

Connecticut General Assembly



Program Review Committee Report On Secondary Vocational Education In Connecticut

March, 1974

PROGRAM REVIEW COMMITTEE
REPORT ON
SECONDARY VOCATIONAL EDUCATION IN CONNECTICUT

March, 1974

Connecticut General Assembly

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March, 1974

LETTER OF TRANSMITTAL

TO: HONORABLE MEMBERS OF THE GENERAL ASSEMBLY

We are pleased to submit to you the third evaluation Report prepared by the Program Review Committee.

This Report, we believe, presents the reader with a comprehensive view of the strengths and weaknesses of our state's vocational education system. We have attempted to point out those programs which are working efficiently and effectively, and should be continued in their present form. We have also noted some programs which are in need of improvement, and recommended various changes which we believe will make these programs more responsive to the needs of the citizens of Connecticut.

The members of the Program Review Committee are hopeful that this Report will serve as a useful tool in the continuing effort to improve vocational education in Connecticut.

Respectfully submitted,


Senator Dave Odegard
Co-Chairman


Representative John Groppo
Co-Chairman

Table of Contents

LETTER OF TRANSMITTAL

INTRODUCTION.....	1
I. HISTORICAL CONTEXT OF VOCATIONAL EDUCATION IN CONNECTICUT.....	4
II. ENABLING LEGISLATION.....	9
III. PROGRAM DESCRIPTIONS.....	11
IV. STATE POLICY DIFFERENCES IN PROGRAMS AND IMPLICATIONS OF THOSE DIFFERENCES.....	14
V. STATE POLICY DIFFERENCES IN ENROLLMENT AND FUNDING OF DIFFERENT SYSTEMS.....	18
VI. POLICY DETERMINATION.....	22
Basic Elements of a Good Policy System.....	22
Information Available-Planning Tools.....	24
VII. IMPROVING PRESENT SYSTEM OF POLICY DETERMINATION.....	30
Graduate Follow-up.....	31
Labor Projection.....	31
Admissions Standards.....	32
VIII. PLANNING SYSTEM.....	34
The Federal Plan.....	36
The State Plan.....	39
Data Comparisons Between the State and Federal Plans.....	42
Examples of Discrepancies.....	43
Data Comparisons Between State Plans Issued in November, 1972, and November, 1973.....	46
Group Inputs to the Planning Process.....	52
Improving the Planning System.....	55
IX. THE ROLE OF THE GENERAL ASSEMBLY - ENHANCING LEGISLATIVE CAPACITY.....	57
X. PROPOSAL FOR LONG-TERM STUDY OF VOCATIONAL EDUCATION IN CONNECTICUT.....	59

XI. PROPOSALS FOR NEW DIRECTIONS IN VOCATIONAL EDUCATION.....	62
Shared-Time Programs.....	63
Enrollment Modification.....	64
Satellite Schools.....	65
Cooperative Programs.....	67
Proprietary Schools.....	67

APPENDIX

Agency Response.....	1a
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Introduction

The Program Review Committee selected the secondary vocational education program of the State of Connecticut for review because the Committee believes that this aspect of the State educational program is of major importance both for the future of our young people and the future of our economy.

In the Committee's opinion, the question of whether a non-college bound high school student can find gainful employment upon completion of his high school studies should be of utmost concern to members of the General Assembly and to the State Department of Education.

Because there is only a finite amount of money that may be spent on vocational education, we also feel there must be a definitive method of determining if vocational education programs are effective. Without such methods, we will not be able to make judgments regarding the best utilization of the available funds.

We also approached this study with a deep concern for the continued well-being of Connecticut's economy. The Committee is aware of the growing need for skilled, well-trained technicians among the State's business and industrial community. The Committee realizes that the availability of highly skilled and well-trained technicians will have a direct effect on the continued health of Connecticut's highly industrialized economy.

It is the Committee's opinion that the State education system must be prepared to make a positive contribution towards alleviating the skilled labor shortage in Connecticut. We expect the education system to be ready

to act as the instrument for reducing the ever-increasing flow of unskilled and unemployed graduates from our high schools.

SCOPE OF STUDY

The following pages contain a report on the Committee's investigation into the overall effectiveness of the administration of the State program of secondary vocational education by the Division of Vocational Education of the Connecticut State Department of Education.

The Division's efforts in secondary education may be divided into two administrative areas. First, the Division, through its Bureau of Vocational Technical Schools, administrates directly sixteen regional vocational-technical schools. Second, the Division administrates and coordinates a program of indirect support for vocational education in all Local Education Agencies (LEAs).

Since these two systems constitute the Division's major responsibilities in secondary education, they are, for the purpose of this study, the two major concerns of this Committee.

REVIEW PROCEDURE

This six month study of secondary vocational education involved on-site interviews with over fifty regional vocational-technical and local school staff members, including superintendents, principals, directors, guidance counselors, and teachers. Individual discussions were also held with representatives of Connecticut business and industry, administrators of proprietary schools, and members of teachers' organizations primarily

concerned with vocational education in this State.

Numerous schools were visited, vocational educational facilities were inspected, and vocational classes were observed. In addition, several hundred pages of testimony were taken by the Committee at a public hearing open to interested citizens and educators.

The Committee conducted a detailed written survey of all fifteen operational regional vocational-technical schools, requesting each school director to provide pertinent statistical data, policy statements, and subjective observations regarding the operation of his school.

A similar survey was directed to principals of thirty selected local high schools across the State. These schools represented a carefully selected sample based on 1970 census material and constituted a random sample within each of three categories: Urban, suburban (included in census standard metropolitan statistical area but not part of a major city), and "other" (which by definition includes rural). These three categories were weighted by total 1970 population for the State and resulted in a "mix" of ten urban, fourteen suburban, and six "other" high schools. In addition, a random sample of junior high school guidance counselors were surveyed in order to obtain their views and opinions on the operation of vocational education in the State.

A thorough review of comparative data from other states regarding their vocational education efforts was conducted. This review included direct information from a number of individual states, extensive material from the Education Commission of the States, located in Denver, Colorado, and a detailed

review of the pertinent comparative data on all fifty states contained in an unpublished study prepared for The National Advisory Council on Vocational Education.

In addition, numerous documents, reports, and memoranda from the Division of Vocational Education were studied and interviews were held with personnel both in the Division of Vocational Education and in the Department of Education. Furthermore, pertinent State and Federal legislation was reviewed and analyzed.

The Committee encountered complex problems in its review of the State administration of vocational education. But we feel that our attention to this area of the Connecticut educational system was timely and worthwhile. We believe that the members of the General Assembly and the citizens of Connecticut will find the conclusions and recommendations contained in this report thought-provoking and revealing. This report is essentially a call for action. A call which we earnestly hope all people interested in good government and superior education will hear and act upon swiftly.

Historical Context of Vocational Education in Connecticut

In examining any system it is helpful to understand the intent of those who developed it, the historic background, the legislation which enabled the system to develop into its current form, and its composition today. In the case of the vocational education system in Connecticut, the original intentions of the General Assembly concerning educational opportunities are set down in the General Statutes of Connecticut. The General Assembly has mandated that " ... the educational interests of the state shall include, but

not be limited to, the concern of the state (1) that each child shall have for the period prescribed in the general statutes equal opportunity to receive a suitable program of educational experiences ..."* The General Assembly placed the responsibility for these interests with the State Board of Education and included as an interest " ... vocational education ..."

Having stated the educational interests of the State and the right of each child to educational experiences, the General Assembly further mandated that "educational and vocational programs [are] to be conducted without discrimination. All educational, counseling, and vocational guidance programs and all apprenticeship and on-the-job training programs of state agencies, or in which state agencies participate, shall be given to all qualified persons, without regard to race, color, religious creed, sex, age, national origin or ancestry. Such programs shall be conducted to encourage the fullest development of the interests, aptitudes, skills, and capacities of all students and trainees, with special attention to the problems of culturally deprived, educationally handicapped, or economically disadvantaged persons ..."

These legislative mandates show that the General Assembly is not merely interested in education, but in providing equal educational opportunities to all Connecticut children without discrimination.

It is reasonable to expect that the educational system in Connecticut would develop along the lines of the interests of the State and the intent of the General Assembly. Over the years, the importance of vocational education

* Connecticut General Statutes, Title 10, Chapter 163, Sec. 10-4a.

** Connecticut General Statutes, Title 10, Chapter 163, Sec. 10-4.

*** Connecticut General Statutes, Title 4, Chapter 48, Sec. 4-61h.

as a part of the overall educational system has increased. One of the major reasons is the increasing role of technology, the resultant change in the structure of the labor force and the necessity for supplying more and more trained workers for this force.

These technological changes occurred quite rapidly in the United States; Connecticut was among the first states to experience large-scale technical and industrial growth. As early as 1808, Connecticut law included statutes concerned with industrial training. Another hundred years passed, however, before legislation providing for the funding of trade schools was implemented. The first "State trade education shops" were established in Bridgeport and New Britain in 1910.

Much of the credit for establishing trade and industrial education in Connecticut must go to Charles D. Hine, the State Commissioner of Education from 1883 to 1920, and to businessmen and manufacturers such as Howell Cheney. These men gave early encouragement and guidance to the fledgling vocational education programs. These programs were closely related to existing systems of apprenticeships; all of them stressed shop skills and gave little emphasis to general education. In addition, several concentrated on training for local industries (hat making-Danbury, textiles-Middletown, Manchester, and Putnam), in an effort to supplement the trade education given in factory schools.

Vocational-agriculture training programs developed along with trade and industrial education. The Manual Training School in New London, a leader in this field, set up its program in 1906. New Milford High School established vocational-agriculture training in 1912, the first public high school to do so.

In 1917, the United States Congress passed the Smith-Hughes Act (Vocational Education Act) which gave professional and financial aid to vocational-agriculture programs and provided a basis for state programs in vocational education in the public schools.

During the next forty years various Federal statutes were enacted which expanded vocational education opportunities.

During the Kennedy Administration, a panel of consultants on vocational education was appointed to evaluate vocational education in the light of technical change. This panel concluded that the current system of vocational education lacked sensitivity to changes that had occurred in the labor market, and to the needs of certain parts of the population. The Vocational Education Act of 1963, incorporating many recommendations from this panel, extended vocational education to those who were unable to succeed in regular vocational education programs due to a special problem (disabilities, etc.), and included a wider range of occupational categories. It also increased Federal expenditure four-fold, and provided funds for research in vocational education.

An outgrowth of the attempt to evaluate the relative success of the Vocational Education Act of 1963 was the establishment in 1966 of an Advisory Council on Vocational Education. The report of this Council was one of the basic sources for the compilation of a new vocational education bill known as the Vocational Education Amendments of 1968 (Public Law 90-576). Although described as "amendments," the 1968 legislation was, in effect, a replacement for all previous legislation except the Smith-Hughes Act of 1917. It broadened the scope of previous legislation and emphasized certain areas

that had been of secondary concern previously. It stressed the areas of planning and programs. Planning, especially long-range planning, at both the state and national level was a key element in the legislation, and an attempt was made to improve state planning and provide more Federal leadership.

The Vocational Education Amendments of 1968 created National and State Advisory Councils on Vocational Education. The National Advisory Council is composed of twenty-one members, appointed by the President, with expertise and experience concerning vocational education. The Council advises the Commissioner of Education on matters of administration and regulations, reviews and evaluates programs funded by this legislation, and examines possible duplications of programs (post-secondary and adult levels).

All states receiving grants under this legislation must have a State Advisory Council whose members are experts in vocational education, programs and needs. Each Council advises its State Board on policy matters, evaluates programs, and reports to the Commissioner and the National Council. The State Councils also provide varying amounts of input into the development of the State Plan for Vocational Education.

The State of Connecticut continued to advance in the area of vocational education with the help of this Federal legislation and enabling laws passed by the General Assembly.

In 1944, the trade schools added more courses in comprehensive subjects and work related areas. In this attempt to provide a fuller education, they became more like public high schools. At this time, they were also officially designated as vocational-technical schools. In 1947, the General Assembly passed

legislation enabling the State Board of Education to direct the operations of the vocational-technical schools through the State Department of Education. During the following years programs were begun for the construction of fourteen new buildings for teaching trade skills. Today there are fifteen regional vocational-technical schools in full operation, one in partial operation and two in the planning stages.

Public high schools also set up vocational courses during these years, beginning with programs in agriculture and home economics funded by the Smith-Hughes Act (1917). These courses, along with the programs at regional vocational-technical schools and regional vocational-agriculture centers, comprise the current system of vocational education in Connecticut.

