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ABSTRACT

Major purposes of the urban cooperative work education programs study were to assess the effectiveness of secondary and postsecondary cooperative education programs in the nation's hundred largest cities and to analyze the postprogram experiences of both participants and nonparticipants. Thirty case studies were compiled from 19 secondary and 11 postsecondary cooperative education programs located in cities. Interviews were conducted with 675 students participating in the 30 programs and with a cohort group of 774 vocational students not enrolled in the programs to compare their school and job experiences and satisfaction. More participants than nonparticipants had positive attitudes and were employed, with the postsecondary participants scoring higher in the satisfaction areas. In addition, a followup study of participants and nonparticipants in the 50 primarily nonurban programs studied in part I of the assessment study indicated that where comparable data were available the outcomes were approximately the same. Study conclusions were that the program populations of minority, disadvantaged, and average to below-average students were generally competent and well-motivated and had high job placement rates, except in cities with high unemployment. Major constraints to expansion of the cooperative programs were lack of a sufficient number of coordinators and adverse economic conditions. (The final report, which provides more detail, is available in three volumes.) (MF)

AN ASSESSMENT OF SCHOOL SUPERVISED WORK EDUCATION PROGRAMS

PART II:

URBAN COOPERATIVE EDUCATION PROGRAMS AND FOLLOW-UP STUDY

EXECUTIVE SUMMARY

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INTRODUCTION

The United States Office of Education (USOE) in 1972 launched a two-part study to assess the effectiveness of school-supervised work education programs mandated under the set-aside provisions of the 1968 amendments to the Vocational Education Act of 1963 and other work education legislation. The overall purpose of the study was threefold:

(1) To provide useful information on the relationships between the kinds of experiences students receive in various types of work education programs and their post-program experiences

(2) To identify and analyze existing constraints or limitations in carrying out the various work education programs, including both "internal" and "external" constraints

(3) To determine the feasibility of expanding cooperative education programs

Part I of the study, conducted by the Systems Development Corporation and completed in September 1973, addressed itself to cooperative education (mandated under Part G of the amendments), work study (mandated under Part H of the amendments), Job Corps, and work experience (e.g., those funded under the Neighborhood Youth Corps and WCEP) programs. Fifty case studies were compiled, and interviews were conducted with samples of program participants and students attending the same schools who were not enrolled in work education programs. The fifty-program Part I sample was further stratified into the following categories of programs:

(1) **Special education (cooperative and Job Corps programs):** Programs which provided students with the opportunity to obtain school jobs

related to their vocational education majors. These programs were headed by coordinators who also functioned as instructors or guidance counselors.

(2) **Dropout prevention:** Programs which provided students with supplemental income to induce or permit them to remain in school. Such programs could be funded from Part H, Neighborhood Youth Corps, or other funding sources.

(3) **Career exploration:** Programs which provided students with the opportunity to explore varied occupational areas by observing workers and actually performing tasks for pay on a variety of jobs. Such programs could have been funded from WCEP, Part H, Neighborhood Youth Corps, or other funding sources.

Part II of the study, conducted jointly by Olympus Research Corporation (ORC) and DECIMA Research (DECIMA), had two major purposes: (1) to assess the effectiveness of cooperative education programs located in urban areas, and (2) to determine the post-program experiences of both participants and nonparticipants interviewed in conjunction with Part I of the study. Its specific purposes were as follows:

(1) The compilation of thirty case studies of cooperative education programs operating in secondary and post-secondary institutions located in the nation's hundred largest cities

(2) The administration of interviews to participants in the thirty programs, and a cohort group of vocational education students attending the same schools but not enrolled in cooperative programs

(3) The administration of follow-up interviews to all students (both participants and nonparticipants) who were interviewed in conjunction with Part I of the study

(4) The comparison of the results of (3) above with the post-school experiences of a group of vocational education students who responded to a national longitudinal follow-up study of the class of 1972 sponsored by the National Center for Educational Statistics

This executive summary contains the findings, conclusions, and recommendations of Part II of the study and, wherever possible, integrates the Part II findings and conclusions with those of Part I. The material is organized into three sections: (1) urban case study assessment, (2) the follow-up study, and (3) conclusions and recommendations.

