, in combination with state and local funds, have enabled Currituck County to offer a comprehensive vocational program for eligible handicapped. The students served are better able to have a successful vocational experience, which also contributes to the holding power of the school.

Kinston City - Estimated Expenditures (all fund sources) - \$22,000

DESCRIPTION OF SERVICES:

A special support program was available for identified handicapped students who were judged by the School Based Committee to need the additional supportive services in order to become employable. Students who had not achieved their vocational objective during regular vocational classes met with the SS instructor for one hour daily. Class time instruction focused on remedial communication and computational skills in addition to basic vocational skills. During the afternoon, these students worked at selected job sites to experience actual on-the-job training in areas related to their career goals.

The support services instructor supervised the job skill experiences and maintained a constant effort to secure a permanent job placement for students completing the supportive services program activities.

IMPACT OF USE OF THESE FUNDS ON THE TARGET POPULATION:

Without the program these identified handicapped students would not have had an opportunity to be placed on-the-job and would not have achieved levels of accomplishment noted. These students definitely benefitted from the extra instruction and assistance provided as a result of this support services program.

Edgecombe County - Estimated Expenditures (all fund sources) - \$14,137

DESCRIPTION OF SERVICES:

Tri-County Industries, Inc., is a unique blend of private enterprise, government funding, and local volunteers and contributors meshing

together to help handicapped people take a more active role in personal, community, and employment activities. There are eighteen severely handicapped students from Edgecombe County Schools attending Tri-County Industries who are financed by the Exceptional Children and Vocational Education programs. This sheltered workshop provides sheltered employment. The program is divided into two phases: Allied Services and Work Adjustment.

-Allied Services Vocational Evaluation is a service which provides a systematic, organized basis for the purpose of determining individual vocational objectives: assets, limitations, and behaviors, in the content of work environments in which the individual might function, and specific recommendations, which may be used in the development of the individual's program plan.

-Work Adjustment is transitional, time limited treatment/training service or program utilizing individual and group work related activities are provided in an organized systematic basis. It also assists individuals in understanding the value and demands of work; to modify or develop attitudes, personal characteristics, work behavior, and to develop functional capacities, as required, in order to assist individuals toward their optimum level of vocational development.

Objectives

1. To identify competencies and functional limitations of the barriers to the successful job performance of an individual.
2. To identify services necessary to alleviate and/or overcome the limitations of the individual in relation to finding and holding a job.
3. To identify a realistic and optional vocational objective.

Methods

1. Gathering, analyzing, and interpreting social, medical, economic, educational, psychological, and cultural information about the client.
2. Developing individual evaluation plans incorporating the intake and referral information and questions asked by the referring agency.
3. Implementing the evaluation plan so as to meet the goal of evaluation.
Assessment in the following may be included:
 - a. Psychometrics
 - b. Work Samples
 - c. Simulated Job Stations
4. Formulating recommendations based on the above assessment to be utilized in the development of an individual plan. A formal staffing is held, with the individual present, to review recommendations and needs.
5. A comprehensive written report is prepared which describes assets and limitations to employment, as well as recommending realistic job goals.

IMPACT OF THESE FUNDS ON THE TARGET POPULATION:

This program has been successful in helping these individuals secure permanent employment in the private competitive job market.

Cumberland County - Estimated Expenditures (all fund sources) \$76,000

DESCRIPTION OF SERVICES:

Vocational supportive labs are established in all eight senior high schools. One professional resource teacher and one aide assist identified students in the vocational teachers' classrooms. The supportive personnel assist students with the following:

- Reading and math related to the vocational course in which the students are enrolled
- Modification of curriculum and with the identified vocational students
- Individualized curriculum assistance as needed with identified students to improve the students' success in the classroom
- Vocational assessment and career planning

The labs are set up during the regular school year for five to six 55-minute class periods.

- Reading and math related to the vocational course in which the students are enrolled
- Modification of curriculum with the identified vocational students

Introduction to Home Economics	Local
Homestead & Gardening	Local
Building Maintenance & Repair	Willie M, Local, ECP
Job Training	JTPA

IMPACT OF USE OF THESE FUNDS ON THE TARGET POPULATION:

As a result of these funds, there are other funds available to provide additional services to a special population, which otherwise, would not get some much needed services. There is also a better coordination of efforts because funds are available to go into these programs and services.

Watauga County - Estimated Expenditures (all fund sources) \$24,602

DESCRIPTION OF SERVICES:

The Watauga County Center for Exceptional Children is housed at Hardin Park Elementary. Through the use of Basic Handicapped funds, a Prevocational Education program has been provided to TMH and physically handicapped students. These students have an I.Q. of 50 and below and physical handicaps such as blindness and cerebral palsy. About one-half of the students are non-verbal.

A teacher (part-time) and teacher's aide are employed through the use of these funds. The purpose of the program is to enable all students to develop skills which will help prepare them for future work placement. The center serves students through age 21. During the 20th or 21st year of a student, a part-time placement is arranged in a sheltered workshop. This is an adjustment period used to ensure a

smooth transfer of the student from the school setting to the workshop setting.

An example of the activities students experience is "WCCEC Productions." This is a manufacturing project in which students make wood and sewing products to sell. A catalog of products is developed and distributed. Orders are taken for the project, an appropriate number are made, and the products are sold.

IMPACT OF USE OF THESE FUNDS ON THE TARGET POPULATION:

Without the use of the handicapped funds, this program would probably not be in place. It has assisted students in making the transfer from school to an appropriate work site. Because of experiences gained in the class, students are more prepared to adapt to requirements placed on them in a sheltered workshop or other appropriate work site.

B. Disadvantaged - (Excluding LEP) Secondary Level

3. Description of successful activities that served disadvantaged.

The local school administrative units continued their efforts to provide quality vocational training for disadvantaged students. The major emphasis was to ensure that all students were provided equal access to vocational programs and an equal opportunity to develop marketable skills. Local unit's service delivery included outreach activities, vocational assessment, supplemental services, career guidance and counseling, and job placement and follow-up. The following is a description of these activities:

a. Outreach

"At risk" students were identified at the seventh and eighth grade level. Individual and/or group counseling sessions were provided to inform students of vocational program offerings and the continuum of services available to them. During the spring of 1986, parents were informed of vocational options available to students. A vocational support service coordinator worked to ensure that all students identified received career counseling designed to plan appropriate vocational placement.

b. Assessment

Students enrolled in vocational programs were given an assessment to determine their interests, abilities, and special needs. This assessment analyzed students' abilities and needs in relationship to available vocational training at the secondary level and the labor market demands of the community.

Upon completion of the assessment process the vocational support coordinator and vocational teacher cooperatively develop a Career Development Plan for each student. This plan outlined the student's strengths and weaknesses, supplemental services needed, and method by which needed services would be provided.

c. Supplemental Services

Local educational agencies provided a broad range of supplemental services designed to help students achieve success in regular vocational programs. Many LSAU's established support service centers or enhanced the quality of services provided in existing centers. Students were referred to the SSC by the vocational teacher to receive one-on-one remedial or small group instruction as needed, counseling, or for additional time on vocational tasks. The Support Service Center served as a bank of instructional materials and supplemental strategies from which disadvantaged students and their vocational teachers could draw assistance for skill training.

Instruction provided through the Center varied according to student needs and learning styles. However, a major emphasis was placed on basic skills remediation, and counseling. The Center personnel also assisted in planning instruction, modifying curriculum, and made recommendations for facilities and equipment when appropriate.

4. Achievements in Serving Disadvantaged Students - Secondary

The following projects reflect the services and activities provided disadvantaged students in a variety of schools.

Hyde County - Estimated Expenditures (all fund sources) \$22,371

DESCRIPTION OF SERVICES:

Disadvantaged funds allotted to the Hyde County Schools were used to provide supportive services to eligible students at Mattamuskeet High School and at Ocracoke School. One teacher aide was employed at each school to supplement and reinforce reading and math skills needed by students to enable them to succeed in the vocational program in which they were enrolled. Funds were also used to purchase materials and equipment needed to assist the students in achieving their vocational objective(s). A separate resource lab is utilized and is equipped with materials and equipment made available through prior years' funding. Regular classroom teachers are also working closely with the aides and, together, are helping eligible students to overcome deficiencies identified through the assessment process.

IMPACT OF USE OF THESE FUNDS ON THE TARGET POPULATION:

Through these funds, students are receiving additional services, otherwise unavailable, that are helping them achieve success in vocational education.

Craven County - Estimated Expenditures (all fund sources) \$50,000

DESCRIPTION OF SERVICES:

Funds were used to employ a full-time support services coordinator to work with the remediation teacher and students at J. T. Barber. Additionally, the coordinator was responsible for developing a program to bridge the gap between academic and vocational skills. Part of this was done through helping classroom teachers select materials based upon student assessed needs to supplement the regular instructional program. Another aspect of this responsibility was involvement with the "Basic Improvement Program." This is an exemplary youth program which provided Pre-Employment skills training to selected special needs students. The students served were identified as high risk, potential dropouts in need of early intervention if they remain in school. One of the goals to help those high risk students require saleable skills that will lead to employment even if they do become early leavers or dropouts. Funds from JTPA were extensively used in support of this project.

IMPACT OF USE OF THESE FUNDS ON THE TARGET POPULATION:

Follow-up data has documented the positive impact of these activities. Among the positives noted were a change in attitude of students from negative to positive about self and school; grades improved for many of the students; attendance records showed that there were fewer absences among the group served; and, more conscious efforts were made by faculty to plan instruction to foster an integrated curriculum among all disciplines.

Warren County - Estimated Expenditures (all fund sources) \$43,788

DESCRIPTION OF SERVICES:

Three professionally trained vocational teachers operate a support services center for disadvantaged students who need remedial instruction to succeed in their regular vocational education classroom. The three teachers have divided the activities and provide technical assistance based upon their instructional certification: Home Economics, Business Education, and Trade and Industrial Education. All three teachers assist students in need of remedial communication and computational skills training.

The center is organized into various technical work stations by the teachers. The students in need of technical assistance bring assignments to the center from the regular classroom teacher and/or receive additional technical assignments from the support service

teachers based upon their evaluation of the students performance of the original assignment. Upon request, the support services teachers will accompany students to the regular classroom to perform assignments in the regular classroom while all other students are performing the same task.

IMPACT OF USE OF THESE FUNDS ON THE TARGET POPULATION:

The major strength of this support services center is the organization and management strategies developed and used by the regular classroom teachers and the support services teachers.

The regular classroom teachers attribute much of their success with special population students to this program. It is the best support services program I have observed.

Macon County - Estimated Expenditures (all fund sources) \$65,440

DESCRIPTION OF SERVICES:

The disadvantaged support program in Macon County starts in the middle school and continues through high school for those students who have been identified as high risk or those unable to succeed in their vocational courses. Assessment and evaluation are on-going procedures in our programs. COPPS, TAP, and CASE are used as well as students' self-evaluation and self-assessment, teacher observation, test scores, economic disadvantages, discipline programs, attendance, year-end reports, certificates of levels completed, and/or social/emotional programs. The program at the middle school and the high school are coordinated in such a way that the high school serves as a resource for the middle school students. Observation and hands-on activities are provided, volunteer tutors in reading and math give assistance on a weekly basis in a one-on-one situation, outside career professionals support the program and local folk artists funded by the National Endowment for the Arts work closely with the teachers and students. Field trips to local industries and technical schools along with job associated tasks strengthen student interest and ability in making wise career choices.

IMPACT OF USE OF THESE FUNDS ON THE TARGET POPULATION:

Students have progressed in many areas to the point of no longer failing in a particular vocational setting. The students tend to retain the knowledge acquired when they have actually used the academic and vocational skills in a practical application. Students are better informed and more capable of making discriminating decisions for future choices of career plans.

Limited English Proficient (LEP) - Secondary Level

3. Description of successful activities that served LEP.

Limited English-proficient students that needed assistance in vocational programs were identified. Support personnel (teachers or paraprofessionals) were employed as needed to provide assessment, counseling, and tutorial services in their native language. In addition, funds were used to purchase supplemental materials and supplies designed to help students achieve success in vocational programs.

4. Achievements in serving the LEP students in terms of improved access and services provided that contribute to success in the program.

The emphases on mainstreaming resulted in more students participating in vocational programs. The enrollment increased from 61,675 during 1985-86 to 72,630 during 1986-87. The number of professional and paraprofessional employed to provide additional services increased from 235 to 321.

In an effort to provide a full range of services, local units worked cooperatively with JTPA programs and state funded dropout prevention programs to make available a broad range of services for disadvantaged students.

E. Students in Non-Traditional Programs (Sex Equity) - Secondary

1. Achievements and services provided to reduce sex bias and sex stereotyping.

Local school administrative units were given an opportunity to apply for special grants to develop programs aimed at reducing sex bias, sex stereotyping, and increasing the enrollment of boys and girls in non-traditional vocational programs. Thirty special equity projects were funded and implemented.

The scope and design of each project varied according to each LSAU's needs in one or more of the following areas:

1. Inservice activities
2. Guidance materials
3. Outreach materials
4. Non-traditional Career Day
5. Technology Exploratory Program
6. Sex Equity Model Program
7. Projects to assess local equity needs
8. Projects for teenage parents

The most successful of these were the Summer Technology Exploratory programs. These projects were designed to introduce males and females to non-traditional careers

in the technology area. Students were provided hands-on exploratory experiences and visited high tech industry in the area to talk with non-traditional employees and observe different tasks they were required to perform. In addition, guest speakers employed in non-traditional occupations were invited to the classroom to talk with students about careers in the technology area. Each project included a strong counseling component which utilized sex fair guidance materials, equity resources, and research.

In addition to the special projects, the sex equity coordinator conducted a very successful workshop designed to increase the awareness level of vocational personnel of target equity issues and to assist LSAUs in developing local equity programs to eliminate barriers to sex fair vocational education.

2. Cooperative efforts with private sector

Local school administrative units collaborated with businesses, industries, and local organizations to develop awareness/outreach workshops, non-traditional career day activities, non-traditional cooperative experiences, and a network of individuals working in non-traditional fields.

The following projects reflect the services and activities provided students in non-traditional programs - sex equity.

Hertford County - Estimated Expenditures (all fund sources) \$5,000

DESCRIPTION OF SERVICES:

Vocational education sex equity funds have been used in Hertford County to raise students, parents, and employers' awareness of the ill effects of sex bias and occupational stereotyping through channels of communication, the distribution of accurate information, and regularly scheduled student evaluation to assess the degree of success the program is realizing.

A vocational assessment coordinator was assigned to work with appropriate vocational students on prevailing misconceptions and reflections of students with non-existent or limited career objectives. Information on the employment status of Hertford County Schools' graduates, including the number of former students entering post-secondary institutions to prepare for non-traditional employment, was compiled. With this information, efforts were coordinated with the local Title VI, IX, and Article 504 Committee, central office staff, principals, and teachers to formulate instructional activities for students and staff that helped reduce or eliminate the negative effects of sex bias attitudes and practices.

The Sex Equity Program Coordinator (designated vocational assessment coordinator) assisted in developing and scheduling inservice activities for the LEA's professional staff. Throughout the year, guest speakers

representing employment in non-traditional occupations were scheduled to meet with students, providing valuable information concerning the preparation required to gain such employment. Also, field trips were made to businesses and industries sensitive to program objectives to heighten student awareness of non-traditional employment opportunities. All project activities were coordinated, monitored, and assessed for future reference by the Sex Equity Program Coordinator.