ENABLING LEGISLATION

The major State Statutes currently governing vocational education in Connecticut are General Statutes 10-4, 10-8, 10-12, 10-64, 10-65, 10-66, 10-95, 10-96, 10-266f, and 10-286a. There are, of course, other Statutes affecting vocational students, because all vocational students are also public school pupils and citizens. There are some Statutes, dealing with other areas of legislation, which can be applied to vocational education as well, but the ones noted are the most applicable.

Several Statutes, which have already been described, deal with the educational interests of the State, educational opportunities, and discrimination. The remainder deal with vocational education in general.

Section 10-4 of the General Statutes of the State of Connecticut mandates

that responsibility for " ... general supervision and control of the educational interests of the State ..." including vocational education, be vested in the State Board of Education. In addition, Section 10-12 designates the State Board of Education "as the state board of vocational education for the purpose of cooperating with the Federal Government in the promotion and administration of vocational education."

Section 10-95 allows the State Board of Education to establish "public day and continuation schools ... for instruction in the arts and practices of vocations ..." Section 10-96 requires the State Board of Education to " ... establish standards under which it will approve town operated vocational schools ..." and requires evaluation of these programs.

Section 10-64 concerns the establishment of vocational-agriculture centers "in conjunction with [the] regular public school system." Section 10-65 describes grants for these centers and Section 10-66 gives the State Board of Education the authority to regulate them.

Section 10-8 requires state licensing of proprietary schools ("private schools for trade instruction and special occupational training").

Programs designed to "... prepare students and out-of-school youth for occupational opportunities ..." are funded under Section 10-266f. Evaluation of these programs is required by Section 10-266i. Grants for facilities used for occupational training are described in Section 10-286a.

Evaluation of vocational and occupational training programs as described above (Sections 10-64, 10-65, 10-66, 10-95, 10-266f, and 10-286a) are required

by Sections 10-96 and 10-266i. The evaluation required, however, is very general as criteria are not specified.

PROGRAM DESCRIPTIONS

The historical development of vocational education, aided by the statutes discussed above, has resulted in the current system of vocational education in Connecticut. This system contains a variety of facilities and presents to the student an assortment of programs. The most intensive vocational programs are found in the regional vocational-technical schools.

The Division of Vocational Education of the Connecticut Department of Education operates fifteen regional vocational-technical schools with a secondary school enrollment of about nine thousand students. The schools offer training in over thirty types of work, ranging from aeronautical drafting to welding. Other programs cover such diverse areas as barbering, plumbing, electronics, printing, and home economics.

In addition to technical training, the regional vocational-technical schools provide comprehensive high school courses in English, Mathematics, and the Sciences and other subjects. A student completing the course receives a high school diploma which also certifies competency in a technical field.

By 1980, the number of regional vocational-technical schools is expected to grow to eighteen; one in Milford will be operating at that time and two more are planned for Enfield and Groton.

More than two thousand students are currently receiving agricultural

training at seventeen vocational agriculture centers associated with comprehensive local or regional public high schools. Animal husbandry, ornamental horticulture, farm management, forestry, and wildlife and natural resources conservation are some of the areas covered by the courses. This variety enables students to prepare for careers not only as farmers, but as residential or business landscapers, florist's assistants, and other related areas.

In addition to the more specialized programs established by the vocational-technical schools and vocational-agriculture centers, there is a wide variety of basic and middle level training available at local and regional high schools. These programs are broader in scope and have more depth than the industrial arts and home economics courses usually identified with public school vocational education.

High school vocational training can be broken down into five basic areas:

(1) Business and office education; (2) health occupations; (3) home economics for gainful employment; (4) distributive education; and (5) trade and industrial work. Work experience programs have also been set up to enable the student to gain working practice in his vocational area.

Currently, over thirty thousand secondary students are taking business courses in local and regional schools. These programs encompass basic secretarial and clerical skills. They include courses in business machines, data processing, and business law, as well as stenography and typing.

There are five basic health occupation programs in the local public schools. Today, the largest of these is the nurses' aide program. Programs

are also run for students interested in careers as medical laboratory assistants, psychiatric aides, animal technicians, and radiologic technicians.

Current home economics courses have progressed into areas beyond the cooking and sewing instruction designed for future homemakers. Local public schools have established programs to prepare students for employment in such fields as food management and food service (including such vocations as meat cutter and chef), clothing management, care and guidance of children, and home furnishings.

Over seventy Connecticut public high schools provide training for students interested in jobs involving distribution and sale of goods and services. About three thousand students are currently enrolled in these courses. Distributive education programs include courses directly related to distribution and marketing, actual work experience, and a regular school curriculum.

Trade and industrial training is not the sole property of the regional vocational-technical schools. A growing number of public high schools are also administering programs in these areas. They are attempting to make this type of training available to the student who is unable or uninterested in attending one of the regional technical schools which generally have an over-abundance of applicants. These programs, however, are not nearly so sophisticated as those in the vocational-technical schools, since the high schools lack the extensive facilities and specialized faculty of the State supported regional schools.

Despite these disadvantages the public schools are able to provide programs in such areas as auto mechanics, graphic arts, welding, electronics assembly,

drafting, and other trades.

As programs and facilities vary so do the State policies involved. The Program Review Committee has found that basic differences exist between the regional vocational-technical school programs and those in the Local Education Agencies. While in some instances these differences are to be expected, in other cases it would seem that the educational interests of the State are not being served.

STATE POLICY DIFFERENCES IN PROGRAMS & IMPLICATIONS OF THOSE DIFFERENCES

There are a number of significant differences between vocational education programs at the LEA level and vocational education programs in the technical schools.

Programs offered at the technical schools are generally more complex and sophisticated than those offered at the LEA level. While the majority of vocational programs available - and the vast majority of graduates - at the LEAs are in the business and office education area, the majority of programs - and the vast majority of graduates - at the technical schools are skilled in trade and industrial work. The eleven trade and industrial programs offered at the LEAs had a total of 304 graduates in 1971, while the twenty-four trade and industrial programs at the technical schools graduated 1544. In addition, the trade and industrial programs at the LEAs generally teach a single skill, such as minor tune-up, while the technical schools attempt to train students as all-around technicians, such as auto mechanics.

The State can be justifiably proud of the facilities and equipment

available at the technical schools. Although rapid progress in technology means that many types of industrial equipment are rendered obsolete in short periods of time, every effort is made to train students on the same type of equipment that they will use on the job.

The amount of time students spend in vocational courses varies between the two systems. Vocational-technical students spend approximately fifty per cent of their total class time in "shop" courses for three years. (The freshman year at the technical schools consists of an "exploratory" program that merely serves as an introduction to various trades, rather than vocational training in specific trades). Most vocational programs in the LEAs are limited to the last two years of high school, and the training is far less intensive. While business education students will spend up to one-third of their school day in "vocational" courses, students enrolled in an auto-servicing course may spend as little as an hour a day in vocational classes.

Programs which are offered at the technical schools cannot be "duplicated" with State funding at the LEAs. According to the Division of Vocational Education, " ... the State Department of Education makes every effort to avoid duplication of trade and industrial programs in the local high school if such programs are available in a regional vocational-technical school."*

The major question is what is meant by "available." From extensive interviews with local school officials, the Committee has determined that "available" in the regional vocational-technical school is interpreted by the Division of Vocational Education to mean "offered" at the regional vocational-

* Letter to David J. Novack, Research Analyst, Program Review Committee, from Joseph Murphy, Associate Commissioner and Chief of Vocational Education, dated December 27, 1973.

technical school. Even when many more students apply for admission to a particular vocational-technical school program than can be admitted, it is the Division's policy not to fund a duplicate program at the Local Education Agency (LEA) level.

The reasons for the adoption of this policy were at one time valid. First, it was felt that duplication of programs at the vocational-technical and LEA levels would be an unnecessary expense to the State. It did not seem prudent to pay for two programs when one consolidated program would suffice. Also, it was felt that the duplication of programs could result in training too many workers in certain trades.

However, these reasons have become a good deal less compelling in recent years. The number of qualified students applying to the technical schools and the number of skilled workers needed to keep the Connecticut economy growing have both increased considerably. Not all the qualified students who apply to the technical schools can be admitted, and not enough skilled workers to meet the needs of the Connecticut economy are being trained. For example, less than half of the students who applied for admission to the fifteen vocational-technical schools in 1971 could be accommodated.

School principals and superintendents interviewed by the Committee, are frustrated by their inability to obtain funds for duplicate programs when large numbers of qualified and interested students are turned down by the technical schools every year. The local schools have very little to offer those students who are intent upon a trade or industrial career. A number of educators complained bitterly that students who could be "turned on" by

vocational-technical school training are "lost" when such training is denied them due to a lack of space. School officials expressed concern that students who want and need complex trade/industrial training simply are not being accommodated adequately in the local high schools.

According to the Graduate Follow-Up Report published by the Division of Vocational Education, graduates of the technical schools receive an average starting salary of \$2.74 an hour, as compared to \$2.15 an hour for LEA vocational education graduates. The more complex trades taught in the technical schools appear to pay higher wages than the trades taught at the LEAs.

In addition, graduates of the technical schools are given preference over other applicants for job openings in many Connecticut businesses. According to a survey conducted at the Committee's request by the Connecticut Business and Industry Association, some employers equated technical school graduates to workers with two years of practical experience. Other employers first informed the technical school in their area of any openings in their firms.

One characteristic which both systems have in common is the dedication of the teachers and administrators involved in vocational education. Each individual we talked with showed a sincere interest in vocational education and a desire to help young people reach their full potential through the learning of a trade.

Recommendations:

- (1) THE DIVISION OF VOCATIONAL EDUCATION SHOULD INCREASE OPPORTUNITIES IN VOCATIONAL EDUCATION, SPECIFICALLY AT THE LEVEL OF THE LOCAL EDUCATION AGENCIES.

- (2) THE DIVISION OF VOCATIONAL EDUCATION SHOULD RESEARCH THE POSSIBLE BENEFITS OF DUPLICATING VOCATIONAL-TECHNICAL SCHOOL, PROGRAMS IN LOCAL EDUCATION AGENCIES, AND, WHERE SUCH DUPLICATION WOULD INCREASE EDUCATIONAL OPPORTUNITIES, THE DIVISION SHOULD ACT APPROPRIATELY.

STATE POLICY DIFFERENCES IN ENROLLMENT AND FUNDING OF DIFFERENT SYSTEMS

Approximately 85,000 students are enrolled in vocational programs in the LEAs. The vast majority of these students are female. State funding for these programs is about \$400,000 per year for local high schools, and \$800,000 per year for the vocational agriculture centers.

There are approximately 9,000 students enrolled in the vocational-technical school secondary programs. About eight-six per cent of these students are male. State funds for operating these technical schools amount to approximately \$14 million a year.

A number of groups have expressed concern over the question of minority and female representation in the technical schools. Their concern stems from the fact that many minority group members and females are unemployed or under-employed because of their lack of technical skills. The admission of more females and members of minorities to the technical schools may help to reduce the high level of unemployment and under-employment in these groups.

Females are substantially under-represented in the vocational-technical schools. Their percentage in these schools at the secondary level is about fourteen point two per cent of the enrollment. However, it is important to note that female students are highly concentrated in the beauty culture and

fashion design programs - eighty-six per cent of the secondary female students enrolled in the vocational-technical schools are in one of these programs. There are no males at all enrolled in these two trade areas.*

Some vocational-technical schools are unfortunately instrumental in preserving traditional male-female stereotypes. One technical school recruiting brochure currently in use shows a "boys' program" and a "girls' program" for each grade level. Eleventh grade boys take Physics I, Geometry, and Blueprint Reading, while eleventh grade girls study Pattern Drafting/Clothing, Homemaking, Art, and Typing. Such rigid programming has no place in the modern technical school.

A study of vocational-technical schools prepared for the Division of Vocational Education in 1971 by Professor Richard Whinfield of the University of Connecticut found that "[t]he schools are by nature male-oriented."** Three schools reported that they currently have no female secondary students. When the director of one of these schools was asked why there were no females in his school, he explained that the school had no "facilities" (lavatories) which could be used by female students.

According to a survey prepared by the Connecticut Commission on Human Rights and Opportunities***, minority groups at the technical schools constituted eight per cent of the total enrollment. This figure is slightly lower than

* Program Review Committee, Survey VE III (Regional Vocational-Technical Schools), November, 1973.

** Whinfield, Richard W., A Study of the Characteristics of Students who Sought Admission to Connecticut Regional Technical Schools in 1971, University of Connecticut, March 1973, p. 16.