URBAN CASE STUDY ASSESSMENT

The sample of thirty urban-cooperative education programs was selected from four hundred programs nominated for possible inclusion in the sample by state and local educators, members of state and national advisory committees on vocational education, and other experts in the field of vocational education. The sample selected was structured as follows:

(1) **Educational level:**
   (a) Secondary programs — nineteen
   (b) Post-secondary programs — eleven

(2) **Size of city:**
   (a) Large (cities with populations of over one million) — ten
   (b) Medium (cities with populations between 300,000 and 999,999) — ten
   (c) Small (cities with populations under 300,000 but still among the hundred largest cities in the nation) — ten

(3) **Minority and disadvantaged enrollment:**
   (a) More than 50 percent minority or disadvantaged — ten
   (b) Less than 50 percent minority or disadvantaged — twenty

Based on an analysis of the program nominations received, about half of the cooperative education offerings were in the traditional areas of distributive education and business and office occupations. However, the field work showed that the emphasis was shifting from traditional single occupation programs to multiple occupation programs. In fact, after the on-site visits had been completed, the case study programs were reclassified into the following categories (all under the supervision of a single coordinator):

(1) **Single occupation programs**: Programs in which students received classroom instruction in specific occupations and were placed in jobs closely related to their classroom training

(2) **General occupational cluster programs**: Programs in which students received classroom instruction in general occupational areas and were placed in a variety of different jobs within ocupational clusters

(3) **Diversified programs**: Programs in which students received world-of-work training in the classroom and were placed in a variety of jobs, not necessarily related to their majors in school or within any specific occupational cluster

The actual distribution of the sample by the categories listed above was as follows:

(1) Single occupation — five

(2) General occupation — sixteen

(3) Diversified — nine

Bivariate Correlation Analysis

A bivariate correlation analysis was performed to determine if significant relationships existed between success criteria (dependent variables) and potential predictors of program success (independent variables). The success criteria, or dependent variables, identified were as follows:

(1) **Completion and placement rates** (for secondary programs only; completion and placement records were not kept for most post-secondary programs): Programs with above average completion and placement rates were considered "successful."

(2) **School and job satisfaction** (as rated by students): Programs in which students rated their school and job satisfaction above the average for the sample as a whole were considered most successful.

(3) **Other**: Above average student responses to the following were considered successful program outcomes —

(a) Program helped decide occupation

(b) Desire full-time job in same occupational area as school job

(c) Program fits with student career interests
(d) Overall student ratings of programs
(e) Likelihood that students will recommend program to friends
(f) Student attitude toward instruction
(g) Student attitude toward jobs

A total of 33 independent variables, categorized as follows, were identified:

(1) **Type of program:** Single occupation, general occupation, and diversified
(2) **Size of city:** Large, medium, and small
(3) **Unemployment rates in cities:** Above 1974 national average (5.6 percent), same as national average, and below national average
(4) **Student characteristics:** Sex, minority status, grades, and student enthusiasm
(5) **Administrative:** Seventeen different administrative variables, including student-coordinator ratios, existence of advisory committees, availability of placement services, counseling, work stations, integration of classwork with on-the-job training, and enthusiasm of teachers

Type of Program

The findings of the bivariate correlation analysis by type of program were as follows:

(1) **Diversified programs:** There were inverse correlations between six of the dependent variables and "type of program — diversified" at the secondary level. Completion rates for diversified programs were lower, fewer of the students interviewed said that their jobs related to their career interest, programs were given lower student ratings, fewer students would recommend the programs to friends, and student attitudes toward diversified programs were less positive than the average for the total sample.
(2) **General occupation programs:** Completion rates, job responsibility, job satisfaction, school satisfaction, and program helped decide occupation were all higher for secondary school general occupation

programs. However, training-related placement rates were lower for the general programs.

(3) **Single occupation programs:** As might be expected, high school single occupation programs correlated significantly with "program helped decide occupation" and "placement — training related."

(4) There were no significant correlations at the post-secondary level.