A very successful "career day" activity was conducted for students that included non-traditional employment information, community outreach information and materials, assertiveness and leadership training activities.

IMPACT OF USE OF FUNDS ON THE TARGET POPULATION:

Hertford County Schools' Sex Equity Program has enhanced its commitment to abolish sex bias and has raised the consciousness of faculty and students alike. This will be an ongoing process that should continue after funding has terminated.

Brunswick County - Estimated Expenditures (all fund sources) \$12,000

DESCRIPTION OF SERVICES:

Project BEE (Brunswick Equity Education), a uniquely designed audiovisual program, focused upon strategies promoting occupational opportunities free of sex bias and stereotyping. Components of the project included: publishing a series of news articles concerning former students employed in non-traditional occupations; pre-post assessing students to measure impact of project activities; providing staff development opportunities for faculty at the local school and state level; providing non-traditional work experiences for faculty; and developing a 50-minute video drama concerning issues of sex bias and stereotyping. The video "Going for It" was the most involved aspect of the project and involved students, faculty, administration, and community business leaders.

IMPACT OF USE OF THESE FUNDS ON THE TARGET POPULATION:

The video and study guides have been used with the middle and secondary level in Prevocational, Social Studies, Family Living, English, Science, Psychology, Vocational Education, and Career Education curricula. They have also been an effective tool for guidance counselors and teacher trainers concerned with the expanded range of possibilities available to young people today. Community, civic, and religious organizations have access to these and may find the unit a useful addition to their programs of work.

Robeson County - Estimated Expenditures (all fund sources) \$39,000

DESCRIPTION OF SERVICES:

The students are participating in the second Summer Technology Institute. Students will be exploring non-traditional careers in drafting, electricity, math & robotics, computer knowledge, and personal development and career growth. Several resource persons will speak and demonstrate to the students various career opportunities related to that particular career path.

IMPACT OF USE OF THESE FUNDS ON THE TARGET POPULATION:

Many students will be exposed to more choices in careers than they would have had access to if this opportunity had not been made available to them.

Davidson County - Estimated Expenditures (all fund sources) \$72,000

DESCRIPTION OF SERVICES:

The Young Parent Program will be housed at Davidson County Community College (DCCC) and students from each of the three LSAU's (Davidson County, Thomasville City, and Lexington City Schools) are eligible to attend. DCCC funds the salary of the director and provides any classroom and office space required.

The LSAU funds a local teaching position and some of the part-time vocational positions required. A counselor and/or health professional is hired through JTPA resources. Monies from the Sex Equity Grant would be utilized to:

- a. Hire a guidance counselor-coordinator to be employed 3/4 time to work with students on entry into the program, employability skills, on an individual, small group, or classroom basis.
- b. Transportation
- c. Child Care
- d. Instructional supplies and materials

Academic and/or vocational classes are held in the morning, with the afternoons devoted to parenting and child development classes and/or vocational coop experiences. Child care is provided at DCCC and other approved sites.

Small group and individual counseling sessions are implemented by the counselor with additional sessions conducted by staff from the Davidson County Mental Health and Davidson County Health Departments. A CARE network has been conducted with volunteers from the community (local civic, church, and medical community). A network of support for parents and families of the young parents and prospective parents uses bi-monthly parent group sessions and/or home visits by the counselor.

Since the program is housed at DCCC, this provides a wonderful opportunity for transition into the vocational/technical programs. We

hope to provide a strong reinforcement for obtaining additional vocational training to improve support to these young families.

Evaluation of the project was based on:

1. Decrease in dropout rate of the target population.
2. Determining number who achieves high school graduation.
3. Determine number of students placed in jobs and/or vocational or technical training.
4. Achievement of stated objectives will be formally evaluated by an external evaluator from the community college system.
5. Quarterly evaluations by vocational directors of the three LSAUs.
6. Bi-monthly evaluation by program personnel.

IMPACT OF USE OF THESE FUNDS ON THE TARGET POPULATION:

Seventeen of the 37 students who have enrolled in the Alternative High School for Teenage Parents at Davidson County Community College this year have graduated. Nine of the graduates completed Adult High School, one completed the GED, and seven received diplomas from their high schools in Davidson County and Lexington. Ten students remain in the program and some of them plan to continue in AHS this summer and hopefully, some of them will be ready to enroll in college courses in the fall. Four of the current graduates are enrolling in college classes this summer and plan to continue in the fall. One of our graduates has already completed a geriatric assistants program and three students have been enrolled in typing classes this past quarter. These young parents are preparing themselves to be employed and independent. According to statistics, 8 in 10 teenage parents drop out of school and 7 in 10 go on welfare. As a result of the Alternative High School program, these graduates will not become one of these statistics.

Avery County - Estimated Expenditures (all fund sources) \$57,611

DESCRIPTION OF SERVICES:

Sex Equity funds were used at Elk Park and Riverside Elementary Schools to provide courses which provided career information and introductory job skills in a non-traditional manner. The objective of the program is to encourage students to look at careers without the traditional sex biases. One male and one female teacher are involved in the program. They serve both schools by exchanging schools after the completion of a semester. The female teacher is responsible for career awareness, electronics, construction, and horticulture. The male teacher is responsible for computer instruction, horticulture, graphics, woodworking, and power and energy. The workbook, Choices and Challenges, is used to help students understand the limiting effects of sex biases and stereotyping and to build new attitudes toward jobs. With this basis, students realize that they have a broader variety of careers from which to choose. By trying their skills in the areas described, students can test their abilities and interests.

As a portion of the class, the CASE interest inventory was given first semester and the TAPS aptitude inventory was given the second semester. Students were given individual counseling to interpret the results of these inventories. As a portion of the counseling, emphasis was given to exploring non-traditional career opportunities.

Finally, funds from the project were used to develop a slide/tape program and brochures for vocational programs with strong emphasis on non-traditional careers. The brochures were disseminated throughout the county. The slide/tape program is used for pre-registration orientation and for presentations to civic and educational groups.

IMPACT OF USE OF THESE FUNDS ON THE TARGET POPULATION:

A pre and post attitudinal survey was used to measure students' attitudes about careers from a tradition or non-tradition viewpoint.

Pre-Test Results:

- Over 50% of the girls felt that 18 (62%) of 29 careers were suitable for men or women
- Over 50% of the boys felt that 12 (41%) of 29 careers were suitable for men or women

Post-Test Results:

- Over 50% of the girls felt 20 (69%) of 29 careers were suited to both sexes, an increase of 7%
- Over 50% of the boys felt that 17 (59%) of 29 careers were suited to both sexes, an increase of 18%
- 26 of 29 careers (90%) showed an increase in the number of students who viewed it non-traditionally
- 25 of 29 careers (65%) showed a 10% gain in student non-traditional response
- 3 of 29 careers (10%) showed a 20% gain in student non-traditional response

II. Program Improvement Accomplishments - Secondary

Results and Accomplishments of Expending Title II - Part B Federal Funds VOCATIONAL EDUCATION PROGRAM IMPROVEMENT, INNOVATION, AND EXPANSION

The following information reflects the state's programs, services, and activities designed to provide participants education/training with federal funds under Title II, Part B and matching state/local funds where required or optionally provided.

- A. New Courses (See Table 2)
- B. Expanded Courses (See Table 2)

Courses By Category*

Table 2

Program Area	1** New Courses	2** Expanded Courses	3** Improved Courses	4** Discontinued Courses	5** Total
AGRIC.	68 (11%)	48 (19%)	96 (11%)	60 (5%)	156 (8%)
B.O.E.	217 (34%)	63 (26%)	280 (33%)	154 (13%)	434 (21%)
H.O.	10 (2%)	28 (11%)	38 (4%)	10 (1%)	48 (2%)
H. EC.					
cons	58 (9%)	0 (0%)	58 (7%)	143 (12%)	201 (10%)
occ	47 (8%)	36 (14%)	83 (10%)	18 (1%)	101 (5%)
I. A.	82 (13%)	58 (24%)	140 (16%)	25 (2%)	165 (8%)
M. E.	25 (4%)	16 (6%)	41 (5%)	39 (3%)	80 (4%)
T & I	118 (19%)	0 (0%)	118 (14%)	366 (30%)	484 (23%)
PRE-VOC	0 (0%)	0 (0%)	0 (0%)	391 (33%)	391 (19%)
TOTAL	625 (30%)	249 (12%)	854 (41%)	1206 (59%)	2060 (100%)

*This information is taken from the North Carolina Public School Statistical Profile: Comparison of 1985-86 with 1986-87.

**Columns 1 and 2 were added to get column 3. Columns 3 and 4 were added to get column 5.

NEW-means new to the LSAU or a school within an LSAU

EXPANDED-means added a level in a sequence or added a coop component

A. New Courses

The new courses identified in Table 2 are new to the local school administrative unit (LSAU) or a school within an LSAU. This numerical data is indicative of trends in vocational education germane to business and industrial economic and labor force requirements.

B. Expanded Courses - Secondary

1. Program Improvement Reflected in Part II, Local Plans and Program Area Data

Local school systems developed a three-year Part II in the local plan which was consistent with the timing as specified in the Carl D. Perkins Vocational Education Act of 1984. For FY 1986, the local school systems submitted a program report on Part II of the local plan and updated FY 1987 Part II, Improvement Plans where necessary.

The local school systems were not required to re-submit Part II of the local plan unless there were substantial changes in the Program Improvement Plan. For the 20% of the school systems in the 1986-87 Program and Administrative Review Process, the comprehensive report became the Revised Part II of the local plan.

Revisions and updates of Part II of the local plan indicated that improvements were made in the following areas: additional equipment/materials/supplies; increased personnel development activities; updating curriculum; redirecting of programs to areas with labor market growth; and making progress toward all programs being responsive to technological advances, changing characteristics of the work force, and the academic, technical, and attitudinal development of students.

2. Local Advisory Composition and Contribution to Improving Programs

To receive state and federal funds for vocational education programs and services, the local superintendent of public schools and the chairperson of the local board of education must sign a number of statements of assurances contained in the annual application. Among these assurances is one which states: "The annual plan was developed with the advice of a local advisory council. This plan is consistent with criteria set forth by legislation and/or State Board policy."

Based on a 20% random sample of secondary vocational education annual applications for state/federal funding submitted for FY 87, following is the composition of local advisory councils by clientele groups represented. For FY 87 there were 140 local systems with 139 reporting 3,886 members on vocational education advisory councils.

Clientele groups represented:

Agricultural	5.86%
Business	16.19
ESC, JTPA, other employment	21.01
Health	3.57
Home Economics	5.07
Industry	10.51
Labor	6.91
Marketing	4.33
Office	4.38
Technical	4.18
Trade	5.61
Other (parents, students, educators)	12.38
	<u>100.00%</u>

Composition by race and sex:

White males	48.14%
White females	22.27
Black males	16.82
Black females	11.78
American Indian males	.68
American Indian females	.14
Other males	.16
Other females	.01
	<u>100.00%</u>

Reports submitted by local school systems indicated that local vocational advisory council members participated in activities which included: attending orientation meetings, conducting occupational/community surveys to determine employment needs, advising on course contents, reviewing evaluation data, recommending appropriate equipment, and program visitations to schools. Representatives of the PICs as specified in the Job Training Partnership Act were more involved in the review of and commenting on local vocational education annual applications.

3. Vocational Education Standards and Their Relationship to Improving Programs

The 1985 General Assembly of North Carolina recognized the importance of quality vocational programs in the state by enacting six standards for the approval of vocational education programs as reflected in annual applications for state/federal aid beginning with plans and applications for the 1986-87 school year. These standards are beginning to impact all courses, services, activities meeting the legislated purposes of secondary vocational education; courses meeting identified minimum/maximum enrollments, the need for job skills programs being documented as needed based upon labor market data/follow-up data; equipment and facilities meeting minimum identified standards; all instructional and support personnel meeting minimum

certification requirements; and, students involved in the cooperative method of instruction receiving their on-the-job training in jobs directly related to the content being taught in the classroom.

C. Improved Career Guidance/Industry Education Coordination - Secondary

1. Accomplishments this year in the State's priorities (indicated in the State Plan) for program improvement, innovation, and expansions:

A statewide system of business/industry coordination and placement services was expanded in the areas of planning, implementation, and evaluation of the program. Approximately 90% of the coordinators developed functional yearly programs of work that were either submitted or shared with appropriate local school administrative unit personnel.

The membership of the state Advisory Committee for Vocational Development was updated. This 22-member committee consists of representatives from business, industry, labor, higher education, administration, and constituent groups. It functions to provide input from the community, strengthen linkages with secondary vocational programs, and make recommendations for evaluating and updating the career guidance/industry education coordination programs.

On-site program reviews for 20% of the local school administrative units in the state were conducted. This process serves as one determinant of needed implementation strategies for programmatic improvement.

A coordinated effort with the Vocational Honors Society in twelve local school administrative units which involved more than 400 students was conducted. This program serves as an incentive to promote scholarship, citizenship, pride, and enthusiasm in students enrolled in vocational education programs.

2. Methods and procedures used to implement program improvement activities according to the identified priorities:

A four-day vocational development section at the Annual Vocational Education Summer Workshop was provided. Seventeen hundred counselors, industry/education coordinators, and job placement coordinators were invited. Participants updated their program components, e.g. using occupational data and information, developing personalized education plans, analyzing job trends relative to career planning, and appraisal of "the state-of-the-arts" as an instructional tool.

A statewide workshop for industry/education coordinators was conducted to update IECs on their emerging roles and to

prepare resource materials for improving program effectiveness.

Three staff development activities were sponsored in each of the eight regions through the statewide networking Regional Leadership Council system. The workshops involved 650 industry/education coordinators and were a concentrated effort to improve program effectiveness, particularly in the areas of job training and permanent employment.

Guidelines for certifying persons who deliver vocational development services to students enrolled in North Carolina's vocational education programs were upgraded.

3. Descriptions of programs/services which are an example of the impact of vocational education funds on youth are as follows:

The four-year personalized education plan is a cooperative, tentative, charting process; after an assessment of individual interest, achievement, and/or aptitude has been made of needed courses in order to accomplish the current career goal objective. Each student enrolled in vocational education must have a four-year personalized education plan. This plan lists by grade the courses (and sometimes the activities) the student will need through the completion of high school in order to complete his/her career goal. It also lists career options after high school. The plan is made after an assessment of each student's interest, achievement, and aptitude levels have been determined. The listing of courses is made in pencil, so that course changes can be made as the student's interests and needs change. These plans are closely monitored to keep them updated. The advantage of this process is that students proceed through school with definitive career goals and exit from the school on a career course to enter the labor market with marketable skills or to advance their education in an appropriate post-secondary institution.

The internship/shadowing program is one that is increasing in participation. The program enables students to work and/or observe, over a given period of time, their high-interest occupation. The student is able to ascertain if the duties expected are those desired and the environment is conducive to and compatible with their expectations. If not, the student is able to explore other occupations in which he/she finds satisfaction. The program provides students an on-site observation of the world of work in a high-interest occupation in which these students can make valid decisions pertaining to their futures.

D. Personnel Development - Secondary

A scholarship program for individuals desiring degree certification in vocational education attained fruition. Information on the Vocational Education Prospective Teacher Scholarship was

mailed to over 200 different organizations including local school systems, postsecondary institutions, and institutions of higher education. Thirty-two (32) applications were received and a review team made scholarship recipient recommendations. The Division of Vocational Education made the selection of 20 recipients. There are 15 recipients from the previous years' scholarships continuing their vocational teacher preparation.