*** Connecticut Commission on Human Rights and Opportunities, Enrollment Pattern Survey of Connecticut Vocational-Technical Schools by Race and Sex, October 1973, passim.

the minority population of the State - nine point two per cent as reported in the 1970 census. Minority students were concentrated in five inner-city schools, which contained eight-one per cent of the total minority enrollment.

Statistics collected by the State Human Rights and Opportunities Commission show that females are not admitted to the technical schools in the same ratio as they are represented in the State population (fourteen per cent of technical school students are female, while fifty per cent of the State population is female). However, Professor Whinfield's study shows that females are admitted to the technical schools in approximately the same proportion as they apply to them.* Because of ingrained ideas concerning "traditionally male" and "traditionally female" careers, it appears that many prospective female students are not even applying to the technical schools.

Recommendation:

- (3) THE DIVISION OF VOCATIONAL EDUCATION MUST ENSURE THAT EVERY CONNECTICUT STUDENT, MALE OR FEMALE, HAS AN EQUAL OPPORTUNITY TO PARTICIPATE IN ALL TYPES OF VOCATIONAL AND TECHNICAL EDUCATIONAL PROGRAMS FOR WHICH HE OR SHE IS QUALIFIED.

In addition to questions about opportunities for females, the number of students enrolled in each system and the funding levels of the respective systems greatly affect the influx of skilled workers into the Connecticut economy and the performance and quality of vocational-technical educational efforts.

Because many trades are taught only at technical schools, and only a relatively small number of students can be admitted to them, there will

* Whinfield, loc. cit.

always be many students whose desire for vocational training cannot be met. These students may elect to pursue a less technical trade at their local high schools, or they may simply give up the idea of learning a trade and remain unskilled.

At a time when there exists the dual problem of high unemployment among unskilled and semi-skilled laborers, and a desperate need of Connecticut businesses and industries for highly skilled technicians, new methods for training more skilled technicians must be found.

The level of State funding for the two systems is very uneven. A decision - conscious or unconscious - has been made by the State Department of Education to concentrate vocational education efforts at the vocational-technical schools. This has come to mean that students who want to train for highly technical careers are served well if they are able to enroll in the vocational-technical schools, and are served poorly or not at all if they are not admitted.

Considering the limited funds available, Local Education Agencies are doing an excellent job of training students for employment in a variety of businesses and trades. Additional State funds would allow the LEAs to expand their vocational offerings and would permit more students to benefit from trade education. Such an expansion would also serve the needs of Connecticut business and industry.

Recommendation:

- (4) THE GENERAL ASSEMBLY OF THE STATE OF CONNECTICUT SHOULD INCREASE STATE FUNDING TO VOCATIONAL EDUCATION PROGRAMS OF THE LOCAL EDUCATION AGENCIES THROUGH SUCH GRANTS AS THOSE MANDATED IN TITLE 10, CHAPTER 172, SECTION 10-266f OF THE GENERAL STATUTES OF CONNECTICUT.

Policy Determination

The Division of Vocational Education does not articulate a "policy," as such, for its activities. A picture of the Division's policy can only emerge by examining how the Division has been operating in recent years and how current funding is allocated. As mentioned earlier, the apparent "policy" of the Division of Vocational Education involves funneling most of the moneys provided by the State into the system of vocational-technical high schools.

It is not the purpose of this section of the report to suggest the most advantageous or desirable ways that State moneys earmarked for vocational education could be spent. The major ramifications of present spending policies have been discussed earlier in the report. Rather, it is a major objective of the Program Review Committee to examine the procedures and mechanisms which are utilized by the Division of Vocational Education in formulating the policies that govern how State moneys will be utilized. The relevant questions are: Who makes the decisions? How are they made? What inputs are fed into the decision-making process? How can we tell if the decisions were wise ones?

BASIC ELEMENTS OF A GOOD POLICY DETERMINATION SYSTEM

Program planners generally believe that a good system of policy formulation or decision-making will encompass three basic elements:

1. A meaningful and workable plan;
2. a well-functioning, information system;
3. a relevant evaluation format.

These three fundamental management tools are essentially related and represent concepts which are quite simple. A good plan sets forth (1) what is to be accomplished during the coming year, (2) how it is to be accomplished, and (3) the means by which we can determine how well it is accomplished. Thus, a plan should articulate definite and well defined goals or "objectives" to be reached, then spell out various "activities" which must be performed in order to achieve the goals, and finally set forth fully explained "measures of effectiveness" which will show how well the objectives were met.

For example, a charitable organization might decide to promote a fund-raising concert. The goal, or "objective," might be set at \$1,000. Various "activities" necessary for achieving the "objective" could be formulated: A hall to be hired, a band to be contracted, tickets to be printed, and poster, radio and newspaper advertising to be arranged. Afterwards, a good information or monitoring system will feed into the evaluation of the project. Did tickets sell better in grocery or department stores? Which organization members sold the most tickets? Could posters or tickets have been printed more cheaply? By monitoring this type of information, the organization will be able to profit by both the strengths and the weaknesses of its operation and plan the event more successfully the following year. The evaluation phase of the project, if relevant information is processed, will generate much more data than whether or not the \$1,000 was raised.

The case above is an over-simplified example of the inter-relationships among planning, information systems, and evaluation. The system of policy formation is obviously more complex in an area such as vocational education.

The Federal Government and the Budget Division of the State Department of Finance and Control require a modified "management by objectives" approach to planning, by spelling out the goals, objectives, and activities for each of their programs. Increasingly, citizens across the nation are demanding meaningful accountability of publicly-funded operations which provide public services. The desire to improve the accountability of government and give the General Assembly and the citizens of Connecticut more relevant information has prompted the Program Review Committee to focus upon the Information and Planning Systems as the main linkage to program evaluation and, ultimately, the key to the elusive answer of the eternal question: "What are we getting for our money"?

INFORMATION AVAILABLE - PLANNING TOOLS

The Division of Vocational Education makes use of a number of planning tools to develop its policies concerning vocational education.

The Division annually publishes, in booklet form, statistics on graduates of vocational programs in Connecticut schools. According to the Foreword in the Graduate Follow-Up for 1971, "... This report is distributed throughout the state in order to help vocational educators to more effectively plan new programs and improve present program offerings."

The Graduate Follow-Up Report, contains statistical data on vocational graduates. Statistics are reported in the following manner:

Distributive Education

(1)	Total No. of Graduates (2)	Entered Armed Service (3)	Continued Training in Full-Time School (4)	Status Unknown (5)	Other (6)	Available for Employment (Col. 2 minus, 3, 4, 5, and 6) (Col. 8 plus 11, 12, and 13) (7)	Employed In Occupation for Which Trained or in Related Occupation		Mean Hourly Wage (10)	Unrelated Occupation (11)	Part Time (12)	Unemployed (13)
						Number (8)	Percent (9)					
Secondary												
Ansonia High	19	0	7	0	0	12	7	58	1.94	4	0	1
Bethel High	15	2	6	0	0	7	7	100	2.17	0	0	0
Bloomfield High	26	4	8	9	0	5	3	60	—	2	0	0
Branford Sr. High	21	2	5	0	0	14	11	79	2.08	3	0	0
Bridgeport (Bassick High)	7	2	0	0	0	5	5	100	2.40	0	0	0
Bridgeport (Central High)	11	0	2	0	2	7	4	57	2.53	0	2	1
Bridgeport (W. Harding High)	18	0	3	3	0	12	11	92	2.57	0	0	1
Danbury High	32	0	8	0	1	23	23	100	2.05	0	0	0
Derby High	46	1	15	0	0	30	27	90	2.05	2	1	0
East Hartford High	9	0	4	0	0	5	5	100	2.15	0	0	0
East Hartford (Penney High)	53	5	17	0	1	30	30	100	2.15	0	0	0
Enfield High	4	0	0	3	0	1	1	100	1.95	0	0	0
Greenwich High	18	1	5	0	0	12	12	100	2.30	0	0	0
Groton (Fitch High)	46	5	15	1	7	18	13	72	2.02	4	1	0
Hartford (Bulkeley High)	15	1	9	0	0	5	3	60	2.11	2	0	0
Hartford Public High	12	1	4	1	0	6	5	83	2.34	0	0	1
Hartford (Weaver High)	29	4	12	3	2	8	6	75	2.18	2	0	0
Manchester High	16	2	4	0	0	10	10	100	2.02	0	0	0
Meriden (Maloney High)	13	1	2	0	0	10	8	80	2.11	0	1	1

Example of method of reporting graduate follow-up statistics.

Data for the Graduate Follow-Up Report is collected individually by 163 schools, colleges and other institutions which have State supported vocational education programs. Each school is responsible for devising its own method of data collection, and these methods vary quite widely from school to school. For example, schools even gather their data at divergent times during the year. They are required to report graduate follow-up data to the Division of Vocational Education every December. However, schools surveyed indicate data collection dates ranging from "January" to "November."

Obviously, students about to graduate will give markedly different responses about job waiting for them than those same students the following November, when asked if they have obtained work. Also, a graduate who has just started his job, and a more seasoned worker who has been employed on a similar job for six months (and possibly has been awarded his first raise) will, in most cases, receive different hourly wages.

The methods utilized by each of the 163 institutions supplying placement data to the Department create additional problems for program evaluation. Some schools reported that they conduct mail surveys of their graduates. Others use telephone canvassing, personal contact, or reports from former teachers as a means of amassing the necessary statistics. Whether data collected in such varying fashions can be accurately compared and evaluated is questionable.

A third problem stems from a lack of clarity in ED229, the State Department of Education form in which the institutions must report their vocational education placement data. Schools are asked to indicate the number of

students who are continuing their education, either in "field trained or related" or in "other fields." They are also required to report the number of graduates employed in "occupation trained," "related occupation," and "unrelated occupation" jobs.

However, neither ED229 nor the instructions accompanying it contain a clear definition of "related" and "unrelated" employment mean. According to the Division of Vocational Education, "The person collecting the data makes the determination [of what the definition is]. This determination is subject to verification by the staff of the RCU (Research Coordinating Unit) of the Division of Vocational Education." The Division further explains that "standardized criteria are available to the Local Education Agencies (LEAs) through the use of the Dictionary of Occupational Titles and HEW Vocational Education Occupations Manual (OE-80061). Lists based on these documents are provided to the LEAs."

However, a review of these Federal documents and the Division's list shows that these reference works have only a limited application to the problem of determining what is meant by "related" and "unrelated" occupations. The list provided to the LEAs by the Division specifies job categories under the eight broad program areas reported in the Graduate Follow-Up Report (vocational-agriculture, distributive education, health occupations, etc.) Therefore, it may appear to the persons collecting the data that the Division would consider a student trained as an automobile mechanic who is now working as a barber to be employed in a "related" field since both jobs are covered in both trade and industrial education for vocational-technical schools. Obviously, each school must individually define the terms "related" and "unrelated."

One school may determine that a student who has been trained as an auto mechanic and who is now working as a salesman in an auto parts shop is employed in a "related" occupation, while another school may regard that same student as working in an "unrelated" field.

The graduate follow-up is beset with another problem; the department of Education has never made any attempt to verify any of the data received. According to the Division of Vocational Education, there is simply not enough staff available to permit even a small sample of the data to be checked. ED229 is only one of many forms which local school officials are required to fill out for the State Department of Education, and a number of school superintendents and principals interviewed admitted that they would not stake their reputations on the accuracy of their follow-up material.

As well as containing data which is difficult to compare, the Graduate Follow-Up Report does not answer what might be considered a pertinent question: How well do students advance in their chosen fields? While it is important to know what types of jobs vocational education students initially obtain upon graduation, it is equally essential to determine if present vocational education training is preparing young people to assume greater responsibility in their careers. The Graduate Follow-Up Report cannot answer this very basic question.

Finally, there is no available "control" data to match against vocational graduate statistics. No numbers have been collated on the types of jobs and wages obtained by "general" (non-vocational education and non-college prep) program graduates. It is important for educators to know if the relatively

high expense of providing vocational training for students is "worth it" in terms of the type of employment which they are able to obtain upon graduation. At present, there is no data available upon which to base this judgment.

The Program Review Committee concludes that because of major faults in the collection of graduate follow-up data, it is impossible to accurately determine the answers to even the most simple questions about vocational education graduates' successes in the job market.

However, the Division continues to use this document as an important tool in planning and evaluating its programs, and still submits it to all State legislators and to the Federal Government as evidence of the "progress" that has been made in vocational education.

The Connecticut Department of Labor annually prepares a Report on State Occupational Requirements for Vocational Education for the Division of Vocational Education. This report contains projections of the number of openings which will occur in particular job categories for the next five years. While Labor Department projections are valuable estimates of various annual job openings, they fail to take into account the number of persons who are already trained and will be available to compete for those positions; (e.g. women joining the work force after bearing children, skilled returning servicemen, persons who are skilled but for some reason have been unemployed). Unless school administrators take this factor into consideration when using these labor projections, their curriculum decisions may well be based on incomplete information.