Size of City

Significant correlations of success criteria and size of city occurred most often in the category "large cities — secondary." Three of the correlations were inverse: "dropout rate" (meaning that droupout rates increased) in large cities; "job responsibility" (meaning that job responsibility decreased); and attitude toward job (meaning that attitudes toward jobs were less positive in large cities). On the other hand, there were positive correlations with "school satisfaction," "program helped decide occupation," and "recommend program to friends." Since there were no significant correlations with dependent variables and "small cities," only three comparisons — all between large and medium-size cities — could be made at the secondary level. Job responsibility and attitude toward job increased in medium-size cities, but decreased in large cities; on the other hand, school satisfaction increased in large cities, but decreased in medium-size cities.

At the post-secondary level, in large cities inverse correlations were identified between "overall student rating of program" and "student attitude toward program"; the reverse was true for small cities.

Unemployment Rates

There were no significant correlations between placement rates and unemployment rates for secondary school programs, although there were higher dropout rates in cities with lower unemployment rates. This finding seemed to support the general feeling of ORC researchers that rising unemployment rates, with the exception of one program in a city where the general unemployment rate was more than 15 percent, were not having an adverse effect on cooperative programs.

The findings also indicated that job satisfaction, school satisfaction and the number of students who desire full-time jobs in the same areas as

their school jobs were higher in cities with below average unemployment rates.

Student Characteristics

Completely opposite conditions were found for students with A or B grades and those with grades of C or lower (Table 1). Students with A or B grades had higher degrees of school satisfaction, rated their programs higher, had more positive attitudes toward their program, and were less likely to drop out. The exact opposite was true for students with grades of C or lower, who also would be less likely to recommend their programs to friends. On the other hand, students with A or B grades were less likely to want full-time jobs in the same occupational areas as their school jobs. Once again, the reverse was true for C, D, or F students. Thus, although programs which enrolled average to below average students encountered far more problems with dropouts and student attitudes than those which enrolled above average students, in terms of career goals the program seemed to be more important to C, D, and F students.

TABLE 1

Bivariate Correlation Analysis of Dependent and Independent Variables by Student Grades for Secondary Programs Only[a]

	Student Grades	
Dependent Variables	A and B	C, D, and F
School satisfaction	$x_{(+)}$	$x_{(-)}$
Desire job in same area	$x_{(-)}$	$x_{(+)}$
Overall student rating of program	$y_{(+)}$	$y_{(-)}$
Would recommend program to friend	(*)	$y_{(-)}$
Attitude toward program	$y_{(+)}$	$y_{(-)}$
Dropout rate	$x_{(-)}$	$x_{(+)}$

[a]Key: x = correlations at 0.05 significance levels. (−) = inverse relationship.
y = correlations at 0.01 significance levels. (*) = no correlation.
(+) = variables increase or decrease together.

Administrative Variables

Strong correlations existed between several success criteria and training and supervision on the job at both the secondary and post-secondary levels. The same was true with regard to integration of classwork and on-the-job training at the secondary level, and overall quality of work stations at both levels.

There were, however, several correlations, which appear to be related, that are difficult to explain — all at the secondary level. They are as follows:

(1) As training and supervision on the job increased, completion rates decreased and programs were less likely to fit with student career interests.

(2) As overall quality of work stations increased, completion rates decreased.

(3) As the ratio of students to coordinators increased, completion rates increased and dropout rates decreased.

The most likely explanation for these apparent anomalies is that the unexpected number of diversified programs included in the sample (nearly 30 percent of the sample programs) caused distortions that otherwise would not have occurred. Most of the students enrolled in diversified programs were classified either as disadvantaged or average to below average students. It is possible that students in diversified programs preferred as little supervision as possible (either at school or on the job) and felt uncomfortable in jobs which required a high degree of individual responsibility. In several cases, coordinators of diversified programs told ORC researchers that they refused job orders from employers which they thought were beyond the abilities of their students. Although such statements seemed paternalistic and condescending at the time, it may be that these coordinators were merely facing reality.

Significant correlations were also found between counseling and several success criteria. Students who received highly rated and effective counseling rated their programs higher, were more likely to recommend

programs to friends, and had more positive attitudes toward their programs. These relationships were strongest at the secondary school level, but they also occurred at the post-secondary level.