Vocational education certification guidelines continued to be in the process of revision. This activity is still receiving input from various groups.

The Division of Vocational Education Management Plan included specific goals and objectives for the training of employed vocational personnel including teachers, counselors, teacher educators, and state and local administrators. This includes priorities in new and related fields, equity, and special populations. The plan emphasized personnel development activities. There were 66 training activities which involved 5,481 vocational education participants as a result of the plan. Priority was given to new and related fields, equity, and special populations. The 5,481 participants included local vocational instructional and support personnel, vocational teacher educators, and vocational administrators at the local and state level. The training activities offered were based on a needs assessment which included prior training activities, vocational leadership advice, participant identified needs, and the Vocational Education Program Review and Improvement Process.

The Division of Vocational Education in concert with other Department of Public Instruction staff gathered data on the supply and demand of vocational education personnel. This data was shared with selected individuals and organizations for use in planning for vocational teacher education preparation.

E. Curriculum Development - Secondary

The following curriculum thrusts were conducted to help local programs improve their offerings.

Agriculture: Reprint of Homestead Gardening Skills Test Item Bank, Ornamental Horticulture Guide and Test Item Bank, and Agriculture Machinery Guide and Test Item Bank.

Business and Office: Developed Computer Applications Course Guide; revised administrative support occupations competencies; and developed Keyboarding Guide K-7.

Home Economics: Prepared draft copies of Foods/Nutrition, Clothing/Textiles, Interior Design/Housing, and Parenting/Child Development; and adopted and purchased Family Living and Food Services Guides.

Industrial Arts/Technology Education: Adopted and printed Technology Education Curriculum Guide and Technology Education Activities Guide; and revised NC-AIASA Competitive Events Standards.

Marketing: Completed Articulation Guide; participated in

IDECC resulting in \$16,000 savings for materials; prepared competitive events video; and revised DECA Handbook. Trade & Industrial Education: Revised these test item banks and distributed as drafts: Electrical Trades, Graphics, ICT, Technical Drafting, and Automotive Technology. Prepared two drafts of curriculum guides: Industrial Maintenance and Cabinetmaking/Furniture. Vocational Development: Completed Business Lab Guide; completed IEC Guide; completed Personalized Education Plan Guide; printed Employability Skills Guide; and distributed CECNC Handbook.

These materials were developed in conjunction with teachers and business/industry personnel. Priorities for curriculum development were based upon the number of teachers and students to be served, last revision dates, new thrusts, and availability of materials from other sources. As a result of such development, teachers have access to current information for planning, enhancing, and managing the teaching process.

F. Equipment

The Equipment Standards, prepared for each vocational course, was reviewed by teachers, business/industry, and local administrators during 1986-87. Based upon their input, the Equipment Standards guidebook will be revised and distributed during the Fall, 1987. These standards are to help local school systems identify their deficiencies and determine resources required to have up-to-date equipment.

G. Research - Secondary

1. Research, development, and exemplary activities funded through the Carl D. Perkins Act by the Division of Vocational Education, North Carolina Department of Public Instruction, during Program Year 1986-87 operationalized the Carl Perkins Act through projects focused on program expansion, innovations, and assessment and/or demonstration of new methods for delivering programs, training, and technical services. Continuing changes in technologies and work environments are creating obsolescence in curriculum content and instructional methodologies, teacher preparation and training, delivery of services, and access to the latest state-of-the-art materials, software, and hardware by local school systems, especially in sparsely populated areas for students from both regular and special needs populations. A changing emphasis from the lay and legislative communities has increased the need for valid documentation of student achievement in vocational education. Multiple projects (described below) were designed and initiated or continued in an attempt to provide strategies for coping with each of these factors. In addition, two efforts were undertaken to improve the research and development process.

.Following the release of the Request for Proposals (RFPs), a two-day PROPOSAL WRITING PROJECT MANAGEMENT WORKSHOP was conducted for 60 participants in an effort to improve the quality and increase the quantity of proposals received. Participants represented local vocational administrators, teacher educators, community college personnel, teachers, equity coordinators, and some public/private community groups.

.In order to more effectively diffuse research and development results, a PROGRAM IMPROVEMENT CAROUSEL was added to the Annual Vocational Education Summer Workshop. The carousel featured 17 "New Ideas and Promising Practices" in a round robin set of four 30-minute presentations. Also, featured were displays of state developed/adopted curriculum materials for each of the eight vocational program areas. Approximately 750 of the workshop participants attended the carousel; requests for additional information were received and handled throughout program year 1986.

Specific research and development projects continuing in program year 1986 were:

- a. DownEast Instructional Telecommunications Network (DITN) - Rural Education Institute, Greenville, North Carolina.
- b. Joint North Carolina Vocational Education - U.S. Army Electronics Project.
- c. Interactive VideoDisc Project - Hyde County Schools.
- d. Identification and Evaluation of Alternative Teacher Education Delivery Strategies - East Carolina University.
- e. Demonstration Model for Documenting Competency Achievement of Special Needs Students in Association with JTPA - Cumberland County Schools.
- f. Field Test of a Computerized Model for Assessing and Documenting Student Competency Achievement - Richmond County Schools.
- g. Correlation of Selected Social Studies Competencies with Competencies in Marketing and Business Education Courses - North Carolina State University.
- h. Determination of the Impact of Selected Innovations on Vocational Education - Burlington City Schools.
- i. Evaluation and Follow-Up of Consumer and Homemaking Graduates - University of North Carolina at Greensboro.

New Research and Development projects initiated in program year 1986 were:

- j. Training Strategies for Building Vocational and General Education Competencies Into All Programs - A&T State University.
- k. An Identification of Communications Skills/Competencies Taught in Vocational Education Programs - North Carolina State University.

1. Developing Pre/Post Test-Item Banks for Selected Vocational Programs - Wake County and New Hanover County.
 - m. Developing and Validating a Standardized Basic Electronics Proficiency Test and Test-Item Bank - Appalachian State University.
 - n. Demonstrating the Use of Army-Developed Interactive Laser Videodisc Software in a High School Electronics Course - Cleveland County Schools.
 - o. Developing a Model Training and Certification Program for Former Military Personnel - Appalachian State University.
 - p. Implementing Alternative Collaboration Strategies Between School Programs and Business and Industry - Rural Education Institute, Western Carolina University.
 - q. Applying the Teacher Effectiveness Model to Competency-Based, Individualized Instruction in Vocational Laboratory/Shop Programs and Courses - Wake County Schools.
2. Methods and procedures used to implement the new and continuing projects program improvement according to the identified priorities are specified in each of the following project descriptions:
 - a. DownEast Instructional Telecommunications Network (DITN) - Rural Education Institute, Greenville, North Carolina.

The Division of Vocational Education and the Rural Education Institute at East Carolina University, Greenville, NC have designed and are implementing a major program for providing rural students access to an innovative curriculum which integrates academic and vocational education. Five small high schools - Aurora, Bath, Belhaven, Mattamuskeet, and Ocracoke in Hyde and Beaufort counties are the model sites.

Highlights of the model include: (1) providing students with a rigorous, new curriculum - Principles of Technology - integrated with mathematics and communication skills; (2) developing vocational activities and strategies that assist students in meeting competencies for present and emerging technical careers; (3) meeting student graduation requirements for vocational and academic courses; (4) utilizing technology in the delivery of the program by linking the sites with interactive audio, video, and computer capabilities; (5) providing access to state-of-the art science, vocational and telecommunications equipment and techniques through a mobile unit and teacher; (6) networking teachers, students, materials, equipment, and other human resources by electronic means; and (7) providing multi-approaches to classroom management and instruction. DITN is an alternative system of delivering vocational education to students in rural isolated areas of North

Carolina. It is a network of five high school classrooms linked by audio conferencing equipment, electronic chalkboards, and computers with modems serving as the delivery system for teaching the Principles of Technology physics/vocational course. A master teacher serves as the coordinator of the curriculum, the science and vocational labs, activities, and the teleconferencing. Teachers at each of the five schools elaborate on the science demonstrations and follow-up with the assignments and products that are developed by the students. They also teach mini-lessons on the teleconferencing system.

Small school systems serving sparsely populated areas often have difficulty in providing their high school students with some of the vocational learning opportunities offered in more urban areas. Yet these students have to compete for the same jobs in a workplace which is becoming more technical and academically demanding. The job market demands are greater than the supply in the areas of electronics and telecommunications, repair and maintenance, and service related jobs.

The North Carolina Basic Education Plan will move local school systems closer to providing better services for students attending small, rural schools who want access to a variety of vocational courses, but creative planning using communications technologies will be necessary. New approaches to class scheduling, instructional methods, and the utilization of personnel and instructional technology will be required. The DITN model serves as a prototype demonstration model for NC--planned by school administrators and teachers--in conjunction with the state and the Rural Education Institute at East Carolina University.

DITN provides a step-by-step process for using teachers, instructional technology, a mobile lab, and other resources in an interactive network to deliver courses which could not be taught otherwise because of lack of personnel, lab equipment, and other resources.

Research and development of alternative delivery systems is encouraged in the guidelines of the federal legislation and is the basis for the design and implementation of the DITN model. The evaluation at the end of the first school year has shown that students can achieve in course content using these alternative systems and that staff development for teachers can be delivered on the system.

- b. Joint North Carolina Vocational Education - U.S. Army Electronics Project.

At the beginning of the 1985 school year, 18 Trade and

Industrial Education electronic programs throughout North Carolina participated in the joint North Carolina Vocational Education - U.S. Army Electronics Project. The purpose of the project was to articulate the curriculum of the secondary T&I programs with the Signal Corps Basic Electronic Training program at Fort Gordon, Georgia. High school junior and senior Trade and Industrial Education electronics students from 23 local school administrative units participated in the project.

Instructors were given two weeks of intensive training at Fort Gordon during the summer. While there, they received technical update, teacher training, curriculum articulation, precision soldering, and interactive laser video simulation training. Selected eleventh grade electronic students from the participating high school programs spent one week during the summer at Fort Gordon visiting the facilities and the job related programs.

Program improvements resulting from additional efforts are under way for North Carolina vocational education programs to work with the Army in a program which involves 180 academic competencies which are required to be successful in technical skill areas. The next efforts will be in the areas of transportation and student assessment.

Program improvements resulting from this project have been an expansion of the U.S. Army electronics curriculum materials to the existing North Carolina electronics programs. Staff development has been provided for the electronics instructors. Assistance in job opportunities for young people has been expanded in the field of communications-electronics.

Participation in the project has increased the competencies of electronics instructors from the point of content and methodology and provided administrators with comprehensive overview and procedure used in the U.S. Army to improve the quality of programs. It has contributed to the division effort to assure that state-of-the-art curriculum is available to local teachers. It also acted as an incentive to LSAUs and motivated them to purchase state-of-the-art equipment for electronic programs.

Expansion of the project has benefited seven other states which now utilize the facilities at Fort Gordon.

c. Interactive VideoDisc Project - Hyde County Schools.

"Using An Interactive Video Instruction Model in a Selected Vocational Program" is a pilot project in which an interactive video system for a selected vocational program is being located, installed, and used in the instruction of

students in a rural school system. The selected software will be made available to high school vocational students enrolled in one of five vocational courses in Hyde County, North Carolina.

Objectives of the activity included searching for and selecting an interactive video instructional system including the hardware and software for use as in the demonstration site; installing the system; training the teaching and administrative personnel; and operating a demonstration site where administrators, teachers, and students can observe the use of interactive video in vocational education.

The demonstration site planned for Mattamuskeet High School was operated for approximately fifteen weeks during the second half of 1986 school year. A secondary site at Ocracoke School was operated for an additional seven weeks. Two-day demonstrations were provided in each of the eight regional education centers of North Carolina. Individuals who visited the demonstration sites were involved in an evaluation of selected components of the system.

The project continued in program year 1986-87 and resulted in a two-part plan that local education agencies can use in selecting, installing, and maintaining an interactive video instructional system. Guidelines included in the resulting handbook are based on research conducted by the project directors on the utility, feasibility, and transportability of interactive video as an instructional technique.

d. Identification and Evaluation of Alternative Teacher Education Delivery Strategies - East Carolina University.

Highlights of the project included a massive search throughout the nation to locate examples of alternative strategies for the initial preparation and/or continuous professional development of vocational teaching personnel; a matrix showing the results of the search (and the advantages and disadvantages of each strategy); and, a survey of pertinent personnel in North Carolina to determine perception and consensus as to the impact of the strategy on existing structures for vocational education such as administration, teacher education certification, staff/professional development, the Quality Assurance Program, and the Career Development program.

A project steering committee was established and used throughout the project and an audio/tape with transparency presentation on the project and its findings was developed for use in project dissemination activities.

e. Demonstration Model for Documenting Competency Achievement

of Special Needs Students in Association with JTPA -
Cumberland County Schools.

Because Cumberland County Schools continued this project in program year 1986, junior and senior high special needs students enrolled in the job training vocational instructional program (JT) at the high school level will have access to a computer-managed and individualized instructional process.

The vocational director and vocational evaluation coordinator for Cumberland County Schools are conducting a research project to demonstrate the use of a computer management system documenting the employability skills achievement of special needs students in association with the local JTPA/PIC.

"The Competency-Based Employability Skills Program" instructional guide was modified to a format which can be computerized for use in the project. Software including a classroom management system, a test generator, progress reporter, end-of-program individual student achievement reporter, instructional activities bank, and grade tabulator was purchased and demonstrated in the project activities.

Workshops were conducted to instruct the Job Training teachers in the use of the instructional guide, computer hardware, and software; to assure their competence prior to initiation of the project activities.

Student achievement data was collected and tabulated by individual courses as well as by all eight course sites used in the project. Personnel involved in the project evaluated the utility of the system at the high school level. This information along with the student achievement data was used by a steering committee to prepare recommendations and a detailed plan for replication in local school systems in North Carolina.

A demonstration center was established to serve as an observation site for personnel from across the state; in addition, project staff conducted training workshops for selected vocational personnel across the state.

- f. Field Test of a Computerized Model for Assessing and Documenting Student Competency Achievement - Richmond County Schools.

A demonstration model for "Obtaining Competency-Based Achievement Data on Students Enrolled in High School Vocational Programs" is being developed and piloted under the direction of the vocational director of Richmond County Schools. As part of the project activities, all competencies and three test items per competency for each

vocational offering are being entered into computer files using the DATABANK software.

Project procedures involved the computer generation of pre and post-tests for each of the vocational programs offered at Richmond County Senior High School. Pre and post-tests (which include both written and performance test items) were being administered to students in the respective courses. Student performance on the tests was analyzed per class section, per program, per school, per teacher, and per level for use in creating a sound base for curriculum content decisions. Computerized management of the assessment activity is made possible via the features of a software package - DATABANK.

A highlight of the project is that, for the first time, achievement results reflecting vocational student performance is available for local level decision making. It should be noted that Richmond County Schools has been implementing competency-based achievement assessment for the past five years using teacher-developed tests and manual analysis procedures. Use of a computerized management system is making it possible to expedite the availability of data on individualized student performance prior to and following instruction and ease the teacher paperwork load.