The Division of Vocational Education also makes use of the Education Department's Research and Planning Unit and the Bureau of Education Management and Finance for statistical data in such areas as enrollments and teacher availability. The data attained through the Division's present sources of information has, in a number of cases, proven to be neither adequate nor reliable.

Information is annually collected for the Federal Government concerning the use of Federal funds. Its validity has been vigorously disputed by the Advisory Council on Vocational Education. The Advisory Council states in its 1973 Annual Report that "... data available from the Department of Education is grossly inaccurate and misleading."

The Program Review Committee concurs with the conclusions of the Advisory Council on Vocational Education concerning the lack of reliable and adequate information provided by the Division of Vocational Education. We have found that this lack of information presents serious problems in the development of vocational education programs that will meet the needs of both our young people and Connecticut business and industry.

Improving Present Systems of Policy Determination

Because an adequate information system is vital to the development of a workable plan and evaluation tools for the Division of Vocational Education, every effort must be made to improve the reliability and adequacy of data collected.

GRADUATE FOLLOW-UP

The document most obviously in need of improvement is the Graduate Follow-Up, since it is used both for planning purposes and as a major evaluation tool. Specifically, the Division of Vocational Education should develop a uniform time and method for collection of data about vocational education graduates. It should provide clear explanations of all terms in the instructions which accompany follow-up forms, and make a spot-check to verify that the statistics provided by the local schools are accurate. Additional information should also be gathered on the types of jobs and wages obtained by "general" program graduates for purposes of comparison with the statistics on vocational education graduates.

LABOR PROJECTION

The Annual Report on State Occupational Requirements for Vocational Education should be revised to include estimates of the number of persons who will actually be competing for jobs that will be open in various occupations. If the Division had access to this kind of information, its planning process would be a great deal more valid.

Recommendations:

- (5) THE DIVISION OF VOCATIONAL EDUCATION SHOULD CONDUCT A COMPREHENSIVE ANNUAL GRADUATE FOLLOW-UP. ALL TERMS USED IN THIS FOLLOW-UP (e.g. VOCATIONAL STUDENT, RELATED EMPLOYMENT, ETC.) SHOULD BE CLEARLY DEFINED. THE FOLLOW-UP SHOULD BE ADMINISTERED IN A UNIFORM MANNER AND AT A UNIFORM TIME THROUGHOUT THE STATE. A SYSTEM FOR VERIFYING THE DATA SHOULD BE IMPLEMENTED BY THE DIVISION OF VOCATIONAL EDUCATION, AND INFORMATION DERIVED FROM THIS FOLLOW-UP SHOULD BE COMPARED WITH SIMILAR DATA CONCERNING GRADUATES IN OTHER PROGRAMS.

- (5a) THE FINAL DESIGN FOR THIS FOLLOW-UP SHOULD BE SUBMITTED TO THE EDUCATION AND PROGRAM REVIEW COMMITTEES OF THE GENERAL ASSEMBLY FOR ULTIMATE APPROVAL OR DISAPPROVAL.
- (6) THE DIVISION OF VOCATIONAL EDUCATION SHOULD REQUEST, FROM THE DEPARTMENT OF LABOR, ACCURATE AND MEANINGFUL LABOR PROJECTIONS TO AID IN THE PLANNING PROCESS.

ADMISSIONS STANDARDS

Specific policy areas, such as admission standards and curriculum selection, are in severe need of reliable data revealing their successes or failures. For example, the administrators of each individual regional vocational-technical school are responsible for adopting their own admissions requirements. All schools must conform only to the broad guidelines contained in Bulletin #30 issued in September, 1971, by the Bureau of Vocational-Technical Schools of the State Department of Education. These broad requirements conform with criteria set forth in Sections 10-95-1 to 10-95-5 of the State Regulations on Admission of Students to State Vocational-Technical Schools.

These criteria are:

- (a) Successful completion of grade 8 or 9 and readiness for grade 9 or 10.
- (b) Physical fitness for the trade desired; (any handicap must not prevent the student from becoming employed).
- (c) Interest in vocational education.

Admission requirements vary greatly among the vocational-technical schools. While all schools require a test of some sort for admission, the

type of examination differs. Of the fifteen schools, twelve require an aptitude test, five give an intelligence test, and four give a reading test. In addition, one school requires a mechanical and abstract reasoning examination, and one gives a mathematics examination. The weight placed on the results of these tests also varies greatly from school to school. Some schools maintain a strong interest in a prospective student's past grades, and some look for high I.Q. scores. Others rely on indications of a student's interest, or recommendations from the sending schools. Six noted that they require a personal interview for admission. Some schools are experimenting with various admission standards to determine which would be best for them. At present, school administrators cannot avail themselves of any State Department of Education research data revealing which of the above criteria are the best indicators of a student's prospective performance at their technical school. The individual schools cannot be expected to have the facilities to conduct this type of complex and long-term research.

The relatively high attrition rates at the technical schools (approximately twenty-eight per cent, according to the Whinfield study*) show that present admission methods are not an accurate prediction of those students most likely to succeed in vocational-technical schools. Clearly, since a very limited number of students can be admitted, it is vital that those young people who can derive the greatest benefits from their training should gain entrance. Only extensive research by the Department of Education will enable the school administrators to make informed policy decisions concerning the validity of their admissions policies.

* Whinfield, op. cit., p. 60.

Recommendation:

- (7) THE DIVISION OF VOCATIONAL EDUCATION SHOULD ENSURE THAT ADMISSIONS STANDARDS FOR VOCATIONAL TECHNICAL SCHOOLS DO NOT DENY EQUAL OPPORTUNITY FOR VOCATIONAL EDUCATION TO ANY STUDENT QUALIFIED UNDER THE APPLICABLE STATE REGULATIONS. ADMISSIONS REQUIREMENTS WITHIN PROGRAM AREAS SHOULD BE MADE UNIFORM THROUGHOUT THE REGIONAL VOCATIONAL-TECHNICAL SCHOOL SYSTEM.
- (7a) THE DIVISION SHOULD CONDUCT INTENSIVE RESEARCH INTO ADMISSIONS PROCEDURES AND DEVELOP STANDARDS RESULTING IN AN IMPROVED SUCCESS RATE, WHILE NOT IMPOSING ARTIFICIAL SELECTION BARRIERS.

Planning System

The Division of Vocational Education lacks a meaningful plan of yearly operation. The Division annually prepares two documents, each of which claims to be a "program-budget plan" for the Division. One of the "Plans" is submitted to the Federal Government, the other to the Budget Division of the State Department of Finance and Control. Neither of these documents is acceptable as a planning tool for three basic reasons:

- (1) Startling discrepancies exist between the documents in areas such as number of programs, personnel, students, and level of Federal funding requested.
- (2) They do not provide enough information (neither the Federal or State Government requires all the data which the Program Review Committee deems as essential to good decision-making. Also, both the Federal and State funding sources accept "goals," "objectives" and "activities" which are ill-defined. Meaningful evaluation is impossible, for the Division of Vocational Education has no solid objectives to which it can be held accountable).

- (3) The Program Agency Summary, or "State Plan," does not reliably reflect what the funding for a given vocational education program will buy in terms of personnel, or provide in terms of student service. Disparities are sometimes so great as to suggest shifts in policy by the Division after the State Plan has been submitted.

If a legislator were interested in data about Federal funds requested for cooperative work experience in the vocational-technical schools, he would find a discrepancy of sixty-two per cent between the amount requested by the Division of Vocational Education from the Federal Government and the requested amount the Division reported to the State Budget Division of the Department of Finance and Control. In the category of "research and planning in vocational education," the discrepancy in Federal money requested, as reported in the two documents, is sixty-four point five per cent.

It is apparent that the legislator, or private citizen, seeking a "Plan" for the Vocational Education operation, an operation involving over \$25 million in State and Federal funds, can at best avail himself of two separate documents - one provided to the State and one provided to the Federal Government - which display wide divergencies in moneys allocated to and students educated in specific vocational programs.

In fairness to the Division of Vocational Education, however, it may be stated that the Division does provide both the Federal Government and the State Budget Division with the information which each requests. The Committee is aware that high numbers of programs involved, stringent time pressures, and crowded working conditions make the Division's planning

responsibilities difficult to carry out.

The Program Review Committee has examined in detail the guidelines for the presentation of the Federal Plan and has concluded that Federal requirements are minimal. One might assume that the Plan and program are of high quality because the Federal Government has approved the planning document as received, and has decided to fund vocational education in Connecticut with \$12 million annually. However, such an assumption would be erroneous. Federal acceptance of the Plan only assures Federal funding. The quality of the program may be the lowest of all state programs receiving Federal aid.

It is the position of the Program Review Committee that the planning document accepted by the Federal Government is fundamentally weak. It also seems apparent that the other Plan presented to the State Budget Division, unfolding vocational education programs and their funding, also lacks the type and quality of information which should serve as sound input into executive and legislative decisions which involve appropriating \$15 million of State money to vocational-technical programs.

To ensure clarity in the following discussion of these Plans, the "Connecticut State Plan for the Administration of Vocational Education" (which is submitted to the Federal Government) will be called the Federal Plan; and the "Agency Program Summary" will be called the State Plan.

THE FEDERAL PLAN ("Connecticut State Plan for the Administration of Vocational Education")

The main section of the Federal Plan is Table 3, "annual and long range planning and budgeting." It is divided into six sections: (1) Goals,

(2) objectives, (3) outcomes 1973-74-78 (relating to number of students to be served), (4) activities, (5) budgeted total funds (for each activity, a Federal figure is given, which serves as the actual request for Federal funding, and a combined State/local contribution is listed), and (6) benefits listed for each activity.

Major criticisms of the Federal Plan by the Committee are three-fold:

- a. The Federal Government does not request, nor does the Division of Vocational Education provide, a figure for State funding of any activity. Apparently, the Federal Government awarded Connecticut over \$12 million for vocational education services without ever asking how much the State was contributing to each of the programs, or as a total amount.
- b. The Federal Government accepts nebulous "goals" and "objectives" which cannot be meaningfully evaluated. The Federal Government accepts descriptions of "benefits" stemming from program activities which could be considered ludicrous. For example, the "benefit" listed for the "activity" to "underwrite part of tuitions of professional personnel studying in approved programs," is as follows: "Quality education will be provided for vocational education programs by more understanding teachers." However, the vocational areas involved are never listed, and "quality" education as a benefit seems to lack meaning. Also, it would be interesting to see what courses a vocational education teacher takes to gain "more understanding."
- c. Although total funding is listed for each activity, only sporadic attempts have been made to show the breakdown of spending within

each sphere. For example, over \$101,000 is allocated to the goal "to provide work study opportunities," but the only personnel mentioned is one central office consultant responsible for part-time coordination. It is never made clear how the funds will be allocated to cover salaries, "work scholarships," and other expenses.

In many cases, activities listed in the Plan allude to staffing, but the description simply states that the funding will "continue to support instructional cost." The percentage of money actually spent on salaries, and on other instructional costs, and the number of teachers involved are never discussed. For example, the goal-category of "providing vocational programs for the disadvantaged in local schools," cites \$2.7 million in total funding. The money's only use, as given in the Plan, is to "continue to support instructional cost for 189 programs serving the disadvantaged." How much of the \$2.7 million is planned for salaries? What are the other "instructional costs"? How many teachers are involved? These are the questions which clearly deserve to be answered.

The Committee believes that complete abandonment of such line-item information cannot be conducive to effective funding.

In summary, the Committee criticizes the Federal Government for funding the vocational education program without knowing the amount of money contributed by the State, without defining meaningful, measurable program objectives and benefits, and without incorporating into the Plan such important line-items as total salaries and number of teachers employed.

THE STATE PLAN ("Agency Program Summary")

This document requests the Division of Vocational Education to describe each program, state its objectives, give output indicators, and draw up a budget for each program category within the Division. The program description section of this report is undoubtedly one of the better parts of the planning process, providing, in most cases, a good picture of what the program encompasses. The output indicators, however, merely list the "number of students served," the number of individual programs funded in a category, and the number of staff members. The heading above the category "output indicators" reads "program evaluation," but the indicators turn out to be merely a headcount. This, of course, is a result of the lack of meaningful objectives which are the essence of any real program evaluation.

Many of the "objectives" set forth in the State Plan might well be described as spurious or obfuscated. Goals which are measurable and purposeful represent the key linkage to the planning and evaluation processes. If only the vaguest of objectives are stated, a program cannot be scrutinized to uncover its successful aspects, which might be continued, and to find areas which need help the next year or perhaps should be discontinued altogether.

The major "program objectives" articulated by the Division of Vocational Education, which encompasses a total requested funding of about \$25 million from State and Federal sources, is "to provide youth of high school age and adults of all ages with vocational education programs, activities, and services."

The types of services are not listed at the beginning of the Plan. Each program category and its number of participants are mentioned at a later point

in the document. The objectives, as stated, do not attempt to evaluate the calibre of programs, activities, and services offered. Also, the percentage of people requiring such services who will be served, and the percentage of industrial needs that will be satisfied by such programs are never clarified. In fact, the overall program objective for vocational education does not even refer to job placements, much less set goals for skilled and semi-skilled trades, such as desirable starting salaries. Most of the objectives for the specific vocational education programs are similarly nebulous. One example, deemed as particularly "obscure" by the Committee, are the "objectives" listed in the State Plan for "providing training for vocational education professional personnel," funded at \$293,295 for the current fiscal year. These objectives are:

1. "To provide an adequate supply of qualified teachers for vocational education." (What is an adequate supply? How many more are needed? How many are necessary this year? Is a qualified teacher merely one who is certified? Does the statement imply that there are unqualified teachers in the system? What are the meaningful objectives?)
2. "To provide workshops and seminars, new practices, and new occupational areas." (Although the number of teachers in workshops and seminars are subsequently mentioned, the program summary never makes clear which vocational areas are involved, what the new practices are, or what new occupational areas are to receive the \$293,295 requested).

A second major criticism of the State Plan is that it provides no information pertinent to the total planned cost of each program within the Division of Vocational Education. The State Budget Division requires that

the vocational education request for State funding be broken down by:

1. Personal services,
2. other expenses,
3. payments to local governments,
4. other payments, and
5. equipment.

The Budget Division also specifies that Federal contributions, private donations and "other" moneys be listed, although these funds are not broken down by line-item.

The State Plan does not include the planned spending figures of local governments for each educational program. Therefore, high level funding decisions are made for each vocational education program without any information about local government contributions to the estimated cost. Also, although projections are made concerning the number of students to be served by a specific program, there are no estimates of the total funds available. Not even an approximation is given.

As an example, for the vocational program serving the disadvantaged in public schools, the State Plan lists \$634,794 request from the Federal Government as the only additional funds available. In the Federal Plan, however, the Division included \$2 million in combined State/local funding. Almost all of this money apparently comes from local sources. Thus, without any knowledge of planned local input, a decision was made to fund a program. In this case, the local government was the major funding source.

A third criticism of the State Plan concerns Federal expenditures. They are not broken down into categories such as personal services, other expenses, and equipment, even though Federal financing is often considerable. The only figure which presently appears is the total lump sum of Federal dollars to be spent for each program.

DATA COMPARISONS BETWEEN THE STATE AND FEDERAL PLANS

This sub-section presents information included in each of the two planning documents prepared by the Division of Vocational Education for fiscal year 1973-74. Discrepancies between the data presented for the vocational education program categories will be reported in percentages.

It is noted that fiscal comparisons are limited to requests reported for Federal funding only, as these are the only dollar figures which are comparable between the two reports. In certain situations, it is possible to imply a State funding figure reported to the Federal Government (when the State/local figure reported to the Federal Government is apparently all State money). In such cases, it appears that the Division of Vocational Education has also provided disparate figures for State funding. An example is shown in the category of "research and planning in vocational education." *

At first, the Program Review Committee thought that these discrepancies might be caused by a time lag factor. The State Plan is dated November, 1972, while the Federal Plan was not finalized until July 1, 1973. However, this was not the case. The request for Federal funding as reported in the State Plan

* See this report, page 45, number 4.

submitted in November, 1972, appears as "estimated" Federal funding in the State Plan submitted in November, 1973, for the next fiscal year. For every program category listed, the Federal funding figures for Fiscal Year 1973-74 were identical, even though the actual Federal funding request, with different dollar figures, was forwarded midway between submission of the two State planning reports. If a time lag were the reason for the discrepancies, certainly the Division of Vocational Education would up-date the figures on the November, 1973, State Plan.

EXAMPLES OF DISCREPANCIES

The Program Review Committee's analysis of the Plans could not ascertain a pattern or any apparent motives underlying these discrepancies. Therefore, the Committee could only conclude that these gross variances in key data reported to the State and Federal Governments reflected only the uncoordinated planning function and poor management of the Division of Vocational Education. Examples of these discrepancies are:

1. Co-operative work experience programs in the local high schools.
 - a. A discrepancy of thirty-two point four per cent (\$103,000) is noted for Federal funding as reported in the two documents.
 - b. The variance in number of students to be served is fifty-seven point nine per cent (1,100 students), and the differential reported in the number of total students is fifty-two point eight per cent, yet the number of programs to be offered differs by only three point three per cent.
 - c. The calculation for Federal dollars to be spent per student in these programs vary by nineteen point two per cent.

2. Vocational guidance in the local schools.

- a. The planned number of students to be served, according to each document, differs by only three per cent, yet the Division's funding request to the Federal Government is twenty-six per cent higher than the Federal funding as reported to the State. It is of interest to note that although the Division reported a drastically lower level of Federal funding to the State, the number of staff members to be supported is eleven per cent higher.
- b. The difference in the calculation of average Federal dollars to be spent per student is twenty-two point six per cent.

3. Exemplary programs.

- a. There is no significant difference in Federal funding which the Division requested of the Federal Government and which it reported to the State Office of Finance and Control (only point thirty-five per cent). Yet the reported number of students to be served varies by fifty per cent (5,000 students vs. 7,500 students) and the amount of Federal dollars to be spent per student varies by forty-nine point five per cent. In other words, figures sent to the Federal Government in support of a funding request allow forty-nine point five per cent more Federal spending per student than the figures reported to the State.
- b. Note:

The following facts regarding exemplary programs are significant. Neither document indicates which, if any, exemplary programs used in the past have been incorporated into the vocational education system. In fact, a legislator or

private citizen perusing either the State or Federal planning document would find neither a description of these funded exemplary or model, programs nor even a mention of the occupational areas covered by them. Thus, the only documentation available to the funders, at both the Federal and State levels, is the description of these programs as "exemplary."

4. Research and planning in vocational education.

- a. For this category, there is a difference of sixty-four point six per cent, or over \$96,000 between the Federal funding requested by the Division and Federal funding as reported to the State Office of Finance and Control.
- b. Another apparent discrepancy with serious implications is contained in the funding figures reported to the Federal Government and to the State Office of Finance and Control. In the Federal Plan, the Division of Vocational Education reports a combined State and local funding of \$100,000. In the State Plan, a request is made for State funding of \$38,198. However, none of the State research and planning operations seem to be subsidized by any Local Education Agency. Thus, it appears that the Division of Vocational Education is inaccurate in its reporting of State funding to the Federal Government. The discrepancy is over \$60,000.

DATA COMPARISONS BETWEEN STATE PLANS ISSUED IN NOVEMBER, 1972, AND
NOVEMBER, 1973 (for Fiscal Year 1973-74)

Funding and programmatic information which appears as "projected" or "requested" in November, 1972, is designated as "estimated" data the following year. For every vocational education category except one, Federal and State funding is identically reported. The number of students, personnel, and programs to be offered, however, differs markedly for several program categories. Consequently, the same amount of money is to be allocated in a different manner than originally planned and funded. In some cases, data for comparable program categories submitted as part of the Federal Plan varies with both State documents, thus presenting a third set of figures to increase the confusion.

The following tables illustrate the discrepancies between the State Plans submitted in November, 1972, and November, 1973, (both for fiscal year 1973-74). Comparisons have been made with the Federal Plan submitted in July, 1972, where possible. The tables represent several program categories broken down into the areas of Federal funding, State funding, number of students served, personnel expenditures, and number of programs supported by this funding.

PROVIDING LOCAL SECONDARY SCHOOL VOCATIONAL EDUCATION

FISCAL 1973-74

	<u>Nov., 1972</u> <u>State Plan</u>	<u>July, 1973</u> <u>Federal</u> <u>Plan</u>	<u>Nov., 1973</u> <u>State Plan</u>
Federal Funds	\$1,500,000	\$1,053,598	\$1,500,000
State Funds	\$1,275,694	N/L*	\$1,275,694
No. of Students	50,250	23,000	42,000
No. of Programs	300	140	270
Personnel Supported	N/L*	N/L*	N/L*
Federal Dollars per Student	\$29.85	\$45.80	\$35.71

Note: The goals and objectives listed in the Federal and State plans are almost identical. They are cited here for comparative purposes.

Goals: Federal Plan: Providing local secondary school vocational education.

State Plan: Providing local secondary school education (obviously misprint).

Objectives: Federal Plan: To serve increased numbers of students at the secondary level in local high schools in vocational programs leading to gainful employment and/or higher technical education.

State Plan: To develop and maintain vocational programs at the secondary level in the local high schools leading to gainful employment and/or higher technical education.

*N/L = Not Listed

ADMINISTRATION AND GENERAL SUPPORT
VOCATIONAL EDUCATION
 Fiscal 1973-74

	<u>Nov., 1972</u> <u>State Plan</u>	<u>Nov., 1973</u> <u>State Plan</u>
Federal Funds	\$117,552	\$117,552
State Funds	\$ 81,838	\$ 81,838
Personal Services	\$ 71,838	\$ 71,838
Other Expenses	<u>\$ 10,000</u>	<u>\$ 10,000</u>
Grand Total	\$199,390	\$199,390

Personnel Summary

General Fund	4	4
Federal	<u>9</u>	<u>1</u>
Total Positions	13	5

SUMMARY All funding levels remain constant. Personnel funded is reduced by eight positions.

VOCATIONAL GUIDANCE IN LOCAL SCHOOLS
Fiscal 1973-74

	<u>Nov., 1972</u> <u>State Plan</u>	<u>July, 1973</u> <u>Federal</u> <u>Plan</u>	<u>Nov., 1973</u> <u>State Plan</u>
Federal Funds	\$100,000.00	\$126,000.00	\$100,000.00
State Funds	\$ 4,041.00	N/L*	\$ 4,041.00
No. of Students	10,000	10,300	39,000
Personnel Supported	20	18	N/L*
No. of Programs	N/L*	N/L*	35
Federal Dollars per Student	\$ 10.00	\$ 12.23	\$ 2.56

*N/L = Not Listed

WORK STUDY PROGRAM+
Fiscal 1973-74

	<u>Nov., 1972</u> <u>State Plan</u>	<u>July, 1973</u> <u>Federal</u> <u>Plan</u>	<u>Nov., 1973</u> <u>State Plan</u>
Federal Funds	\$ 79,988.00	\$ 81,193.00	\$ 79,988.00
State Funds	\$ 3,800.00	N/L*	\$ 3,800.00
No. of Students	300	250	300
Federal Dollars per Student	\$ 266.62	\$ 324.77	\$ 266.62

+Note: This example is included to show that time lag factor cannot explain discrepancies between original State and Federal Plans. Having reported a disparate figure to the Federal Government in July, the Division then repeats the original estimate the following November.

*N/L = Not Listed

CO-OPERATIVE WORK EXPERIENCE IN THE LOCAL HIGH SCHOOLS
Fiscal 1973-74

	<u>Nov., 1972</u> <u>State Plan</u>	<u>July, 1973</u> <u>Federal</u> <u>Plan</u>	<u>Nov., 1973</u> <u>State Plan</u>
Federal Funds	\$319,118.00	\$422,670.00	\$319,118.00
State Funds	\$ 8,081.00	N/L*	\$ 8,081.00
No. of Students	1,900	3,000	8,600
No. of Programs	60	62	175
Federal Dollars per Student	\$ 167.96	\$ 140.89	\$ 37.11

*N/L = Not Listed

DEVELOPING EXEMPLARY PROGRAMS

	<u>Nov., 1972</u> <u>State Plan</u>	<u>July, 1973</u> <u>Federal</u> <u>Plan</u>	<u>Nov., 1973</u> <u>State Plan</u>
Federal Funds	\$136,357.00	\$136,831.00	\$136,357.00
State Funds	None	None	None
No. of Students	7,500	5,000	2,500
Programs Supported	7	5	6
Federal Dollars per Student	\$ 18.18	\$ 27.37	\$ 54.54

GROUP INPUTS TO THE PLANNING PROCESS

In addition to the State Plan and the Federal Plan, a number of other inputs are fed into the planning process for vocational education.