Use of an electronic process for managing the measurement and documentation of student achievement of competencies makes it possible for (1) customized access to a computerized system for generating valid criterion-referenced tests from banks of test items (with each bank to include measures of both cognitive and performance proficiency) which are keyed to course competencies, (2) student responses and teacher ratings of student performance recorded on machine-readable (scanner) forms, (3) computerized scoring of tests, development of personalized learning prescriptions, and preparation of grades for report cards, and preparation of itemized competency reports for each student using customized software at the local level, and (4) aggregation of student achievement performance data-especially gain scores-by course/program and competency for use in marketing program success stories and for use in analyzing curricula for revisions or teacher staff development needs.

Gain scores (post-test minus pre-test) can be computed per student, per competency, per class section, per course, per program, per level in sequence, per teacher. Data summaries can be prepared and used locally at the system level to prepare reports on student achievement (Comprehensive Planning Process/State Accreditation - local newspapers) and for curriculum and instructional analyses for the following year. Item analyses can be used for revision of the test-items in each of the banks.

- g. Correlation of Selected Social Studies Competencies with Competencies in Marketing and Business Education Courses - North Carolina State University.

Several math/science/social studies and vocational education competency correlation projects were conducted and/or completed by personnel located in Haywood County Schools and at two universities in North Carolina (North Carolina State University at Raleigh and East Carolina University at Greenville). Eight math/science projects were funded and implemented at the sites listed below. At four of the sites, math competencies associated with vocational competencies in selected courses were identified. At the remaining four sites, science competencies were correlated with vocational competencies in selected specialized vocational programs.

- (1) Math/drafting and math/electronics at North Carolina State University; project director - Dr. Joe Clary
- (2) Math/agricultural education, NC State University; Dr. Larry Jewell.
- (3) Math and trade/industrial education courses and math/industrial arts courses, Haywood County Schools; Mr. Ed Willis, vocational director, and Dr. Sam Smith, assistant superintendent.
- (4) Science and trade/industrial education courses and science/industrial arts courses, Haywood County Schools; Mr. Ed Willis, vocational director, and Dr. Sam Smith, assistant superintendent.
- (5) Math/home economics and math/business and office education, East Carolina University; Dr. Vila Rosenfeld and Dr. Lilla Holsey.
- (6) Science/agricultural education, NC State University, Dr. Jeff Moss.
- (7) Science/home economics and science/business and office education, East Carolina University; Dr. Vila Rosenfeld and Dr. Lilla Holsey.
- (8) Social studies/business and office and social studies/marketing & distributive education, North Carolina State University; Dr. Joe Clary and Ms. Karen Nery.

Project procedures involved the math teachers, science teachers, social studies, and vocational teachers from the respective programs as well as general and vocational education state agency staff in deliberations regarding the correlation of competencies. Two types of products resulted from the projects - highly visual and/or

computer-assisted teaching modules for use by teachers with students in high school vocational classes and computerized correlation matrices of vocational, math, and science competencies.

Training workshops with vocational teachers and vocational administrators were conducted by project personnel, and the project materials were made available for public school use. Since completion of the project, selected school systems have used the research findings in initiating local efforts to identify vocational subjects in which students may receive a credit toward the North Carolina graduation requirements for math and/or science.

h. Determination of the Impact of Selected Innovations on Vocational Education - Burlington City Schools.

- (1) The Basic and Vocational Skills Program is one of three components of a funded research project conducted under the direction of the central office in Burlington City Schools. It is a remedial instructional program in the basic skills combined with introductory hands-on orientation experiences in vocational education.

The audience included seventh and eighth grade students whose past academic records indicate poor self-motivation and under-achievement in mastering basic skills.

The Basic and Vocational Skills Program was designed to provide a comprehensive program which would keep high risk students in school until graduation. Students spent four periods per day concentrating on the basic skills; one period per day learning hands-on vocational skills; one period per day in vocational orientation activities which include computer training and vocational guidance; and one period per day in physical education, art, and music (on an alternate day schedule).

An intensive basic skills curriculum was developed for these students. As much as possible, language and mathematical skills were directly related to and correlated with the prevocational programs. The teachers of these students worked together as a team in lesson planning and individual guidance of students.

The prevocational program was geared to the interests and aptitudes of these students. Areas of study include manufacturing, construction, communications, energy and power, typing, and microcomputers. A strong guidance

program is a part of the academic and prevocational components of the program.

- (2) A second component of the project provided an articulated effort with the Technical College of Alamance, the local two-year postsecondary institution. Through this effort carefully-selected seniors were able to enroll in a required "Communications Skills" course located on their individual campuses but taught by the postsecondary instructor. Students participating in the program earn secondary and/or postsecondary credit depending on their demonstrated performance of the required competencies in the course.

The model established during the project year is being continued with five other areas of articulated programs to be available for the secondary students during the following school year. Most of these additional areas provide students with access to vocational or vocational-related programs which the secondary system, operating on its own, would be unable to provide.

- (3) The third component of the project examined the impact of the increase in graduation requirements on enrollment in vocational education programs over a five-year period. Data on and from approximately thirty local school administrative units (LSAUs) similar to Burlington City Schools on several variables were collected as a basis for the analyses. Some significant findings have been compiled through the project activities and provided to the State Director for Vocational Education.

- i. Evaluation and Follow-Up of Consumer and Homemaking Graduates
Graduates - University of North Carolina at Greensboro.

As one of the four states participating in a national study initiated by a subcommittee of the American Vocational Education Home Economics Division Research section, two home economics teacher educators at the University of North Carolina at Greensboro completed an extensive follow-up of consumer home economics (CHE) students. Specific purposes of the study were to (1) describe the characteristics of high school graduates (1984) who had completed three semesters of CHE while in high school; (2) determine how these 1984 graduates have used knowledge gained in CHE courses in relation to nutrition, parenting, and consumer education; (3) examine relationships among student scores and selected variables (size of community, school enrollment, home economics enrollment, race, class rank, and presence of FHA chapter), the number of CHE courses completed, and measures of responsibility in real life (i.e., using credit cards, owning cars, having insurance, eating nutritiously, etc.);

and (4) identify issues related to the improvement of the CHE curriculum which need to be resolved.

Procedures for project management and data/or data collection used in the study included an active steering committee with state and local level representation, random sampling of the FY 84 CHE graduates from across the state, compilation of school-based descriptive data on students and programs, telephone interviews with each student in the sample per each of two years, computerized analyses, and the individual scoring of students' responses to the measures of responsibility questions using a pre-determined key based on knowledge taught in CHE courses. A slide/sound presentation (plus a transparency and poster presentation) on the project and its findings completed for use by the SEA Home Economics staff, the eight Home Economics Education Regional Leadership Councils, the State Advisory Committee for Home Economics, and selected other decision making bodies in their deliberations for the improvement of the Consumer Home Economics Curriculum in the State of North Carolina.

- j. Training Strategies for Building Vocational & General Education Competencies Into All Programs - A&T State University, Greensboro, North Carolina.

Articulated efforts between general and vocational education continue to have high priority for the improvement of vocational programs in the public schools of North Carolina. Several previous research projects in North Carolina and related efforts in other states have focused on the identification of correlated competencies between vocational programs and basic general education skills in math, science, social studies, and communication. Recognizing that basic general education knowledge and skills are prerequisite to student success in vocational programs and that vocational programs provide opportunities for students to apply/enhance basic/general education skills in meaningful, real-life settings, the Division funded this project in an attempt to prepare teaching personnel to effectively reinforce basic skills in vocational classrooms.

Project procedures involved the preparation of a matrix to illustrate the match between selected basic skills and the competencies established for vocational education use in the North Carolina Competency-Based Curriculum Teacher Handbooks, the selection of a training package, the preliminary training of eight vocational teacher educators to conduct orientation sessions with selected groups of teachers in each of the eight education regions of the state. The training package selected was one using a series of video-taped segments of teachers demonstrating techniques for incorporating basic skills in actual vocational classrooms/labs/shops.

- k. An Identification of Communications Skills/Competencies

Taught in Selected Vocational Education Programs, North Carolina State University, Raleigh, North Carolina.

In a continuing series of projects designed to provide for the identification of competencies between basic and vocational education programs, the Department of Occupational Education at North Carolina State University in Raleigh began work on the correlation of communication skills in all vocational programs/courses. The intent of the project was first to identify basic communications skills and then to designate those vocational program competencies which depended on, were associated with, or enhance student development of the communications skills.

Project procedures involved the electronic downloading of all vocational and non-vocational competencies from the SDPI IBM files for the North Carolina Competency-Based Curriculum Teacher Handbook, the selection of computer database management software, the establishment of key words to represent curriculum skills, and programming modifications to allow computerized curriculum building, electronic updating of curricula, and on-line linkage with V-TECS and MODAS

efforts. An advisory committee for the project (consisting of state and local personnel and selected vocational teachers and non-vocational teachers) was used in the project to verify competency correlation and the key words used in the data based management program. As the project continues, training workshops will be conducted with members of curriculum teams, state staff, and selected local personnel to enable effective use of the curriculum files for statewide vocational program updating and locally-customized curricula.

1. Developing Pre/Post Test-Item Banks for Selected Vocational Programs - New Hanover Schools, Wilmington & Wake County Schools, Raleigh, North Carolina.

In a continuing effort to provide local vocational teachers and administrators with an easily accessible and valid system for measuring and documenting student competency achievement, the Division of Vocational Education initiated the support of projects (with limited funding) in which vocational teachers work to expand and validate competency/test-item banks for vocational programs they are currently teaching. Two such efforts underway during program year 1986 were in the area of Home Economics Education-one in a consumer/homemaking course (Consumer Foods) and one in an occupational home economics program (Child Care Services).

Project procedures involved the teacher/developer in working with state staff and representative members of curriculum teams to update the outcome competency listings for the programs, attending a workshop on constructing/editing criterion-referenced test items for each competency, and the field administration of these items to students currently or

previously enrolled in the programs. Subsequent use of the test-item banks which result from these efforts will be their entry into the statewide computerized competency/test-item banks being created for each vocational program/course. Eventually, statewide end-of-course tests and/or locally customized tests can be randomly generated for measuring and documenting student achievement in Child Care Services and Consumer Foods.

- m. Developing and validating a Standardized Basic Electronics Proficiency Test and Test-Item Bank - Appalachian State University.

For the past several years, North Carolina has collaborated with the U.S. Army in developing a national pre-service electronics training program which is intended to give high school students a headstart in acquiring the technical competencies needed for entry and/or advanced placement status in the electronics training program at Fort Gordon, Georgia. Little was known regarding the specific basic electronics knowledge and skills of high school students and graduates. This project was initiated to fill the need for a valid measure to document the level at which secondary students are being prepared for post high school training or jobs in the field of electronics.

Project procedures involve:

- .Conducting a search to locate existing test items and their sources; obtaining copies of tests/test items and correlating these items with the Teacher Handbook competencies for Electronics.

- .Identifying secondary school and U.S Army personnel with technical expertise in electronics to serve as the "face validation team" and the "weighting team" and assuring that each item is coded and that each competency is weighted according to an agreed upon table of specifications for the test.

- .Securing the services of a "test-item construction" specialist to screen and edit each potential item.

- .Arranging for the entry of edited items into a computer file using DATABANK software.

- .Using the DATABANK software package to generate equivalent forms of the test.

- .Arranging with the U. S. Army (Fort Gordon) and North Carolina secondary schools involved in NPET for students/trainees to be involved in a pilot test of the instrument(s).

.Administering the tests and collecting appropriate supportive data.

.Preparing graphics to reflect student proficiency results (and item analyses).

The final recommendations will address specifically the use of a standardized instrument to measure/document the level of competency achievement for high school students in cooperation with an army training program.

- n. Demonstrating the Use of Army-Developed Interactive Laser Videodisc Software in a High School Electronics Course-Cleveland County Schools, Shelby, North Carolina.

Participants in this project were restricted to those individuals who had been involved in the collaborative electronics effort between North Carolina and the U. S. Army. It was intended that project personnel (Cleveland County Schools) purchase specified interactive videodisc laser hardware to support the delivery of electronics software to be provided by the U. S. Army, arrange for in-service of instructors, and to obtain specific data on its utility and effectiveness as a primary or supplementary instructional tool for high school students. Both the design and implementation phases of this project are based on coordinated efforts with identified state staff and U. S. Army personnel.

Procedures used in the project included working with a steering committee, SBE coordinator, and National Program for Electronics Training (NPET) coordinator project personnel.

.Designed strategies for securing, installing, and maintaining necessary hardware for the project in 2-3 sites with a minimum of two stations per site.

.Made arrangements with administrators in 2-3 LEAs for schools, programs, and personnel to serve as field-test sites as specified by the deputy director, Division of Vocational Education.

.Posed research questions regarding the utility, feasibility, and effectiveness of the hardware-software configuration.

.Arranged for teaching personnel to participate in training sessions and for the participation and organization of students in each of the selected sites.

.Implemented the steps necessary to install the hardware and software for use in the pilot sites; prepared pre/post test for students; and collected the data.

Project personnel will be continuing the project and working with an advisory committee to analyze the data and prepare an executive summary of the report with specific recommendations regarding the use of interactive videodisc systems as a tool in secondary vocational programs.

- o. Developing a Model Training and Certification Program for Former Military Personnel - Appalachian State University, Boone, North Carolina.

A major recommendation of the Vocational Education Curriculum Study recently completed by the department concerns the need for actively recruiting qualified teachers for secondary vocational education programs. Each year, several thousand noncommissioned officers leave military service - the majority of whom have a high level of technical skills and experience. Many of these individuals would be interested in becoming teachers in their area of technical expertise, but lack the professional education training and the certification credentials. This project, under the direction of personnel at Appalachian State University, attempts to provide a vehicle through which such former military personnel may acquire the training needed.

Project procedures involved obtaining input from representative personnel as to their training needs and preferences and then establishing a model for delivering such training to interested individuals. Both the preliminary investigation and the design phases of this project are based on collaborative efforts with U.S. Army training personnel and administrators.

In addition, project staff conducted a search to locate examples of existing models for delivering teacher training and preparation and obtained information and/or materials from sponsors or directors of such activities.

Project personnel will work with a steering committee to analyze the data and to prepare an executive report with specific recommendations regarding the feasibility and utility of each component of the model. (The model addresses those strategies that could be implemented with and without outside support and pays particular attention to how well the strategies "fit" the identified needs and preferences of the targeted personnel.)

- p. Implementing Alternative Collaboration Strategies Between School Programs and Business/Industry - Rural Education Institute, Western Carolina University, Cullowhee, North Carolina.

As its primary purpose, the project intended to provide a comprehensive knowledge base and a source of technical

assistance for local use related to school/business collaboration.

Project personnel from the Rural Education Institute at Western Carolina University conducted a search (in-state and national) of successful collaborative efforts. Through the search, project staff were able to identify and locate successful strategies in operation as well as their designers and users in North Carolina and several other states. The data is now being summarized and the final report will include recommendations regarding the feasibility and utility of the strategies for secondary vocational education programs in other North Carolina LEAs.

In addition, project personnel will be conducting orientation sessions with vocational educators across the state to assist them in the implementation of those alternative strategies designated as successful/collaborative efforts with business/industry in local/regional communities.

- q. Applying the Teacher Effectiveness Model to Competency-Based, Individualized Instruction in Vocational Laboratory/Shop Programs and Courses - Wake County Schools, Raleigh, North Carolina.