The Federal Vocational Education Amendments Act (VEA) of 1968 requires that any state desiring to receive a grant under that Act shall establish a State Advisory Council whose members shall be appointed by the Governor (in those states where the State Board of Education is not elected). The VEA specifies a number of broad interest groups from which members must be appointed, including state and industrial development agencies, higher education personnel, vocational education administrators, and local education staff.

The purposes of the Advisory Council are:

1. To advise the State Department of Education on the development of the State Plan and policy matters arising from it;
2. to evaluate vocational education programs funded under the VEA;
3. to prepare and submit, through the State Board of Education, to the U.S. Commissioner of Education and the National Advisory Council on Vocational Education, an annual report which evaluates the effectiveness of the Federally-funded programs which were carried out in the past year, and to recommend such changes in the vocational education programs as may be warranted by the evaluation.

In Connecticut, the Advisory Council consists of twenty-three members with an impressive array of educational and professional backgrounds. Advisory Council members have organized into a number of specialized committees (financial resources, elementary vocational education, the employing community, etc.) and have developed a great deal of

expertise in these areas. In addition, the State Advisory Council employs as its Executive Officer Mr. Wallace J. Fletcher. A former member of the faculty of the Graduate School of Education of Harvard University, he has much experience in private industry and has worked with the U.S. Office of Education, the House Education Committee, and the U.S. Commissioner of Education in the development of major Federal vocational education legislation.

Despite the high level of expertise of the Advisory Council and its Executive Officer, and the fact that the VEA mandates that the Council advise the State Board of Education in the development of the Plan, the Department of Education has not allowed the Advisory Council to take an active role in the preparation stages. According to the Certification of the Plan for vocational education for Fiscal Year 1974, "... Again this year, the schedule of preparation of the State Plan resulted in the Council being forced into a review rather than a consultative role."

The Program Review Committee is concerned by this substantial deviation from the intent of the Federal legislation. The State Advisory Council, which was designated by Congress as a major voice in the planning and evaluation of vocational education, has been forced into a consultative and "watchdog" role. The Committee is particularly concerned that the Advisory Council even in its consultative role, has been unable, despite repeated attempts, to affect State Department policy concerning the distribution of Federal vocational education funds in Connecticut, admission policies

at the State technical schools, the use or non-use of proprietary schools, vocational education information systems, and a number of other major policies which directly affect the quality of vocational education programs in our State.

Other planning tools available to the State Department of Education include the advisory and craft committees attached to the individual technical schools, as well as the statewide craft committees which advise the Bureau of Vocational Technical Schools. Technical school advisory boards vary from eleven to twenty-one members, and include professional educators and school board members, employers and employees, and members of the general public. They are appointed by the directors of the individual technical schools. The purpose of the advisory committees is to advise the State Board of Education on the policies they believe will best serve the interests of vocational education. Each school also has craft committees for each of the trades offered. Furthermore, there are statewide craft committees, appointed by the Chief of the Bureau of Vocational Technical Schools.

According to the Division of Vocational Education, the State craft committees meet at least twice a year, and the school advisory committees at least once a year. The local craft committees have no fixed meeting schedule.

It is difficult to understand how committees which meet only annually or biannually can play a purposeful role in the planning process for vocational education. A number of the technical school

advisory committees have not held meetings in over a year which makes it appear unlikely that they can exert any significant impact on policy determination at their schools.

Improving the Planning System

One of the most urgent needs in the area of secondary vocational education is the articulation of a yearly comprehensive "master-plan" which clearly reflects the policy and objectives of the Division of Vocational Education and outlines the activities it wishes to undertake. Such a plan should be mandated by the General Assembly and submitted to that body before the annual funding is made. The preparation of the plan would serve to coordinate the activities of the Division of Vocational Education and its presentation would apprise the General Assembly of the utilization of appropriations. Significantly, a plan of this kind would make the Division of Vocational Education accountable to the General Assembly, which is its primary funding source.

Recommendations:

- (8) THE DIVISION OF VOCATIONAL EDUCATION SHOULD DEVELOP A MASTER PLAN FOR VOCATIONAL EDUCATION WHICH WOULD ENSURE COMPLIANCE WITH LEGISLATION AND WOULD PROVIDE A MEANINGFUL BASIS FOR PLANNING AND EVALUATION OF VOCATIONAL EDUCATION IN CONNECTICUT BY THE DIVISION OF VOCATIONAL EDUCATION, THE GENERAL ASSEMBLY AND OTHER APPROPRIATE AGENCIES.
- (9) THIS MASTER PLAN SHOULD LIST GOALS, ACTIVITIES, AND EVALUATION GUIDELINES IN A CLEAR, PRECISE MANNER.
- (10) THIS MASTER PLAN SHOULD PRESENT LINE-ITEM ESTIMATES OF PERSONNEL FOR EACH PROGRAM CATEGORY. ALL PERSONNEL INVOLVED IN

INSTRUCTION, GUIDANCE COUNSELING, ADMINISTRATION AND IN SUPPORTIVE ROLES SHOULD BE INCLUDED, AND THESE CLASSIFICATIONS SHOULD BE CLEARLY DEFINED.

- (11) THE MASTER PLAN SHOULD INCLUDE TOTAL ANTICIPATED FUNDING ESTIMATES FOR EACH PROGRAM CATEGORY FROM FEDERAL, STATE AND LOCAL SOURCES.
- (12) IN THE EVENT OF FISCAL OR OTHER CHANGES IN THE MASTER PLAN, THE DIVISION OF VOCATIONAL EDUCATION SHOULD PREPARE AND CIRCULATE THE NECESSARY REVISIONS BEFORE ANY DECISION ON SUCH MATTERS IS MADE.
- (13) IF THE REQUEST FOR FEDERAL FUNDING DIFFERS FROM THE MASTER PLAN, A REVISED PLAN SHOULD BE ISSUED BY THE DIVISION OF VOCATIONAL EDUCATION. SUCH REVISION SHOULD LIST CLEAR, PRECISE REASONS FOR ANY CHANGES.
- (14) ONE OFFICIAL OF THE DIVISION OF VOCATIONAL EDUCATION, IDENTIFIED TO THE GENERAL ASSEMBLY, SHOULD BE ANSWERABLE FOR THE CONTENT, ACCURACY, AND CLARITY OF THE MASTER PLAN. HE SHOULD ALSO HAVE RESPONSIBILITY FOR BOTH FEDERAL AND STATE FUNDING REQUESTS.
- (15) THE MASTER PLAN SHOULD BE DEVELOPED WITH THE ACTIVE PARTICIPATION OF THE STATE ADVISORY COUNCIL ON VOCATIONAL EDUCATION AND WITH INPUT FROM OTHER VOCATIONAL EDUCATIONAL ADVISORY GROUPS INCLUDING, BUT NOT LIMITED TO THE ADVISORY AND CRAFT COMMITTEES OF THE REGIONAL-VOCATIONAL TECHNICAL SCHOOLS.
- (16) THIS MASTER PLAN SHOULD BE SUBMITTED TO THE APPROPRIATE COMMITTEES OF THE GENERAL ASSEMBLY PRIOR TO FEBRUARY 15 OF EACH YEAR AND APPROVED BY THESE COMMITTEES BEFORE THE APPROPRIATION OF FUNDS FOR VOCATIONAL EDUCATION. THESE COMMITTEES MAY WAIVE APPROVAL WHEN REQUIRED BY THE SITUATION.
- (17) THE APPROPRIATE COMMITTEES OF THE GENERAL ASSEMBLY SHOULD REQUEST EVALUATIONS BASED ON THE MASTER PLAN TO AID THEM IN THEIR LEGISLATIVE DUTIES. THE GOALS, OBJECTIVES, AND ACTIVITIES ARTICULATED IN THE MASTER PLAN SHOULD BE THE FOUNDATION OF ALL MANDATED EVALUATIONS.

THE ROLE OF THE GENERAL ASSEMBLY - ENHANCING LEGISLATIVE CAPACITY

Two of the most severe constraints imposed upon the General Assembly are the limitation of time and lack of staff.

The Education Committee does have access to legislative staff specialists. However, this staff conducts research into specific projects of concern to the various committees and individual Assemblymen. It is not really geared for the ongoing program analysis and coordination which the Program Review Committee feels is necessary to maximize the legislative role in the policy-making process in all areas of education.

Most members of the Connecticut General Assembly have a limited amount of time to devote to their legislative duties, which are quite diverse (each legislator generally serves on three to four committees). The issuance of a comprehensive plan to the General Assembly by the Division of Vocational Education only partly involves the Assembly in the policy-making process. The material in the plan must be reviewed, analyzed, and pertinent questions formulated.

The Program Review Committee believes it is essential that the General Assembly employ a staff member to review, analyze, and summarize the relevant material. It is proposed that such an individual be assigned to the Education Committee and perform on-going research and analysis across a wide spectrum of educational issues. Certainly, a lengthy and detailed planning document loses its efficacy if no one can devote sufficient time and effort to studying it and formulating proposals and recommendations.

The other legislative duties of the General Assembly members clearly limit their input into such a time-consuming process as plan analysis. A staff member could examine proposed program activities and prepare brief summaries for the legislators. He could also acquaint himself with educational activities in other states, as well as with new and proposed Federal legislation.

The Program Review Committee holds the following position:

In the area of vocational education, the bureaucracy appears to set all policy, with minimal input from the General Assembly. Requiring the Division to present a comprehensive yearly plan in order to obtain funding would not entirely solve the problem. The General Assembly, in addition to its severely limited working hours, has no present capacity to undertake document analysis and summarization.

The Department of Education has currently filed a requested funding from the State for over \$347 million for the coming fiscal year. Certainly, such an expenditure justifies the hiring of one legislative staff member to maximize the efforts of the General Assembly in ensuring that the money is wisely spent and that the educational bureaucracy is truly accountable.

Recommendation:

- (18) THE EDUCATION COMMITTEE OF THE GENERAL ASSEMBLY SHOULD REQUEST THE ASSIGNMENT OF ONE FULL-TIME MEMBER TO AID THEM IN INTERPRETING THE MASTER PLAN AND MAKING EVALUATIONS. THE STAFF MEMBER SHOULD ALSO ANALYZE AND REPORT ON ALL FUNDING PROPOSALS AND SUCH OTHER MATTERS AS THE EDUCATION COMMITTEE DEEMS PROPER AND

BENEFICIAL. HE SHOULD HAVE THE EXPERTISE
NECESSARY FOR FULFILLING THESE DUTIES.

PROPOSAL FOR LONG-TERM STUDY OF VOCATIONAL EDUCATION IN CONNECTICUT

In conducting this study of secondary vocational education, the Program Review Committee found it impossible to examine the most important facet of any such review, the product. In this case, the graduates of secondary programs in vocational education are the product. There were, and still are, many difficulties involved in an attempt to analyze them, but two were of major significance: (1) The State Department of Education collects little usable follow-up data on vocational education, (2) the Program Review Committee lacked the time necessary for an in-depth survey of graduates. Therefore, the Committee is proposing a long-range, in-depth study of vocational education independent from the study which resulted in this report.

The Committee realizes that a primary goal of the current study is to make such a long-range examination possible. For this reason, recommendations about graduate follow-up data and information systems have been given to enable the State Department of Education and the General Assembly to make a better analysis of the product of these vocational education programs. It is imperative that the Department of Education and the General Assembly have access to such data in order to regulate and administrate vocational education in Connecticut more efficiently.

The amassing, processing and disbursing of such data as a continuous evaluation of vocational education programs would require an information system far superior to that currently in use in this State. There is, however, an interim method which could be used for a long-range study of vocational education. Information systems could be upgraded to allow for the collection of relevant data on an annual basis. This interim method would require manual gathering and processing of the primary data by the study group. One beneficial offshoot of this interim system would be its functions as a testing ground for the collection methods which would later be utilized in the automated information system. This "trial run" would enhance the effectiveness of the automated system by providing a preliminary test of the data-collecting methodology.

In order to evaluate the product of the vocational education system in Connecticut we must know much more than whether the graduates found jobs or not. Data collection tools must be designed to gather various types of information. However, amassing information is not enough for valid evaluation. A method must be devised to analyze this data, by taking the following steps:

1. Actual student and graduate achievement must be compared with goals stated in a comprehensive plan in order to judge the plan's overall success.
2. Data from the various programs must be compared with one another in order to evaluate the relative efficiency and effectiveness of the individual programs.

3. Information from the institutions administering vocational education programs should be compared in order to judge the relative efficiency and effectiveness of these institutions (this judgement should take into account locality differences and individual student variations).
4. Vocational graduates should be compared with other graduates at varying time intervals (eg. 1, 3, 5, and 10 years).
5. Student selection methods should be analyzed and measured against the relative success of students who were selected by these methods.
6. Costs per pupil should be analyzed by program and by institution, and compared to goals stated in the plan (budget requests).

This, of course, is only a partial list of some of the areas the Committee found important.

The data should be analyzed in such a way as to make the information readily usable for planning, comparative studies, and evaluations. It should be available as a tool for the General Assembly in its formulation of vocational education legislation. The actual analytical design and methodology would be the responsibility of data-collection specialists.

FINAL NOTES

In order to provide a good program of vocational education to

Connecticut students, it is necessary to formulate meaningful plans and to make considered evaluations based on this planning. Neither of these can be accomplished without a foundation of reliable information. It is unreasonable to expect the State Department of Education and the General Assembly to make purposeful decisions without pertinent knowledge of the system for which they are enacting legislation.

Improved planning and more rigorous evaluation capabilities which can be derived from this information will only benefit vocational education and, as a result, the State of Connecticut.

Recommendation:

- (19) THE DIVISION OF VOCATIONAL EDUCATION SHOULD, WITH THE CONSULTATION AND DIRECTION OF THE EDUCATION AND PROGRAM REVIEW COMMITTEES OF THE GENERAL ASSEMBLY, INITIATE A LONG-RANGE, IN-DEPTH STUDY OF VOCATIONAL EDUCATION IN CONNECTICUT. AS A PART OF THIS STUDY THE DIVISION OF VOCATIONAL EDUCATION SHOULD INITIATE PLANS FOR AN AUTOMATED EDUCATIONAL INFORMATION SYSTEM. THE NEEDS OF THE DIVISION OF VOCATIONAL EDUCATION, AND THE EDUCATION AND APPROPRIATIONS COMMITTEES OF THE GENERAL ASSEMBLY, SHOULD PROVIDE THE BASIS AND DIRECTION FOR THE DESIGN OF THIS SYSTEM.

Proposals for New Directions in Vocational Education

The duty of providing improved vocational education to more Connecticut students is not easy to fulfill. There are, however, several new directions which could be taken. Some of these are based on current inadequacies in the system or on programs already operated, at least on an experimental basis, by the State Department

of Education. The remainder are the result of a study of other educational resources available in Connecticut, but not presently utilized by the Education Department.

SHARED-TIME PROGRAMS

Expanding the availability of vocational education programs is one problem area. The regional vocational-technical schools are not capable of providing their services to all the students who desire them, and students unable to attend cannot obtain an equivalent education elsewhere in the system. Shared-time programs between public high schools and regional vocational-technical schools are a possible solution. This system would enable students at public high schools to take advantage of the sophisticated equipment and instruction available at vocational-technical schools when it was not in use. This proposal has certain drawbacks. First, according to the technical school administrators, these facilities are only free during the after-school hours (2:30 P.M. to about 5:00 P.M.). High school students using them would have to contend with disruption of their after-school work and/or family dinner time, reduced transportation, and a lengthened school day. Because of these problems, shared-time programs are less attractive than if they were conducted during the regular school day. Second, faculty and staff must be paid for their "overtime" hours and increased expenses are incurred if special transportation is required. Shared-time programs have been tried at several vocational-technical schools, but their number has decreased, partly due to problems of

recruiting students. But continued study of the feasibility of this type of program is needed. It is an opportunity for expanding vocational education that should be seriously considered.

ENROLLMENT MODIFICATION

The State Department of Education should also examine the possibility of limiting the scope of vocational-technical schools. Instead of giving four years of trade education, the schools could provide intensive technical training at the eleventh and twelfth grade levels; ninth and tenth grade students would remain at their local public high schools. Cooperation and coordination with the local schools would be necessary in studying the feasibility of this proposal.

In essence, this practice would enable the vocational-technical schools to serve twice the number of students they can presently accommodate. The public high school would be responsible for providing career exploration and for giving instruction in skills applicable to the more intensive training that would follow.

While this proposal would undoubtedly cause some initial hardship in the local school districts, primarily because of insufficient facilities and faculty, the Program Review Committee believes it should be carefully examined by the State Board of Education, in close cooperation with the local school districts and the Education Committee of the General Assembly.

Recommendation:

(20) IN ORDER TO EXPAND OPPORTUNITIES FOR

VOCATIONAL EDUCATION IN CONNECTICUT, THE DIVISION OF VOCATIONAL EDUCATION SHOULD CONDUCT AN INTENSIVE STUDY OF THE POSSIBILITY OF SHARED-TIME PROGRAMS BETWEEN THE REGIONAL VOCATIONAL-TECHNICAL SCHOOLS AND THE LOCAL EDUCATIONAL AGENCIES, AND THE FEASIBILITY OF ENROLLMENT MODIFICATION AT THE VOCATIONAL-TECHNICAL SCHOOLS.

SATELLITE SCHOOLS

Another possible means of expanding the availability of vocational education programs is the "satellite school" concept. At this time there is one such school in operation in Simsbury on an experimental basis. This school is administered by nine area towns and is a satellite of A.I. Prince Technical School in Hartford. The students remain enrolled in their own local high school, but spend half their time taking vocational courses at the satellite school. They participate in all activities at their local high school and are graduated from that school after successful completion of their studies.

The satellite school has a built-in working relationship with the regional vocational-technical school. The courses at the satellite are designed to cover wide occupational areas and emphasize skills that are both sophisticated and flexible. Provisions for student exchanges between the schools have been made in case it is necessary to share facilities and instruction. In addition, the student at the satellite school has a much wider range of non-vocational subjects available to him since he takes these at his local public high school.

While the satellite school is still at the experimental stage, most indications point to its success. It has aroused interest and support throughout the State, at the State Department of Education, and in the General Assembly - another major advantage. The cost of expanding this experiment is still uncertain, but the Simsbury satellite cost the State nothing and a continued experiment should be eligible for Federal funding.

It should be no problem to find buildings to house satellite schools. A recent survey by the General Assembly's Office of Legislative Research lists thirteen unoccupied school buildings in nine Connecticut towns with populations above 25,000. Many of these buildings conform to Connecticut safety standards; the extent of nonconformance of the others is not yet known. The survey elicited no response from seven cities in the population category, and the many smaller towns in the State were not included. A more complete survey would undoubtedly reveal additional vacant school buildings which could be used for satellite schools. This possibility should be examined immediately by the State Board of Education.

Recommendation:

- (21) THE DIVISION OF VOCATIONAL EDUCATION WITH THE DIRECTION AND COOPERATION OF THE EDUCATION COMMITTEE OF THE GENERAL ASSEMBLY, SHOULD EXPAND THE PRESENT SATELLITE SCHOOL EXPERIMENT TO OTHER AREAS OF CONNECTICUT.

COOPERATIVE PROGRAMS

There are vocational education resources already available in the State that are not fully utilized. Connecticut's businessmen and employers should be encouraged to provide work experience and on-the-job training to more students than are currently employing. The benefits of these practices, for both students and employers, are obvious. The student obtains actual working experience in an environment that really cannot be duplicated in the classroom. The employer participates in training a labor force from which he will have to draw in the future. He has played his part in ensuring that this future labor force is qualified to enter the job market. One major drawback is the legislation restricting the employment of minors in certain types of work. It is possible that these restrictions could be modified in some areas, and this possibility should be studied for the purpose of increasing opportunities for work experience and on-the-job training programs.

PROPRIETARY SCHOOLS

Another educational resource that could be used is the system of proprietary schools in Connecticut. These private schools offer programs in many vocational areas and have the advantage of greater flexibility than the public school system. Representatives of these schools stated to the Committee that they must be able to quickly modify their programs in accordance with changes in industrial requirements in order to assure placement of their graduates and, thus, the profits of the schools. They emphasized

that the proprietary schools' self-supporting nature makes it imperative for them to provide an education that will assure successful placement for their graduates.

The Vocational Education Amendments of 1968 (Public Law 90-576) provides for Federal funding of cooperative arrangements between public schools and private institutions.* The General Assembly should investigate the possibility of using this existing vocational education system as an expansion of educational opportunities.

Recommendation:

- (22) THE DIVISION OF VOCATIONAL EDUCATION SHOULD MAKE FULL USE OF THE VOCATIONAL TRAINING RESOURCES ALREADY AVAILABLE IN CONNECTICUT. PRIVATE EMPLOYERS, INDUSTRIES AND OTHER BUSINESSES SHOULD BE REQUESTED TO PROVIDE WORK EXPERIENCE FOR VOCATIONAL STUDENTS. THE USE OF PROPRIETARY SCHOOLS FOR VOCATIONAL EDUCATION SHOULD BE INTENSIVELY STUDIED AND IMPLEMENTED WHERE IT WOULD EXPAND VOCATIONAL EDUCATION OPPORTUNITIES AND BENEFIT THE STUDENTS.

The needs of employers in Connecticut dictate the necessity for expanding opportunities for vocational education in this State.** In order to accomplish this, the existing educational resources of the State should be more fully utilized, the possibility of sharing facilities should be studied, and the "satellite school" experiment should be continued and expanded. It is the duty of the General Assembly to make every effort to provide each Connecticut student with the educational opportunities he is guaranteed by Statute.

* Section 122 (a) (7)

** CBIA Survey and others.

APPENDIX
"Agency Response"

The Honorable David O. Odegard

Date February 28, 1974

The Honorable John G. Groppo

Maurice J. Ross

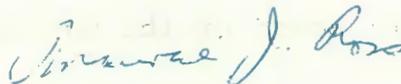
Subject

Acting Secretary

State Board of Education

The Division of Vocational Education is a part of the Connecticut State Department of Education, the operational arm of the State Board of Education. It is appropriate that I, as Secretary of the State Board of Education, respond to the Program Review Committee's report addressed to Dr. Righthand, the Acting Associate Commissioner for Vocational Education. Actually, if we had had more time, I would have preferred to submit your report and the response through the State Board of Education.

The Program Review Committee is to be complimented on its achievement of the study of Vocational Education. There is a great deal of valuable information in this report, and you may be sure that we shall do everything we can to improve our operation. After you have had the time to study our responses, we would appreciate the opportunity to discuss in greater detail some of the points made in the complete report.



Maurice J. Ross

MJR:rw

Response to Findings

General Comments

The general input of this report, namely, that the planning procedures should be improved, is one that we agree with, and are in the process of implementing. We appreciate the reports submitted by the Program Review Committee indicating some of the areas in which there is need for improvement. Listed below are reactions to the findings according to the number of each finding as submitted to the Department of Education.

1. The determination of policy in the area of vocational education is made by the State Board of Education and, in many cases, the General Assembly. The Division of Vocational Education suggests policy and carries out policies adopted by the State Board or the General Assembly.
2. This disproportionate funding out of State monies, if such there be, is not an action taken by the Division of Vocational Education or the State Department of Education. Three factors should be considered:
 - a. The funds for the operation of the State Vocational Technical Schools are requested through a budget which must (after it has been cleared through the Secretary of the State Board of Education and approved by the State Board of Education) be submitted to the State Budget Office and then to the Governor. This is then

presented to the General Assembly which acts on the budget.

- b. The disposition of Federal funds is disproportionate in the opposite direction. Approximately two years ago, an analysis of Federal funds for secondary vocational education was submitted to Representative Nicholas Motto. This indicated a high disproportionate distribution of Federal funds favoring local schools.
- c. State funding specifically for local schools is provided by the General Assembly, originally appropriated at \$375,000 eventually reached \$400,000. At present the Governor's budget recommends \$425,000 while two bills (HB5054 and HB5148) have been submitted requesting \$2,000,000 for this purpose. Last year we initiated the request for \$2,000,000. We have indicated our support of both these bills.
- d. In order to make a fair comparison of funds received by local schools and State-operated schools, one should include the present \$215 ADM Grant which is provided for all students in local educational agencies, but not to State-operated schools.
- e. There should be recognition of the fact that the 16 regional vocational-technical schools are high schools and much of the funds which are made available to these schools are used for academic programs which are essential to obtaining a high school diploma.

3. The discrepancy that exists between the two documents, the State plan and the Federal plan, is not justifiable and we are taking steps to avoid such a discrepancy, to the extent that it is possible.

- a. The terms used in the Federal document are those prescribed by Federal regulation and law.
- b. To provide a degree of consistency the goals and objectives in the State planning program are generally identical with those in the Federal plan. These goals and objectives have been defined by regulation and law.
- c. It is not clear what this finding is saying. Personnel in terms of dollars and positions are identified. In vocational education we have interpreted student service to mean preparation for a career, but we can clarify this.