During the past three years, the North Carolina Department of Public Instruction researched the Effective Teacher Training (ETT) model, created a thirty-hour training program for educators, and began delivering the training to local personnel (including vocational education teachers) in sites across the state. During the same period, pilot testing was initiated for a new Teacher Performance Appraisal (TPA) system focusing on thirty-eight practices and personalized Professional Development Plans (PDPs). Principals of local schools have primary responsibility for the latter two activities.

Concepts and practices within the ETT model and the 30-hours training modules are considered applicable to teachers in regular classrooms in all instructional disciplines. The training program has been well received and, from all indications, effective in providing for improvement of classroom techniques.

However, the current ETT model and training package include few examples which vocational education teachers may use for direct application in hands-on or off-site teaching-learning situations (e.g., In addition to the teaching techniques and student learning experiences used in the regular classroom, the learning environment within vocational education classes may include hands-on laboratory and/or shop experiences, supervised on-the-job training, live projects or other production work activities, and an individualized approach to instruction). This project is the first year of a three-year

project funded by the Division of Vocational Education and being conducted by Wake County Schools. The ultimate outcome is to assure that vocational teachers have access to vocational education companion training modules based on the ETT model in the conduct of their specialized teaching responsibilities.

Project procedures include:

- .Developing an annotated resource list of existing training materials and strategies proved successful in enabling teachers to become proficient with the 38 practices identified in the TPA.

- .Establishing a procedure to determine the major instructional improvement areas (from the TPA practices) needed by vocational education personnel as identified in their Professional Development Plans. (The procedure will result in a computerized regional summary of personnel development needs for vocational personnel.)

- .Determining if existing training materials and strategies will meet training needs of vocational personnel.

- .Conducting and evaluating these practices as staff development activities.

- .Adopting, adapting, and/or developing training modules to fill the training gaps needed by vocational education personnel.

- .Fieldtesting the effectiveness of the training modules in providing the appropriate type and level of training to vocational education teachers.

II. H. Other - Secondary

1. How FY1986-87 Fiscal Allotments to LSAUs Contributed to Improving Programs

LSAU No.	LSAU Name	Allotment	LSAU No.	LSAU Name	Allotment	LSAU No.	LSAU Name	Allotment
010	Alamance	\$35,467	340	Forsyth	\$43,768	690	Pamlico	\$43,768
011	Burlington	31,694	350	Franklin Co	51,314	700	Pasquotank	52,824
020	Alexander	23,393	351	Franklinton	39,995	710	Pender	55,088
030	Alleghany	39,995	360	Gaston	43,768	720	Perquimans	44,523
040	Anson	50,560	370	Gates	43,768	730	Person	50,560
050	Ashe	53,578	380	Graham	39,995	740	Pitt	66,407
060	Avery	45,277	390	Granville	54,333	750	Polk	27,921
070	Beaufort	51,314	400	Greene	46,032	751	Tryon	27,921
071	Washington	51,314	410	Guilford	43,768	760	Randolph	34,713
080	Bertie	54,333	411	Greensboro	43,768	761	Asheboro	15,847
090	Bladen	59,615	412	High Point	36,222	770	Richmond	54,333
100	Brunswick	62,634	420	Halifax	64,143	780	Robeson	70,935
110	Buncombe	54,333	421	Roanoke Rapids	52,824	781	Fairmont	48,296
111	Asheville	39,240	422	Weldon	49,051	782	Lumberton	55,842
120	Burke	35,467	430	Harnett	60,370	784	Red Springs	48,296
130	Cabarrus	35,467	440	Haywood	54,333	785	St. Pauls	44,523
132	Kannapolis	24,148	450	Henderson	44,523	790	Rockingham	35,467
140	Caldwell	39,995	451	Hendersonville	21,884	791	Eden	39,240
150	Camden	35,467	460	Hertford	53,578	792	Western	39,240
160	Carteret	52,824	470	Hoke	53,578		Rockingham	
170	Caswell	47,541	480	Hyde	49,051	793	Reidsville	35,467
180	Catawba	30,940	490	Iredell	39,995	800	Rowan	35,467
181	Hickory	23,393	491	Mooresville	21,129	801	Salisbury	16,602
182	Newton	15,847	492	Statesville	24,903	810	Rutherford	50,560
190	Chatham	23,393	500	Jackson	45,277	820	Sampson	55,088
200	Cherokee	49,805	510	Johnston	64,143	821	Clinton	43,768
210	Chowan	46,032	520	Jones	39,995	830	Scotland	56,597
220	Clay	42,259	530	Lee	46,787	840	Stanly	36,222
230	Cleveland	46,787	540	Lenoir	52,824	841	Albemarle	21,129
231	Kings Mt.	39,240	541	Kinston	49,051	850	Stokes	46,787
232	Shelby	35,467	550	Lincoln	35,467	860	Surry	52,824
240	Columbus	63,388	560	Macon	45,277	861	Elkin	33,958
241	Whiteville	48,296	570	Madison	54,333	862	Mt. Airy	37,731
250	Craven/ New Bern	60,370	580	Martin	57,351	870	Swain	46,787
			590	McDowell	40,750	880	Transylvania	33,203
260	Cumberland	64,143	600	Mecklenburg	0	890	Tyrrell	44,523
270	Currituck	41,504	610	Mitchell	41,504	900	Union	39,995
280	Dare	21,129	620	Montgomery	45,277	901	Monroe	24,903
290	Davidson	43,768	630	Moore	46,787	910	Vance	58,861
291	Lexington	24,903	640	Nash	60,370	920	Wake	39,240
292	Thomasville	21,129	641	Rocky Mt.	52,824	930	Warren	56,597
300	Davie	36,977	650	New Hanover	61,879	940	Washington	49,805
310	Duplin	63,388	660	Northampton	58,106	950	Watauga	49,053
320	Durham Co.	48,296	670	Onslow	64,143	960	Wayne	60,372
321	Durham City	40,750	680	Orange	32,449	962	Goldsboro	49,053
330	Edgecombe	52,824	681	Chapel Hill	32,449	970	Wilkes	56,599
331	Tarboro	45,277				980	Wilson	60,372
						990	Yadkin	50,562
						995	Yancey	46,034

2. How New Formula Allotments Contributed to Improving Programs

Program improvement funds are allotted to local education administrative units based on a weighed formula which includes the following factors: 1) concentration of low income families and 2) average daily membership in grades 7-12. The weighed formula ensures that more funds are allotted to local school administrative units located in economically depressed areas, than are allotted to those not located in economically depressed areas. The implementation of this formula has provided those local school administrative units with the greatest needs to make substantial improvements in vocational education programs through the purchase of additional equipment and instructional materials, to increase participation in staff development activities, and the expansion of programs to meet the particular needs of individuals located in the economically depressed areas of the state.

3. How Principles of Technology Contributed to Improving Programs

Principles of Technology is contributing to the improvement of programs by attracting more students into vocational education and providing the students with instruction in applied science. The course is designed as a foundation for future technicians in a wide range of technologies. It enables students to study the physical principles underlying modern technology. It is taught in 37 high schools to approximately 1,500 students in grades 11 and 12. The students perform lab experiments on up-to-date equipment and apparatus used by lab technicians as they are related to mechanical, electricity, fluid and thermal systems.

4. How Military/Education Activities Contributed to Improving Programs

See II. G. b.

5. How Follow-Up Report on Vocational Education Students Contributed to Improving Programs

Surveys of nearly 40,000 students who completed vocational programs in 1985-86 have been used by local and state personnel to evaluate the effectiveness of programs and to highlight those areas of specific programs where improvement is needed. Responses to questions dealing with the education and work status of these students in the year following completion of the course show the percentage of unemployment among this group and the percentage continuing their formal education beyond high school.

In those schools and local units where the unemployment rate of completers exceeds the county unemployment rate for all youths aged 16-19, that program is analyzed to determine the cause; improvement strategies are included in the local plan for vocational education.

Students rate their vocational program on usefulness in preparation for work and further education. The curriculum in vocational courses is examined to determine the relationship of survey responses to the course objectives and outcomes as established by the instructor.

Students indicate in the survey those knowledges and skills they wish they had learned more about. Local unit personnel use this as a guide for revising course content in the program areas to meet student needs.

The statewide summary data for each of the skills program areas has been used by state staff to highlight those local programs where technical assistance is needed and to indicate possible curriculum revisions at the state level.

The student follow-up data has been used in approximately 30 local units in 1986-87 to assess program strengths and weaknesses during the program review process. Strategies for overcoming the weaknesses are then included in the basic improvement plan. This plan must be reviewed annually by local personnel to determine their progress in achieving improvements that have been identified. See Table 3 for a sample of the statewide summary student follow-up data.

Employers were surveyed in 1987 to determine work quality, technical knowledge, and work attitude of 1985-86 completers. Reports of responses by program area in each local unit are returned to teachers and administrators of vocational programs in the local school administrative unit (LSAU).

These employer surveys are used in assessing the vocational programs during the program review process and form the basis for some of the improvements that are included in the basic improvement plan for the LEA. See Table 4.

6. How Dissemination of Data Contributed to Improving Programs

Data used for program planning, improvement, and evaluation is collected through the local administrative units and processed by the Vocational Education Information System Unit of the Division of Vocational Education. Reports of student enrollment, completer follow-up surveys, and employer surveys are disseminated to state staff, regional administration, and LSAU administration to improve vocational programs.

Data collected in September of each year reveals numbers of students enrolled in Grades 7-12 by state course number in the eight program areas. This is also shown by race, sex, and handicapping condition. This data is made available to local directors of vocational education, regional coordinators, and state level consultants. See Tables 5 and 6 for statewide enrollment totals for Grades 7-8 and for Grades 9-12.

This enrollment data is used in program planning, program review, and evaluation at the local level and in planning at the state level.

Responses to a survey of completers of vocational programs are collected in the spring of each year. Data collected in the survey reveals the work and education status of completers, the degree to which the vocational program prepared the student for work or further education, and who influenced most the student's decision regarding vocational program and career choice. The data collected also reveals the skills students wish they had learned more about, the hourly wage being earned by program completers, and the distance from the student's high school to the work site.

This completer data is reported for each local unit in the state along with statewide summary data. Summary survey reports of the local units can then be compared to the statewide totals. This data is used in making decisions related to curriculum revision. During the program review and improvement process this data is used to substantiate perceived strengths or weaknesses of local vocational programs. It is also used when planning local programs to identify those programs where completers can expect to find adequate job opportunities. See Table 3.

Data is collected from employers of completers of vocational programs to determine the quality of the student's work attitude, work quality, and technical knowledge. Employers are asked to compare the vocational completer with other initially hired employees without vocational training.

Employer follow-up data reported to local vocational directors, regional coordinators, and state staff is used by personnel, particularly at the local level, to evaluate the effectiveness of vocational programs in preparing students for entry-level employment. See Table 4.

7. How Vocational Education Program Evaluation Contributed to Improving Programs

Twenty-three local school administrative units participated in the program and administrative review process. The process included teachers and business representatives assessing their programs using pertinent data and thirteen standards. Local vocational directors assessed the administration of vocational programs by using six standards and input from teachers. Program areas and administration identified their strengths, weaknesses, and needed improvements based upon available data and technical assistance

from state staff. The LSAUs developed a five-year plan showing priorities and funds required to make local improvements. The plan became part of the local plan application and state accreditation.

Over 184 reports were reviewed by state. Typical improvements identified were: up-to-date equipment purchases, increased personnel development, and increased involvement of business/industry personnel with local programs.

8. How the Local Plan Process Contributed to Improving Programs

The local plan process by secondary eligible recipients provides a variety of checks and balances for improving programs.

Part I. A. 6., Program Improvement section of the Statement in the local plan states:

- a. The LEA will participate, when selected, in the evaluation of not less than 20 percent of the eligible recipients assisted by federal funds within the State in each fiscal year. (F) (Sec. 113 [b] [9] [C])
- b. A formal system of evaluation is conducted annually to determine how the programs meet their stated objectives, and are relevant to employment and occupational needs of students. Evaluation results are to be maintained in the local school administrative unit file designated by the superintendent and are used for improvement in programs. (S) (APA 2E .1608)
- c. An organized system for conducting follow-up studies to determine the effectiveness of the vocational instructional programs and guidance and counseling, is used by the LEA. Results are maintained in the school file designated by the principal and a compilation of all schools maintained in the office of the vocational director. Records and other information needed to carry out this function are maintained in the teacher's files. (S) (APA 2E .1608)
- d. The LEA has on file the findings of evaluations of programs operated in the LEA during the previous 1 year and 5 years. (S) (115C-154 [10])
- e. The LEA has the capacity to deliver the vocational education services based upon needs identified through assessments of the following: (F) (Sec. 113 [a] [3] [E])
 - (1) The current and projected occupational needs and the current and projected demand for general occupational skills within the State. (F) (Sec. 113 [a] [3] [A])
 - (2) The needs of students in order to determine how best to improve student skill levels in light of the State's occupational and skill requirements. (F) (Sec. 113 [a] [3] [B])

- (3) The special needs of disadvantaged and handicapped individuals for access to vocational education and vocational services in terms of labor market needs. (F) (Sec. 113 [a] [3] [C])
- (4) The quality of vocational education in terms of:
 - (a) The pertinence of programs to the workplace and to new and emerging technologies.
 - (b) The responsiveness of programs to the current and projected occupational needs in the state.
 - (c) The capacity of programs to facilitate entry into and participation in, vocational education and to ease the school-to-work and secondary-to-postsecondary transition.
 - (d) The technological and educational quality of vocational curricula, equipment, and instructional materials to enable vocational students and instructors to meet the challenges of increased technological demands of the workplace.
 - (e) The capability of vocational education programs to meet the needs for general occupational skills and improvement of academic foundations in order to address the changing content of jobs. (F) (Sec. 113 [a] [3] [C])

The aforementioned assurances are in keeping with local administrative procedures and/or board policies.

Superintendent

Chairperson, Board of Education

9. How Technical Committees Contribute to Improving Programs

The State Board of Education has approved operating procedures for secondary technical committees. A five-year curriculum plan has also been developed to identify when technical committees will be used to help develop inventory of tasks. Two technical committees have been identified for the 1986-87 school year, one for masonry and another for business data processing. These committees will help develop up-to-date curriculum for local program use.

10. How Vocational Student Organizations Contributed to Improving Programs

Over 78,129 students in 1,875 chapters were active members in one of the eight vocational student organizations. In addition to local activities designed to improve students' citizenship, leadership, employment skills, and job skills, regional and state activities were offered. Regional and state competitive events were held to assess competencies developed in vocational courses and to recognize outstanding individual and group achievement. About 2,000 business/industry representatives assisted with these events. They also donated supplies and materials.

Attendance at VSO regional and state workshops was:

Regional leadership workshops	20,480
Regional competitive event conference	17,976
State leadership conference	11,905

Through dues and contributions, vocational student organizations gave 26 educational scholarships totaling \$14,450.

11. How Production Work Activities Contributed to Improving Programs

Production work activities in all skill development programs provide a realistic evaluation of student competency achievement and proficiency. The setting/environment is indicative of actual working conditions students will encounter in the business and industrial community after graduation and upon employment in the public or private sector. This training contributes to state-of-the-art skill development and program improvement.

The following program areas reflect the scope and magnitude of the production work concept:

AGRICULTURAL PRODUCTION - Producing of crops and animals within the school/land laboratory evaluates and reflects competency attainment.