4.
 - a. The statement that students in technical schools receive more intensive vocational education reflects nomenclature, technical versus comprehensive, rather than fact. In the field of business and office education where the greatest number of students are enrolled in local schools, programs start in the tenth grade and in some cases in the ninth.
 - b. Yes, technical in the sense used, appropriate to trade and industrial fields.
 - c. This statement that technical graduates are able to obtain more highly paid positions upon graduation is

based on an hourly rate comparison. Seasonal occupations such as in the building trades may pay a higher hourly rate than non-seasonal occupations.

5. This is true, however, requests for expansions of existing vocational technical schools and construction of additional schools have been submitted to the General Assembly. These requests have been based on a plan.

6. There are more than thirty-five programs in operation around the State which might be construed as duplicative. One must consider the responsibility of the State Department of Education to students and to the State of Connecticut, mainly that its goal is to prepare students for careers below the baccalaureate level. Programs offered are related to the manpower needs for the State of Connecticut. Little service or help is provided a student by preparing him or her for entry into a field which is overcrowded and has poor prospects for employment.

7. There are minimal admission standards for all vocational technical schools set forth in Bulletin 30, Section 5. Since the applications for available space and for training in various schools differ, individual schools are permitted to utilize the instruments that they feel are most appropriate. This policy will be reviewed.

8. Attrition is not completely attributable to those factors which can be measured in advance. Frequently, especially in the ninth grade, students drop out as they find the field that

they thought they were interested in, is not the career that they wish to pursue. In general, tests and selection devices have not been found to be too meaningful in terms of predicting success in the vocational-technical schools. This applies to interest tests as well. We shall attempt to improve our admission criteria, our pre-admission and our post-admission counseling and to identify successful criteria and practices.

9. We plan to work with the Program Review Committee and the General Assembly to improve our information system.

10. The yearly program evaluations as required by the General Assembly have been discussed with members of the Joint Standing Committee on Education of the General Assembly: There will be combining discussions to assure that these evaluations serve the purposes which the General Assembly considers important.

11. The Division of Vocational Education hopes to increase its use of the Connecticut State Advisory Council in the Policy Planning Process. Approximately three or four years ago, when the members of the Division of Vocational Education were invited to attend meetings and when the State Advisory Council was recommending more emphasis on guidance, the Division of Vocational Education instituted this policy before a final recommendation was made.

Last year as a result of a recommendation by the State Advisory Council to provide pre-payment to Local Educational Agencies, the

State Department of Education rewrote the State Plan accordingly. The practice of pre-payment is now in the first stage of implementation.

The State Advisory Council advises in the preparation of the State Plan. It is true that not all their recommendations have been accepted, but it is not the purpose of the Advisory Council to set policy for the State Department of Education, but rather to help formulate policy. This they are doing and will, we hope, continue to do.

In the last year or so, the representation from the State Department of Education at the meetings of the State Advisory Council has been rare, in view of the fact that invitations have not been extended from the Council. This means that much of what is being done by the State Advisory Council is unknown to the State Department of Education. The Advisory Councils of the Technical Schools do meet and do provide input to the action that is taken by the individual vocational-technical school. We shall, however, review their operation with a view toward maximizing their input.

12. The under representation for females in vocational-technical schools cannot be questioned. However, this is a changing situation. There are at present 95 females in the so-called "boys trades." Tradition is a vital factor which has interfered with a more open approach to education for girls. A study by Dr. Richard Whinfield, indicates that the percentage of female admissions for vocational-technical schools is in proportion

to the number of female applicants. It would appear then, that no discriminatory practice is being conducted; in the past females have not been interested and have not applied for the construction or machine trades. As noted in the report of the National Commission on the Reform of Secondary Education, "counselors must accept some of the responsibility for the failure of girls to enroll in science and mathematics courses in the high schools. They must also share the responsibility for the paucity of girls in vocational programs."**

The practice of indicating "boys programs" and "girls programs" is certainly indefensible and will be stopped.

** National Commission on the Reform of Secondary Education, The Reform of Secondary Education, McGraw-Hill Book Company: New York 1973, p. 153.

Responses to Recommendations

1. Agree. The need for increased opportunity for vocational education in Connecticut is documented in the Analysis of Manpower Needs and Jobs in the State as presented in the plans sent to the Federal Government and in the Statistical Report (OE Form 4048 and OE Form 3138) sent to the Federal Government. There continue to be requests for additional budget and facilities from the State Department of Education each year; furthermore, the amounts of funds sent to the local educational agencies continue to increase within the capacity of the annual budget of the department.

2. The State Department of Education will continue to research with vigor the possible benefits of duplicating vocational-technical school programs in Local Educational Agencies and where such duplication would appear to increase educational opportunities the State Board of Education will make appropriate recommendations and requests for appropriations to the General Assembly.

3. Agree. The Department of Education, through the use of counselors from the vocational-technical schools attempts to assist students in making vocational choices, both with contacts with local educational agency counselors and with group counseling of students throughout the State. Refer to #12 response to findings for more detail concerning equal opportunities.

4. We concur in this recommendation. Additional funds have been requested in the 1974-75 state budget request.

5. There is no question that follow-up procedures can be improved. Though follow-up is not conducted in an identical manner; a uniform time, (Nov. 15), is indicated to all schools.

Follow-ups of the graduate follow-up have been conducted. In the past, there has been an intensive study of graduates of the vocational-technical schools who have been out of school for five and ten years. Another similar study has been done in the field of agriculture. They have supported the findings of the annual graduate follow-up. This year a study is being developed to check on the placements of graduates in the field of distributive education. These follow-ups are more intensive and involve

student reactions to the meaningfulness of their programs.

5a. The Connecticut State Board of Education is the agency designated by the General Assembly to be responsible for vocational and technical education in the State, and for the administration of the State Plan or for the supervision of the administration thereof by local educational agencies. The State Board of Education does and will work closely with appropriate committees and sub-committees of the General Assembly to be sure that our studies meet the needs of the Assembly.

6. The Department of Education has requested, from the Department of Labor, manpower data regularly for many years. At present, and for the past year, the Department of Education has funded a person to work with the Department of Labor in researching data for use in vocational education planning. Again, we shall work with the Education Committee and the General Assembly to be sure that we obtain the most meaningful projections.

7. The existing admissions standards do not, we believe, deny equal opportunities to qualified students to by profit by the instruction offered. Outside the broad criteria prescribed by the State Department of Education, the policy has been to leave much discretion to the local administrators in order to allow for differences, such as capacity, in relation to numbers of applicants. In practice, this may mean that admission standards are not uniformly applied in all schools.

The State Department of Education can and will institute a research of available literature, as well as working with local administrators and the advisory committees to find better ways to meeting the problem of admission selection of entrants at the local level.

8. Activities in connection with a master plan for the Division of Vocational Education for Connecticut were initiated several years ago. The term "master plan" is defined as the long-range plan, continuously being updated, for an extended period of years. A five year "master plan" is translated into single year fiscal budgets reflecting each year's update and plans.

The Federal master plan is for a five year period and is in accordance with prescribed guidelines, and provides for an annual one year update. The State Planning, Programming, Budgeting System (PPBS) presentation calls for a one year projection of a financial plan to meet the goals of both the long-range plan, and the one year plans with their financial restraints for each year of planning.

9. We improve our PPB skills with experience (the Department began working with PPB during September, 1968) each year, and we will be able to strengthen the goals, objectives, and indicators as they tie into the master plan year by year.

It is also worth noting that another aspect of the master plan development ties in with the University of Connecticut. The

Division of Vocational Education initiated contacts with the University which are expected to result in approximately \$92,892 of research funds to compare the Connecticut system of delivery of vocational programs with that of other states.

10. The line item approach is not used with the program budget emphasis placed upon this agency by the Department of Finance and Control of the Executive Branch of the Connecticut government. The Function Budget does call for line item entries. To understand the two estimates, they must be used in conjunction with the other. The details which are apparently desired by the Committee are already available in information provided. The specifics which may appear to be missing can be found in the program budget requested by the Department of Finance and Control on Forms BR-1B. We were remiss in not calling this to the attention of the Committee.

11. The State Department of Education is required to submit estimates to the Governor annually on September first. These estimates include anticipated funding from State and Federal sources each year; local statistics become available through the Division of Administration, State Department of Education, but not usually in time for inclusion in our presentation. We shall work to improve this situation.

12. The Division of Vocational Education has a mailing list of about two thousand persons and institutions. When major changes are made affecting the vocational educational programs

the information is circulated to those parties affected.

13. The Division of Vocational Education is required to revise its plans periodically. In general, this is one of the basic requirements for extending the program. Those persons and institutions concerned with the revision(s) are automatically notified. We shall, in the future, indicate in more detail the reasons for plan revisions.

14. In connection with this recommendation, your attention is respectfully invited to the fact that the Division of Vocational Education is but one part of the State Department of Education. The State Department of Education must work through the State Board of Education. The Commissioner of Education and the Deputy Commissioner of Education are designated as the Secretary and Assistant Secretary to the State Board for the department. Under their direction, and through their shared responsibility with the Associate Commissioner for the Division of Vocational Education and his staff a positive procedure for responsibility already exists. We make our people available to the General Assembly, but we stress the fact that legal prescriptions which would fragmentize departmental responsibility do not seem to be what the Assembly or responsible management would call for.

15. This recommendation relates to the role of the Connecticut State Advisory Council.

Three or four years ago, members of the Division of Vocational

Education were invited to attend meetings of the State Advisory Council. The emphasis at that time was upon guidance. The Division of Vocational Education instituted action in this area during the period these meetings were held.

Last years, as a result of a suggestion from the State Advisory Council to provide pre-payment to Local Educational Agencies, the State Department of Education included this in the revised State Plan.

It should not be expected that all recommendations of the Advisory Council will meet with the approval of the Division of Vocational Education any more than it should be expected all suggestions from the Division will meet with the approval of the Advisory Council. In case of serious disagreement the next step in resolution of a serious difference between the two positions which involves policy matters, is to discuss the problem with the State Board of Education. Both the Chairman of the State Board and the Commissioner of Education have, within the past few months and within the period of this study, indicated in writing to the Advisory Board their desire to have greater cooperation between the agencies and have made positive suggestions as to how this might be achieved.

16. Plans for the Department of Education, including the Division of Vocational Education are submitted to the Secretary of the State Board of Education and upon his approval to the State Board of Education. There are also budget procedures of

State Government which require the Department of Education to report plans to the Department of Finance and Control. We shall be pleased to submit copies of these plans to the appropriate committees of the General Assembly.

17. Evaluation reports based upon the plans of the Division of Vocational Education for each year have been initiated in recent years. These reports are mandated by Statute. The February 1974 reports on departmental programs have been delivered to the Joint Committee on Education and the Joint Appropriations Committee, as well as other interested individuals and offices in State Government.

18. The State Board of Education submits annual evaluation reports, planning documents, and other reports to the Joint Standing Committee on Education. It submits to the Appropriation Committee an annual budget of the Department of Education including the budget for the Division of Vocational Education as well as the aforementioned reports and other reports to other groups in the General Assembly. The decision as to staff assistance for the Education Committee of the General Assembly is one to be made by the General Assembly.

19. In 1967, the State Department of Education requested funds from the General Assembly to begin an automated education information system for the entire department including the Division of Vocational Education. The General Assembly did not act on the request. Since that time some progress has been made

in storing some of the information in the State Data Center particularly that pertaining to accounting and personnel records. However, the need for storing management data for policy making decisions still exists. It is hoped that a system of automated education information can be developed and that the General Assembly will assist the Department in this area.

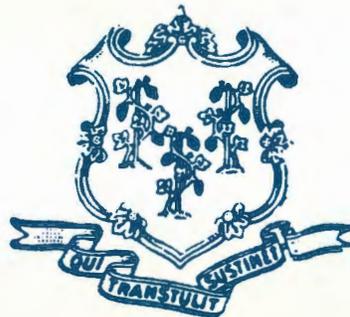
20. A study of the shared-time program is presently being conducted.

21. The one existing satellite "Simsbury" is in the process of evaluation; another is being considered.

22. The cooperative work experience programs and the distributive education programs which are conducted on a cooperative basis do utilize business and industry as educational laboratories. Non-profit schools and institutions have been and are being used to provide programs for students which are most effectively conducted in their facilities. As part of our comprehensive study or revised master plan, we should consider the maximum utilization of all appropriate vocational training resources in the State.

Additional copies of this Report may be obtained by contacting Mr. George L. Schroeder, Director, Program Review Committee, Room 402, State Capitol, Hartford, Connecticut - 06115

Connecticut General Assembly



Program Review Committee Report On Secondary Vocational Education In Connecticut

March, 1974

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