AGRICULTURAL MACHINERY/EQUIPMENT/STRUCTURES - Assembling farm equipment for equipment dealers. Repairing tractors and equipment

for farmers. Laying out and constructing farm buildings provides competency evaluation and instant feedback for program improvement.

ORNAMENTAL HORTICULTURE - Producing and distributing greenhouse plants, designing, and implementing landscape plans. Landscape and plant trees and shrubbery for the houses built by the construction trades students.

FORESTRY - Producing, managing, and marketing forest products to ensure a comprehensive understanding and mastery of the industry.

BUSINESS AND OFFICE EDUCATION - Basic skills/competencies are developed through activities on business machines such as electronic calculators, electronic typewriters, microcomputers, and word processors. Students enrolled in Office Occupations II, Computerized Accounting Occupations II, and Business Data Processing Occupations II participate in the cooperative component of these courses.

Through cooperative methodology students utilize and further develop skills/competencies in part-time office positions in the business community.

12. How Cooperative Vocational Education Methodology Contributed to Improving Programs

During the regular school year 1986-87, 21,517 students were enrolled where the cooperative method of instruction was used; 9,367 students worked during the previous summer. These students worked 2,646,294 hours during the summer and 15,202,109 hours during the school year. They earned \$9,921,217 in the summer and \$57,700,624 during the school year. The total earned, \$67,621,841, represents approximately 10 percent of the total funds spent on secondary vocational education.

The average hourly wage was \$3.80. About 756 teachers, in agriculture, business and office, marketing, occupational home economics, and trade and industrial education coordinated the programs.

Cooperative vocational education continues to improve the business and industry partnership between the local school and community.

13. How State Fair Exhibits Contribute to Improving Programs

The Vocational Education State Fair exhibits are selected by regional chairpersons who serve on the State Fair Committee. The exhibits are model programs and represent each program area in vocational education (agriculture, home economics, health occupations, etc.). Each exhibit exemplifies the most recent technology available in that particular program area, e.g. competencies, content, instructional techniques, and

methods of transmitting instructional content through telecommunication equipment and electronic boards.

The exhibits are viewed by the general public, which includes teachers, administrators, students, parents, advisory committee members, business/industry representatives, and others who make recommendations for improvement of programs at the local level. During 1986-87, approximately 350,000 people viewed the exhibits.

Over the past several years, the Vocational Education State Fair Exhibit received either the Governor's or Commissioner's Award of Excellence which is the highest honor given for an educational exhibit.

14. How the State Vocational Education Planning and Coordination Committee (SVEPCC) Contributed to Improving Programs

During the six meetings of the SVEPCC, the following groups and agencies provided input and reaction necessary to improve coordinated state-level planning for vocational and vocationally related education:

Department of Community Colleges, Continuing Education; Department of Corrections, Adult Correction; Department of Administration, Council on the Status of Women; Department of Commerce, State Occupational Information Coordinating Committee; Department of Human Resources, Division of Youth Services; State Advisory Council on Vocational Education; Department of Public Instruction, Support Services; Department of Commerce, Economic Development; Department of Public Instruction, Division of Exceptional Children; Department of Human Resources, Division of Vocational Rehabilitation; Department of Natural Resources and Community Development, Division of Employment and Training; Department of Labor, Division of Education and Training; Department of Public Instruction, Division of Vocational Education; and the Governor's Education Advisor.

Major thrusts included reactions to the statewide vocational education study; the development and refinement of a document expressing each group/agency's primary mission, goals, and activities related to vocational education; and each group/agency sharing its ongoing and planning projects of interest to the others.

The vocational education study had wide-ranging implications, leading to four hearings with about 200 presenters, 1,200 participants, and over 270 newspaper articles.

The document developed was for the time span of the State Plan, and reflected those areas to be focused on by each group or agency. Through this document, each group better understood each other's perspectives and methods of operation.

The regular sharing of information of ongoing and planned projects of mutual interest consistently was highlighted by committee members as a consistent benefit of the committee. This coordination was of benefit not only to state-level planning, but also to operations.

15. How Coordination with JTPA Contributed to Improving Programs

The coordination between vocational education and JTPA at the local school level during the current 1986-87 year has improved resulting in more effective programs and services for our disadvantaged youth. Also, at the local level, coordination between vocational education administrators and the Private Industry Councils has increased understanding of school programs.

Staff development activities for LSAU staff operating JTPA programs have been coordinated with SEA Vocational Education, JTPA and Dropout Prevention staff. Joint activities involve the development of an action plan, educating inter- and intra-agencies about JTPA, dissemination of the Governor's Coordination Criteria, review of Request for Proposals, and sponsoring of workshops. In addition, the director of the Division of Support Programs, which administers JTPA programs, serves on the VEPCC and is conscious of the need to plan and coordinate the functions of vocational education and JTPA.

The major JTPA projects which operated during PY1986 were the Extended School Day Programs, Dropout Prevention/Job Placement Centers, School-to-Work Transition Programs, and Project HELPs. Each of the projects have vocational components. Curriculum emphasizes pre-employment skills training which includes assessment, testing, and counseling; occupational career and vocational exploration; job search assistance; job seeking and keeping skills; remedial education; and labor market information. Referrals are made to vocational counselors and courses as appropriate. Many JTPA programs utilize the pre-employment skills competencies developed by vocational education. Job development and placement continues to be an integral component of all programs.

During the 1986-87 school year, there existed 133 Job Placement Centers, 36 Extended School Day Programs, 12 School-to-Work Programs, 10 Project HELPs, 18 Tryout Employment and 33 Entry Employment; serving a total of approximately 7,000 JTPA students, ages 14-21.

16. How Community-Based Organizations Contribute to Improving Programs

Local School Administrative Units, Community College institutions, and Community-Based Organizations (CBOs) were given the opportunity to apply for special grants to develop programs/services for dropouts, potential dropouts, disadvantaged and handicapped youth age 16-21. Ten (10) programs were funded for the 1986-87 fiscal year. Five (5) of the approved programs were

in cooperation with secondary school units and five (5) with post-secondary institutions. A total of 706 youth were served with the CBO programs. Outreach, counseling, assessment, prevocational, career intern, transitional and placement services were emphasized in these programs. Community-Based Organizations worked with various educational systems, organizations and agencies to encourage and assist special needs youth to increase their opportunities through further education and/or job training.

17. How Office of Civil Rights Reviews Contributed to Improving Programs

The method for selecting local school administrative units (LSAUs) to receive both on-site and desk reviews was revised to provide assistance to "worst-first" school units. Moving from a random selection procedure to a ranking procedure based on potential civil rights problems guaranteed that those units who may experience the most non-compliance issues would receive assistance first.

Targeting vocational enrollments in both race and sex, criteria was applied to student enrollments to identify areas of potential problems. Emphasis is placed on the identified program areas to break down the stereotyping enrollment patterns and to make additional information available to students of the opportunities in the non-traditional employment areas.

A comprehensive desk review instrument was created to provide those identified LSAUs who undergo desk reviews a guide by which they can determine any non-compliance issues through self-assessment. The results of the assessment must be reported to the Division of Vocational Education where technical assistance and monitoring services are provided.

These efforts have assured the State Educational Agency (SEA) that improved instruction in vocational education will be provided as a result of the technical assistance provided to vocational personnel. The critical areas identified as potential problems are eliminated and thereby results in stronger and improved vocational programs.

**1985-86 Completers
Duplicated Count**

MAIN LABOR MARKET STATUS OF COMPLETERS OF OCCUPATIONALLY AND NON-OCCUPATIONALLY ORIENTED VOCATIONAL EDUCATION PROGRAMS*	TOTAL RESPONSES AND PERCENTAGES					TOTAL COMPLETERS							
	Total Responses	% Employed Full-Time	% Employed Part-Time	% Military	% Not Employed, Seeking Part-Time Work	% Not Employed, Seeking Full-Time Work	% Homemaker	% Not Employed, Not Seeking Work					
All Regular Occupationally Oriented Programs	24,821	38%	25%	5%	6%	6%	1%	18%	44,453				
Agriculture Education	2,533	46%	26%	6%	6%	5%	0%	11%	4,597				
Marketing Education	2,172	42%	25%	5%	6%	6%	2%	16%	3,538				
Health Occupations Education	1,161	23%	28%	3%	6%	5%	2%	32%	1,634				
Occupational Home Economics	1,024	36%	20%	3%	8%	12%	3%	18%	1,684				
Business and Office Education	6,868	28%	28%	3%	8%	5%	2%	26%	11,560				
Trade and Industrial Education	11,056	44%	23%	8%	5%	6%	1%	13%	21,427				
Principles of Technology	7	29%	29%	14%	0%	0%	0%	29%	13				

[illegible][illegible]

For comparison statewide average for youth ages 16-19 was 17.1% in 1986.

#Special separate programs and cooperative education programs for disadvantaged and handicapped students.

*Represents data from all 140 local education agencies.

Table 4

1987 EMPLOYER FOLLOW-UP

EMPLOYER RATINGS OF OCCUPATIONALLY
AND NON-OCCUPATIONALLY ORIENTED
VOCATIONAL EDUCATION COMPLETERS

1985-86 Completers

1987 EMPLOYER FOLLOW-UP														
1985-86 Completers		TOTAL RETURNS												
		% Above Average - Quality	* Rating on a Scale of 1 - 5	Work Attitude - % Above Average	* Attitude Rating on 1 - 5 Scale	Technical Knowledge - % Above Average	* Technical Knowledge Rating 1 - 5 Scale	Overall Rating - % Above Average	* Overall Rating on 1 - 5 Scale	PREPARATION: % Better Prepared	% About the Same	**Rating on 5 Point Scale	Decision on Hiring - Yes	
EMPLOYER RATINGS OF OCCUPATIONALLY AND NON-OCCUPATIONALLY ORIENTED VOCATIONAL EDUCATION COMPLETERS	All Regular Occupationally Oriented Programs	3995	79%	4.14	79%	4.17	74%	3.99	78%	4.08	51%	20%	4.35	42%
	Agriculture Education	322	78%	4.06	77%	4.10	73%	3.94	75%	4.00	53%	19%	4.41	39%
	Marketing Education	467	83%	4.24	82%	4.29	79%	4.10	84%	4.20	56%	19%	4.40	42%
	Health Occupations Education	177	83%	4.26	82%	4.28	79%	4.12	81%	4.18	52%	22%	4.40	36%
	Occupational Home Economics	170	74%	4.02	73%	4.06	70%	3.92	74%	4.00	43%	29%	4.10	35%
	Business and Office Education	1006	82%	4.22	82%	4.26	78%	4.08	83%	4.16	51%	16%	4.42	47%
	Trade & Industrial Education	1852	77%	4.08	76%	4.10	71%	3.92	75%	4.01	51%	21%	4.31	42%
Principles of Technology	1	100%	4.00	100%	5.00	0%	3.00	100%	4.00	100%	0%	5.00	100%	

54

#Special Non-Occupationally Oriented Programs	87	74%	3.89	70%	3.93	67%	3.73	66%	3.74	42%	19%	4.19	35%
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All Regular Non-Occupationally Oriented Programs													
Consumer and Homemaking													
Industrial Arts/Technology Ed													

*Rating Scale: 5=Very Good 4=Good 3=Average 2=Poor 1=Very Poor

**Rating Scale: 5=Better Prepared 3=About the Same 1=Less Prepared

#Special separate programs and cooperative education programs for disadvantaged and handicapped students.

Represe data from 131 of 140 local units

Table 5

VOCATIONAL EDUCATION ENROLLMENT - DUPLICATED COUNT
 VEIS 1 Grades 9 - 12 School Year 1986-87
 Statewide Program Totals

<u>Program Area</u>	<u>Total Enrollment</u>	<u>White</u>	<u>Black</u>	<u>A. Indian</u>	<u>Asian</u>	<u>Hispanic</u>
Agriculture	25,820	19,474	5,509	777	27	33
Business & Office Education	128,803	90,958	34,956	1,862	695	332
Marketing Education	18,195	12,598	5,297	192	52	56
Health Occupations	8,208	5,575	2,362	224	33	14
Occupational Home Economics	8,629	3,568	4,854	172	14	21
Trade & Industrial Education	59,229	43,076	14,960	858	219	116
Consumer Home Economics	49,829	27,543	21,064	1,017	106	99
Industrial Arts	19,747	13,838	5,433	338	84	54
Prevocational Education	6,498	4,169	2,122	133	50	24
Principles of Technology	429	329	85	3	8	4
Basic & Vocational Skills	3	3	---	---	---	---
Special Programs	<u>4,027</u>	<u>1,613</u>	<u>2,350</u>	<u>51</u>	<u>8</u>	<u>5</u>
TOTALS	329,417	222,744	98,992	5,627	1,296	758

Table 6

VOCATIONAL EDUCATION ENROLLMENT - DUPLICATED COUNT
 VEIS 2 7th and 8th Grades, School Year 1986-87
 Statewide Program Totals

<u>Program Area</u>	<u>Total Enrollment</u>	<u>White</u>	<u>Black</u>	<u>A. Indian</u>	<u>Asian</u>	<u>Hispanic</u>
Agriculture	195	153	40	---	2	---
Business & Office Education	3,924	2,725	1,141	9	39	10
Trade & Industrial Education	75	67	8	---	---	---
Consumer Home Economics	7,869	4,648	2,923	237	53	8
Industrial Arts	8,774	5,574	2,959	129	76	36
Prevocational Education	77,894	51,328	24,868	1,113	354	231
Basic & Vocational Skills	869	678	188	---	1	2
Special Programs	<u>579</u>	<u>367</u>	<u>209</u>	<u>1</u>	<u>1</u>	<u>1</u>
TOTALS	100,179	65,540	32,336	1,489	526	288

Table 7

1987 NUMBERS REPORT

Student Participation in Vocational Education 1984-85*

Total students in Grades 7-12	520,002
Total students in Grades 7-12 in vocational courses	333,786
Percent of students taking at least one vocational course	64.2%

Fiscal Expenditures 1984-85*

State/Federal	\$ 99,824,737	75%
Local	33,029,206	25%
	<u>\$132,853,943</u>	<u>100%</u>
Expenditure per student in vocational courses	\$398	
Expenditure per student in all school programs	\$2,575	
Current expenditures for all school programs	\$2,777,482,948	

Vocational Student Organizations 1985-86

	<u>No. Chapters</u>	<u>Members</u>
Future Farmers of America	246	16,240
Future Homemakers of America-- Home Economics Related Organizations	335	12,007
Future Business Leaders of America	273	11,935
Vocational Industrial Clubs of America	440	11,000
Distributive Education Clubs of America	304	9,636
Career Exploration Clubs of North Carolina	231	9,600
Health Occupations Students of America	127	4,424
American Industrial Arts Student Association	44	1,010
Totals	<u>2,000</u>	<u>75,852</u>

*North Carolina Public Schools Statistical Profile 1986

Table 7

Professional Staff 1985-86

Directors of Vocational Education	151
Vocational teachers & counselors	<u>6,061</u>
Total	<u>6,212</u>

Cooperative Work Experience 1985-86

<u>No. students</u>	<u>Hours</u>	<u>Wages</u>
<u>Regular School Year</u>		
18,993	13,203,570 (Average Wage Per Hour \$3.71)	\$48,973,725
<u>Previous Summer</u>		
8,161	2,265,777 (Average Wage Per Hour \$3.67)	\$8,322,948

Completer* Data 1984-85

Total Completers	46,889
Percent Employed full-time or part-time	61%
Percent continuing education full-time or part-time	25%

Comparisons:

Percent of vocational education completers not employed, seeking full-time work	6%
Percent of all youth 16-19 statewide not employed, seeking full-time work	14.8%

*Completer courses are those in a program sequence that have at least one prerequisite and that provide job skills training.

Table 7Program Area Course Offerings 1986-87

Trade and Industrial	98
Industrial Arts/Technology Ed.	30
Marketing	24
Business and Office	23
Agriculture	19
Consumer and Homemaking	16
Occupational Home Economics	11
Special Programs	7
Basic & Vocational Skills	4
Health Occupations	3
Vocational Development	2
Principles of Technology	2
	<u>239</u>

Special Populations Served in Vocational Programs Grades 9-12 1986-87

	<u>Limited English Proficient</u>	<u>Disadvantaged</u>	<u>Handicapped</u>
Agriculture	38	6,249	2,162
Business & Office Education	166	21,073	3,781
Consumer Home Economics	57	13,678	3,244
Health	16	1,667	311
Industrial Arts/Technology Ed.	27	4,109	1,608
Marketing	18	2,928	685
Occupational Home Economics	6	2,888	614
Vocational Development	6	1,882	731
Special Programs	11	2,109	1,428
Trade & Industrial Education	105	11,828	4,305
Principles of Technology	3	84	23
	<u>453</u>	<u>68,495</u>	<u>18,892</u>

Table 8

PART IB. COMPOSITION OF VOCATIONAL EDUCATION ADVISORY COUNCIL
(Indicate Number)*

Clientele Group Represented	Race and Sex								Total
	White		Black		Amer. Indian		Other		
	M	F	M	F	M	F	M	F	
Business									
Industry									
Labor									
Trade									
Technical									
Office									
Health									
Home Economics									
Agricultural									
Marketing									
Education									
Industry Hunters									
Related Agencies (Specify such as representatives of									
Exceptional Children, Voc. Rehab., Apprenticeship, etc.)									
JTPA									
Parents									
Others (Specify)									
Total									

*If an individual fits more than one category, indicate that person's duplication in parentheses in all but one block.

C. LOCAL ADVISORY COUNCIL ACTIVITIES AND LOCAL
COORDINATION WITH JTPA

Activities	Number of Times Fiscal Year This Activity Occurred			
	JTPA*	Council	Individual	Sub Group
Orientation Meeting(s)				
Review Occupational/Community Surveys (Job Needs) (Skills Required)				
Advise on Course Content (Relevance of Programs)				
Review of Student Placement Data				
Equipment and Facility Planning Recommendations				
Identification of Potential Vocational Teachers				
Identify Community Resources to Support Vocational Education Programs				
Review Evaluation Data				
Advise on Local Plan Development (a) Three-Year Plan				
(b) Annual Application				
Conduct Program Visitations in The LEA				
Conduct Program Visitations Outside the LEA				
Other (Specify)				

*Check involvement with JTPA in this column. Based on priorities in the Carl Perkins Vocational Education Act, it is recommended that a copy of the completed plan be sent to the Private Industry Council (PIC) in addition to appropriate JTPA involvement in the review of the draft plan as noted in the Assurances.

III. Consumer and Homemaking Accomplishments

A. Programs in Depressed Areas

The total Concentration of Low Income Families (CLIF), points of 42 or more are classified as being in the economically depressed category. The data is based upon the current Department of Commerce 1980 Census Study for Low Income Families. See Table 10.

Economically Depressed Areas (by Local School Administrative Unit)

Table 10

650 New Hanover	540 Lenoir County	580 Martin
770 Richmond	541 Kinston	220 Clay
990 Yadkin	330 Edgecombe	050 Ashe
440 Haywood	331 Tarboro	210 Chowan
150 Camden	030 Alleghany	460 Hertford
040 Anson	350 Franklin County	310 Duplin
390 Granville	351 Franklinton	890 Tyrrell
730 Person	710 Pender	720 Perquimans
700 Pasquotank	170 Caswell	780 Robeson
950 Watauga	370 Gates	781 Fairmont
610 Mitchell	100 Brunswick	782 Lumberton
560 Macon	070 Beaufort	784 Red Springs
060 Avery	071 Washington City	785 Saint Pauls
430 Harnett	740 Pitt	090 Bladen
960 Wayne	690 Pamlico	240 Columbus
962 Goldsboro	820 Sampson	241 Whiteville
980 Wilson County	821 Clinton	570 Madison
260 Cumberland	380 Graham	660 Northampton
500 Jackson	910 Vance	080 Bertie
670 Onslow	520 Jones	870 Swain
510 Johnston	470 Hoke	480 Hyde
830 Scotland	940 Washington	930 Warren
250 Craven/New Bern	200 Cherokee	420 Halifax
270 Currituck	400 Greene	421 Roanoke Rapids
640 Nash	995 Yancey	422 Weldon
641 Rocky Mount		

B. Support Services and Activities in Depressed Areas

In 1986-87, 27,843 students or 45% of the Consumer and Homemaking students were in the areas receiving funding for depressed areas. With this large percentage of students in depressed areas, attention was focused on basic living skills. The curriculum emphasizes consumer education, nutrition education, and interpersonal relationships. We identified curriculum to be used in the 1988 school year with The Program of Studies, Revised 1987 that emphasizes these issues.

Teachers in the depressed areas receive technical assistance from State Home Economics Education Consultants, Regional Coordinators, and Vocational Directors. In addition, each school system has a Home Economics teacher representative that serves on a Regional Leadership Council that meets three times a year with a State Staff Consultant to give input for statewide planning and receive information on statewide directions. This representative reports back to the other home economics teachers in the school system.

In planning FHA/HERO activities, attention is given to making all programs and project's available to all students. There is student and teacher representation from the depressed areas at the leadership workshops.

C. Programs in Non-Depressed Areas

The total Concentration of Low Income Families (CLIF), points of 41 or less are classified as being in the non-economically depressed category. The data is based upon the current Department of Commerce 1980 Census Study for Low Income Families. See Table 11.

Non-Economically Depressed Areas
(by Local School Administrative Unit)

Table 11

180 Catawba	292 Thomasville	110 Buncombe
181 Hickory	360 Gaston	111 Asheville
182 Newton	680 Orange	790 Rockingham
190 Chatham	681 Chapel Hill	791 Eden
760 Randolph	900 Union	792 Western Rockingham
761 Asheboro	901 Monroe	793 Reidsville
020 Alexander	410 Guilford	750 Polk
920 Wake	411 Greensboro	751 Tryon
130 Cabarrus	412 High Point	230 Cleveland
132 Kannapolis	600 Mecklenburg	231 Kings Mountain
500 Lincoln	340 Forsyth	232 Shelby
800 Rowan	840 Stanly	530 Lee
801 Salisbury	841 Albemarle	850 Stokes
010 Alamance	280 Dare	810 Rutherford
011 Burlington	450 Henderson	630 Moore
120 Burke	451 Hendersonville	860 Surry
490 Iredell	590 McDowell	861 Elkin
491 Mooresville	300 Davie	862 Mount Airy
492 Statesville	320 Durham County	620 Montgomery
140 Caldwell	321 Durham City	160 Carteret
290 Davidson	880 Transylvania	970 Wilkes
291 Lexington		

D. Support Services and Activities in Non-Depressed Areas

In 1986-87, we served a total of 61,628 students in the Consumer Home Economics program with 55% living in non-depressed areas. Attention was focused on directing a Program of Studies, Revised 1987 to be implemented in 1988-89. All course competencies and curriculum will change in 1988. Teachers were inserviced on getting materials in order to make changes.

Schools received technical assistance primarily through Regional Leadership Council Meetings, FHA/HERO Proficiency Events, Program Reviews, and Curriculum Workshops. The State Home Economics Staff, Regional Coordinators, and Vocational Directors provided this technical assistance for home economics teachers. A Summer Vocational Workshop, drawing 550 teachers, was held for four (4) days on the new curriculum which gives special attention to integration of basic skills, elimination of sex bias meeting needs of those with Special Needs, and career orientation.

The student organization FHA/HERO held a Leadership Conference in all eight (8) regions, as well as a state meeting. Twenty-four Proficiency Events were held in all eight (8) regions, with student winners competing at a state event. Two hundred (200) students participated in the State Proficiency Events. Seventy (70) students and advisers participated in the National FHA/HERO Leadership Meeting.

Results and Accomplishments of Expending
Title II - Part A Federal Funds
VOCATIONAL EDUCATION OPPORTUNITIES
POSTSECONDARY

I. Vocational Education Opportunities Accomplishments

A. Handicapped

1. Number of handicapped receiving additional services in mainstream programs. (See Table 1)
2. Number of handicapped served in separate programs. (See Table 1)
3. Accomplishments in coordination with vocational rehabilitation and other programs.

The community and technical colleges of North Carolina are committed to serving the vocational education needs of the adult handicapped population of the state. The first step in providing these services is to identify the target population. This identification is accomplished by:

- a. Voluntary self identification through applications, registrations, and other reporting forms.
- b. In-house assessment through testing, counseling, and instructor feedback.
- c. Referrals from Vocational Rehabilitation, JTPA, and high schools.
- d. Cooperative agreements with Vocational Rehabilitation, Departments of Social Services, Community Action Agencies, and Mental Health Clinics.

The second step in providing the services to the handicapped population is assessment. A variety and sometimes combination of methods are used to assess the handicapped population. Some of these methods are:

- a. Standardized instruments such as the Meyers-Briggs type indicator, etc.
- b. Interviews, observations, and information passed from referral agencies.
- c. Computer software to diagnose students' learning problems.

Once handicapped students have been identified and their needs assessed, they are served by a variety of activities. These include but are not limited to:

- a. Supplemental specialized counseling.
- b. Development of placement tests in Braille.
- c. Tutorial, interpreter, notetaker, signer, reader, and typing services are provided.
- d. Referral services and pamphlets are produced that list services that are available to the handicapped.
- e. Equipment such as large print typewriters, TDD's for the deaf, and tape recorders are routinely provided to the handicapped, plus special parking and elevator keys are provided where required.

4. Description of successful activities that served handicapped.

One of the most successful activities for the handicapped on many North Carolina community college campuses is individual counseling. The handicapped students meet individually with a counseling specialist for the handicapped and also with the Coordinator of Academic Support. Through these interviews, interests and needs are identified. The student is referred to either personal, employment, or career counseling. Their abilities are determined by entrance testing, conference with a counselor, or through cooperative efforts with Vocational Rehabilitation, Social Services, Services for the Blind, and other human service agencies.

One counselor is designated as the counseling specialist for handicapped students. This counselor works on a one-to-one basis with students determining what special equipment or services are needed. The Coordinator of Academic Support provides the individual student necessary tutors, notetakers, or interpreters. The counselor initiates conferences with each instructor and advisor, checks on student progress at mid-quarter, at the end of the quarter, and visits each instructor at least twice each quarter.

Supplemental services and activities are done on an "as needed" basis. Not all students who are handicapped need or even want special consideration and services. Most handicapped students are mainstreamed into regular classes. The task of the counselor and advisor is to find those who need special help and to provide it. Students with alcohol and drug related problems are referred to the Student Assistance Program.

I. B. Disadvantaged - (Excluding LEP)

1. Number of disadvantaged individuals receiving additional services in mainstream programs. (See Table 1)
2. Number of disadvantaged individuals served in separate programs. (See Table 1)

3. Description of successful activities that served disadvantaged.

a. Outreach - Identification - Assessment

A sizeable portion of the individuals who come to community colleges in North Carolina are economically disadvantaged. Those who are most in need are identified through a variety of referral systems. Many are identified through optional student information forms provided at registration. Others are referred through social services agencies, the Employment Security Commission, JTPA, community action agencies, and similar groups. Some students are referred for special services by the institutions' financial aid offices. The standards for eligibility are established by the referral agency, Pell Grant application, or by comparing family income to the current OMB poverty guidelines.

Assessment is a vital step in the overall vocational education program, especially for the disadvantaged population. Services used to assess interests, abilities, and special needs include: preadmission conferences, career and academic guidance, personal counseling, financial assistance counseling, and academic testing. Instruments used for assessment of academic and other needs include admissions placement tests, the Career Assessment Inventory, and the Meyers-Briggs type indicator. Students are often referred to service provider agencies who, when appropriate, conduct further assessment. For example, some students are referred to the Employment Security Commission for GATB testing.

b. Supplemental Services

Supplemental counseling, tutoring, and special remedial programs are provided by the institutions to the economically and educationally disadvantaged student to assure their success. Most institutions have well-developed learning resource centers and developmental studies programs. These programs have been emphasized as part of the North Carolina community college system's commitment to an open door that enables the student to start from where he or she is and progress through a continuum of basic skills to skill training and productive employment. Community college financial aid offices match needy students with a variety of scholarships and loans. Local sources fund some scholarships, and the state of North Carolina has created a scholarship fund which makes over 1,000 grants annually. Pell grants, business/industry scholarships, JTPA, and other assistance are also made available to eligible students.

4. Achievements in serving the disadvantaged students in terms of improved access and services provided that contribute to success in the program.

A number of excellent models for providing services to disadvantaged students have been developed. Most institutions have counseling centers, and provide tutoring, referral to outside agencies, and administration of interest inventories as well as counseling. Tutorial lab and peer tutoring approaches have been successful in helping students with academic and other difficulties. One especially good model involves an "early referral system" for students experiencing academic and other difficulties. Instructors refer the students to counselors who discuss the problems with them and determine means of solving their problems.

Another model involves a tracking system to monitor the attendance and progress of the disadvantaged students in an attempt to assure successful completion of their programs. Another unique and valuable service to assure the success of the disadvantaged vocational education student is the establishment of a "writing center" which provides assistance with specific composition problems.

Often economically disadvantaged students are unable to stay in school without employment. Some institutions arrange cooperative education plans. Others provide job placement services or help the students secure services through the Employment Security Commission. Several institutions have been able to provide funds for transportation, child care, and other costs through foundation funds, linkages with JTPA, or special single parent/homemaker funds.

Linkages with JTPA and county Departments of Social Services are valuable aids in improving the access of the disadvantaged to programs. A number of local coordination efforts are being made. JTPA programs in the community college system are coordinated through a central office in the Department of Community Colleges. This office works closely with the vocational education coordinator. Both work through an interagency coordinating committee to develop productive relationships with other groups.

I. B. Limited English Proficient (LEP)

1. Number of LEP individuals receiving additional services in mainstream programs. (See Table 1)
2. Number of LEP individuals served in separate programs. (See Table 1)
3. Description of successful activities that served LEP.

The majority of the adults receiving assistance under vocational education act LEP provisions in North Carolina are concentrated in or around the large military bases that are located here in North Carolina. Vietnamese, Hispanics, and Koreans are the three most prevalent of the LEP populations, though other nationalities are represented.

Identification, outreach, and recruitment of those eligible for LEP assistance is accomplished by self-identification, peer referral, or recruiter/counselor referral. Several institutions use native language speakers to recruit and refer individuals for assistance. Others are identified during the regular registration process. Supplemental services were provided the LEP such as:

- a. English as a second language class.
- b. Tutoring in native language.
- c. Translations of technical texts into native language.

4. Achievements in serving the LEP students.

The North Carolina system of community and technical colleges enrolled 3,797 LEP individuals during the 1986-87 fiscal year. The majority of these students were enrolled in English as a second language program, which when successfully completed enabled the student to succeed in vocational education. Special interpreters, tutors, and remedial programs also contributed to improved access and success in vocational education programs for LEP individuals.

The heavy concentration of LEP individuals around the large military bases in North Carolina is due in part to the large number of military dependents of foreign nationalities. Another factor in that concentration is the fact that a large number of the foreign born spouses of military personnel sponsor other members of their families or friends to immigrate into the United States.

I. C. Adults In Need of Training and Retraining.

1. Achievements in serving adults who need training or retraining.

North Carolina has one of the largest and most comprehensive postsecondary vocational education systems in the nation. The primary mission of the system has always been the delivery of technical and vocational programs and basic education to adults. With 58 institutions serving over 82,000 full time equivalent enrollments in occupational programs each year, the North Carolina community college system is a model for postsecondary vocational education.

A majority of the students in both curriculum and extension programs are adults who have been out of high school for several years. The average age is 30, and a majority of students are working part- or full-time.

The community college system has been very successful in retraining adult workers through many types of programs, and this success has been a major factor in North Carolina's economic growth. The existence of an accessible, low-cost, high quality system of community and technical institutions is a major drawing card for business and industry, and the state's program for attracting industry through customized training efforts is a model that has been studied and duplicated by other states.

2. Coordination activities with the JTPA and the private sector.

The North Carolina community college system has a history of coordination with the private sector. The majority of the members of the State Board of Community Colleges are from the private sector. Occupational curriculum programs are required to have advisory committees with private sector members. At the state level a recent series of meetings drew together private sector leaders from across the state to discuss the future of each of twelve industries, and the role of community college training in their futures. This information is being used in policy making and planning.

Businesses have donated over \$9 million in usable equipment over the last five years. Several private sector companies have also supported the system by helping to keep instructors up to date. For example, IBM offered updating sessions on electronics for instructors from institutions across the state.

Coordination with JTPA is supported by a state-level technical assistance staff who help institutions establish and operate quality programs. JTPA funds are often used in conjunction with vocational education and other funds to support skills training for the disadvantaged through special classes or mainstreaming of eligible participants. JTPA dislocated worker funds have been combined with vocational education and other funds to offer programs developed for the workers of several major plants which have closed.

At the state level, the vocational education coordinator and the JTPA coordinator work together closely. The state level interagency coordinating committee of the Job Training Coordinating Council is another mechanism for insuring that the programs are complementary.

I. D. Single Parents and Homemakers

1. Number of single parents and homemakers served at secondary level. (See Table 1)
2. Number of single parents and homemakers served at postsecondary/adult level. (See Table 1)
3. Achievements in providing services to both populations.

The increasing numbers of single parents and homemakers in the population, and the fact that they are often in need of skills training to enter or reenter the workforce, has led a number of institutions to target special advertising to this group. Extra efforts have also been made to establish referral mechanisms with agencies and community groups which serve these individuals. Institutions typically work with the county departments of social services, the county commissions on the status of women, and women's centers. Another important referral source is the institutions' own developmental studies programs which have been placing more emphasis on a continuum of learning from basic literacy through skills training.

Most institutions use a voluntary self-identification referral form to identify students in this and other target groups. Through self-referral, instructor and counselor identification, and specific contacts with department heads in programs enrolling a high percentage of female students, institutions establish a clearer picture of the number of students who meet the definition of single parent or homemaker. Several institutions reported that 20 percent of their students qualified.

The size of this population led a number of institutions to develop specialized recruitment, counseling, and support services to meet the needs of these students as a group, in addition to the individualized assessment and counseling services being offered. The provision of extra support services seems to be a key in insuring the success of these students who are often under significant stress.

Child care is identified as one of the most significant needs of this population. Funds are set aside for grants to institutions to develop innovative programs for offering child care to single parents and homemakers to facilitate their entry into or completion of training programs. Approximately 200 children of single parents were given care in programs which often included special support services and assistance with other costs such as transportation. Child care is receiving increased attention at the state level as a problem preventing many people, especially single parents, from obtaining the training they need to be independent.

4. Special delivery methods used that are unique and/or effective.

Several recipients of single parent funds held specialized workshops to focus on the problems of single parents. One was entitled: "The Single Parent as Student: Discipline Under Stress." It featured sessions on time and financial management, legal affairs, building support networks, and parenting skills. Similar workshops were held at other institutions, often as a special service to parents whose children were receiving care through the institutions' child care programs.

The child care programs feature different delivery mechanisms depending on the needs and resources of the local communities. Several entered into agreements with local private care providers to take children of qualified students. The college paid the cost or a portion of the cost depending on the ability of the student to pay. Others provide care on campus. Some were able to establish relationships with the county departments of social services for referral and to arrange for county funds to pay child care costs when funds were available. A substantial majority of the students involved in these programs asserted that they would be unable to attend school without the assistance provided through the program.

5. Method of determining the greatest financial need and number served who met the criteria.

Recipients have established relationships with JTPA and departments of social services. Their established processes for determining eligibility are also frequently used by institutions to determine financial need. Pell grant applications and interviews with financial aid counselors are also used. Numbers served with significant financial needs are not now available, but research has shown that the majority of our students are from lower income groups, and we believe that most, if not all, are beset by significant financial need.

I. E. Students in Non-Traditional Programs (Sex Equity)

1. Achievements and services provided to reduce sex bias and sex stereotyping in vocational programs.

The sex equity grant program served approximately 2,200 participants at twelve institutions with an approximate cost of \$230,000. Some of these grants provided career exploration and introduction to training options in a community service format. Others provided funds to mainstream students in non-traditional curriculum areas with support services to increase chances of successful completion. Funds were provided for individualized counseling, books, transportation, and day care.

Participant evaluations suggest that the sex equity program meets a heretofore unexpressed need of North Carolina women. The bulk of the participants have flocked to short courses, workshops, and seminars on career development and training. Favorable responses to these myriad programs are evident in the hundreds that show up sometimes for a single program to deal with issues and problems in their quest for self-realization.

In the nontraditional curriculum program, success is evidenced by retention rates ranging from 75% to 85%. The students assert that the day care, transportation, and instructional materials provided by the grant make the difference between their attending or not. Further, a single coordinator for each program provides both an emotional and practical "center of gravity," thereby motivating students to do well in nontraditional programs (participating schools almost all report a 3.0 grade-point average for these women). At one school, instructors outside the program have observed the quality and the enthusiasm of the students and have subsequently requested inclusion in the next year's sex equity project.

A serendipitous effect of the sex equity program is the bonding together of grant coordinators across the state. They are currently forming a long-range planning committee to address the long-term missions and goals of the program, the program's long-term products, the continued excellence of its products, and the relationship of the program with official policy-making bodies.

2. Cooperative efforts with the private sector.

Cooperative education programs, which enable a student to work and earn while learning a skill, is often a component of the non-traditional programs. In addition, a number of occupational programs have been specifically designed to fill employer needs. For example, in one area several electronics companies have joined to sponsor classes in wafer fabrication, optical fiber processing, and operator training. Through the Private Industry Council and JTPA, women have been especially targeted for slots in these training programs. Classes are also offered at worksites. Other successful activities have included coordinated efforts involving chambers of commerce or apprenticeship programs.

I. F. Criminal Offenders in Correctional Institutions

1. Numbers served through programs in correctional institutions.
(See Table 1)
2. Names, addresses, and presidents of institutions participating:

Caldwell C.C. & T.I.
PO Box 600
Lenoir, NC 28645
(704) 728-4323
Dr. Eric B. McKeithan

Randolph T.C.
PO Box 1009
Asheboro, NC 27203
(919) 629-1471
M. H. Branson

Central Piedmont C.C.
PO Box 35009
Charlotte, NC 28235
(704) 342-6633
Dr. Ruth G. Shaw

Sandhills C.C.
2200 Airport Road
Pinehurst, NC 28374
(919) 692-6185
Dr. Raymond A. Stone

College of the Albemarle
PO Box 2327
Elizabeth City, NC 27909
(919) 335-0821
Dr. J. Parker Chesson, Jr.

Vance-Granville C.C.
Box 917
Henderson, NC 27536
(919) 492-2061
Dr. Ben F. Currin

Davidson County C.C.
PO Box 1287
Lexington, NC 27292
(704) 249-8186
Dr. J. Bryan Brooks

Wake T.C.
9101 Fayetteville Road
Raleigh, NC 27603
(919) 772-0551
Dr. Bruce I. Howell

James Sprunt C.C.
PO Box 398
Kenansville, NC 28349-0398
(919) 296-1341
Dr. Carl D. Price

Wilkes C.C.
PO Box 120
Wilkesboro, NC 28697
(919) 667-7136
Dr. David E. Daniel

3. Types of programs provided and achievements

The \$209,915 in Carl D. Perkins money was awarded through a competitive grants process to eight community college institutions. This funding enabled them to enhance an already existing, comprehensive program of corrections education coordinated with the North Carolina Department of Corrections. The funds made it possible for 1,479 additional inmates to enroll in one of the following programs:

1. Basic/Remedial Education
2. Drafting (Architectural) and Design Technology
3. Carpentry
4. Horticulture
5. Masonry
6. Small Engine Repair
7. Welding
8. Food Service Management
9. Business Administration
10. Air Conditioning and Refrigeration
11. Electrical
12. Microcomputer Operations

Individual tutoring and counseling, in addition to individualized instruction, helped achieve the goals of the program. Degrees, diplomas, and certificates were awarded to inmates who completed the programs.

4. Additional funds expended for criminal offenders from the Carl D. Perkins Act, such as Title II-A, disadvantaged, or Title II-B.

No additional Carl D. Perkins Act funds were expended for criminal offenders in vocational education.

Results and Accomplishments of Expending
Title II - Part B Federal Funds
Vocational Educational Program Improvement, Innovation,
and Expansion

II. Program Improvement Accomplishments

A significant program improvement accomplishment for postsecondary vocational education is the Curriculum Improvement Projects.

The goal of the Curriculum Improvement Projects (CIP) is to provide inservice training and curriculum development to update a curriculum or curriculum area. The selection of the proposed curriculum areas is based upon a review of each occupational category, i.e., health occupations, business occupations, transportation occupations, etc. Department of Community College program coordinators for the occupational categories review the status of curriculums in the categories and the impact being made on the curriculums by technological, sociological, and economic changes. One or two curriculum titles, or cluster of related titles, are designated in each occupational category as curriculum areas that would benefit from a curriculum improvement project.

A community college institution with a quality curriculum program is funded to be a resource and to provide leadership in organizing the other institutions to address the identified problems that are impacting on the target curriculum area. The strategy for addressing the problems is to use staff development activities to update the instructors' knowledge, particularly in the area of technology, and to update the content of the curriculum and continuing education courses.

Four colleges were funded to implement curriculum improvement projects for a two year period, 1985-87.

Central Piedmont Community College -- Automotive Mechanics
Guilford Technical Community College -- Electronics
Randolph Technical College -- Commercial Art/Graphics
Western Piedmont Community College -- Criminal Justice

These four colleges used a variety of activities to address the particular problems identified for their curriculum areas:

- Training of instructors, hands-on and theoretical, in the technology of their subject area and in instructional techniques related to their area.
- Development of instructional materials such as courses, instructional modules, a competency-based curriculum manual, curriculum models, an instructional planning guide, and video tapes.

- Purchase and distribution of instructional material and equipment.
- Review of curriculum and continuing education offerings.
- Consultation with individual schools.
- Development of a software lending library.
- Development of recruiting aids (video tape and brochure).
- Review of textbooks, software, equipment and other instructional aids.

A review of the goal of the curriculum improvement project concept, and an evaluation of the first year's activities of the four projects indicated that the goals of the curriculum improvement projects were met. Of the colleges invited to participate in the first year of workshops and conferences, average participation levels for the four projects were 63%, 77%, 80%, and 83%.

In an evaluation of the projects, participating instructors stated that the projects benefited them most by:

- increasing their knowledge of technological advances,
- providing information on how to incorporate technological advances into their instructional program, and
- giving them a chance to meet and talk to other instructors in the same subject area.

These instructors indicated that the effect of the projects on them as instructors was to cause a change in:

- curriculum course content,
- instructional material/resources, and
- classroom/lab teaching methods.

These benefits and changes address directly the aforementioned goals of CIP.

In addition, the instructors indicated in the evaluation that the effectiveness of CIP lies in its structure: a project designed to meet the specific needs of community college instructors, and a project that is long term and continuing. Only a long term, continuing, inservice activity that is tailored to a community college instructor's specific needs can increase an instructor's technical knowledge enough so that the new technical information can be incorporated into the content of the curriculum and continuing education courses and effect changes in instructional methods and materials.

The presidents and deans of the institutions that received CIP grants were asked to evaluate the projects. When asked about the benefits of CIP to their own institution's program, they cited the same benefits as the instructors did plus:

- increased visibility and prestige with industry, students, and other schools,
- equipment funds,
- time and funds to do in depth work on curriculum improvement, and
- satisfaction in assisting with a project that has a statewide impact.

The drawbacks that they saw to having a CIP were:

- ineligibility of funded institution to receive other categorical funds during the two years of the grant,
- temporary loss of instructors who became CIP directors, and
- project has to end.

Another significant program improvement accomplishment for postsecondary vocational education is the enrichment and upgrading of high priority curriculum programs.

The following grants were approved to enrich and upgrade high priority curriculum programs during 1986-87.

INSTITUTION	CURRICULUM	AMOUNT OF FUNDING
Beaufort County Community College	Automotive Mechanics (V-003)	\$40,000
Bladen Technical College	Automotive Mechanics (V-003)	30,005
Carteret Technical College	Respiratory Therapy Technology (T-091)	40,000
Catawba Valley Technical College	Furniture Drafting & Product Development (T-042)	39,650
Central Carolina Technical College	Automotive Mechanics (V-003)	39,564
Craven Community College	Business Computer Programming (T-022)	39,997
James Sprunt Community College	Automotive Mechanics (V-003)	39,991
Martin Community College	Electrical Installation & Maintenance (V-018)	40,000
McDowell Technical College	Automotive Mechanics (V-003)	35,715
Mitchell Community College	Automotive Mechanics (V-003)	40,000
Pitt Community College	Secretarial - Executive (T-030)	40,000
Roanoke-Chowan Technical College	Automotive Mechanics (V-003)	40,000
Rockingham Community College	Machinist (V-032)	40,000
Sampson Technical College	Secretarial - Executive (T-030)	40,000
Sandhills Community College	Industrial Electronics (V-045)	32,101
Technical College of Alamance	Criminal Justice - Protective Service Technology (T-129)	36,549
Wayne Community College	Machinist (V-032)	39,929
Wilkes Community College	Criminal Justice - Protective Service Technology (T-129)	40,000
	TOTAL	\$696,501

Each institution that was approved for a grant submitted a written report as of June 30, 1987. The reports describe enriching and upgrading accomplishments and the use of the grant funds. The following types of accomplishments were reported:

- Additional instructors were employed;
- Staff development activities were conducted;
- Instructors attended conferences;
- Instructors had release time to visit industry;
- Instructors had release time to work on curriculum;
- Equipment was purchased;
- Instructional materials were purchased;
- Curriculum programs were revised and updated;
- New courses were developed;
- Course documents were developed;
- Program promotion materials were developed;
- Enrollment increased in some programs;
- Computers and software purchased; and
- Curriculum programs were evaluated.