Student Analysis

The objective of the student analysis was to compare outcomes for students participating in urban-cooperative education programs with those of a cohort group of vocational education students who were not enrolled in cooperative programs. The analysis was based on interviews with 1,449 students, 675 of whom were participating in the case study programs (774 nonparticipating). Of the 774 nonparticipating students, 451 were working, whereas 618 of the 675 participants were working. Thus comparisons with respect to experience on the job were based on interviews with 618 working participants and 451 working nonparticipants.

Participants at both levels scored higher than nonparticipants in the following areas, with post-secondary school participants scoring higher than secondary school participants:

(1) Job satisfaction and job responsibility
(2) School satisfaction
(3) Vocational education program fits with career goals
(4) Likelihood of students recommending programs to friends

Nonparticipants, on the other hand, rated the overall quality of their jobs higher than participants and rated training and supervision on the job equal to participants.

It should be noted, however, that students enrolled in cooperative programs expect higher quality work stations and more training and supervision on the job than nonparticipants, who were not enrolled in school-supervised work education programs. The participants, therefore, may have been more critical than nonparticipants in rating work stations and training and supervision on the job. Other possible reasons for low participant ratings in these areas will be discussed in the section on administrative and program overview.

Comparisons by Sex

On the whole, women expressed less positive attitudes toward cooperative education programs than men. The reasons may be as follows:

(1) Wages: Women earned less than men at both the secondary and post-secondary school levels, but the difference was most pronounced at the post-secondary level where women earned an average of $1.62 an hour less than men. This finding, coupled with the follow-up study finding that women who were trained in the same occupational areas as men were earning considerably less than men two years after their training, is unfortunately a typical finding of studies of sex and employment.

(2) Occupation: The occupational range for women at both the secondary and post-secondary levels was much narrower than that of men. At the secondary school level, women were employed primarily in the clerical, sales and management, and service occupational areas; men were fairly well distributed throughout all occupational areas, and were virtually the only participants in the blue-collar area (skilled craftsmen and operators).

Comparisons by Minority Status

Post-secondary minority participants expressed more positive attitudes toward cooperative programs than their secondary counterparts. This ties in with the follow-up study which shows that minority participants in post-secondary work education programs have economic outcomes better than those of minority nonparticipants and equal to those of nonminority participants. At the secondary school level, nonminorities expressed slightly more positive attitudes, but the differences between the two groups were not great.

Once again, the occupational areas and the wages received by minorities account for the differences. At the post-secondary level, minority participants were earning an average of $1.66 an hour more than nonminority participants, whereas at the secondary level, minority participants were earning slightly less than nonminority participants. Nonparticipants at both levels, with the single exception of nonparticipating minorities, were earning more than participants.

At the secondary school level, minorities predominated in the clerical, blue-collar, and service areas; however, fewer minorities were employed in blue-collar trades as compared to nonminorities. At the post-secondary level, a much higher percentage of minorities was employed in blue-collar trades, and very few were working in service occupations.

Completion and Placement Rates

Completion and placement rates were calculated for secondary programs in cities with varying 1974 unemployment rates by size of city and type of program. Four major points were highlighted by this analysis:

(1) Completion and placement rates were generally high for the sample as a whole. The average completion and placement rates were 84 and 70 percent respectively; and the training related placement rate was 75 percent.

(2) The average completion rate for diversified programs was between 21 and 22 percentage points lower than the completion rates of single and general occupation programs.

(3) The average placement rate for programs in cities with above average unemployment was between 23 and 25 percentage points lower than the placement rates for programs in cities with the below average and average unemployment.

(4) The average training-related placement rate for general occupation programs was 33 percentage points lower than that of single occupation programs, and 9 percentage points lower than that of diversified programs.

It would appear, therefore, that diversified programs were more susceptible to dropouts than single and general occupations programs. The question arises as to whether this was because of the characteristics of their enrollments, or because of the nature of diversified programs. The answer seems to be that it was a combination of both. Most diversified programs were aimed at either disadvantaged students or students with low grade-point averages (or "potential dropouts"). Programs which aim at such a target population must expect higher dropout rates, or lower completion rates. On the other hand, most diversified programs were so

loosely constructed, in comparison to single and general occupation programs, that students often may not have taken them very seriously. In most cases, attempts to integrate classroom instruction with on-the-job experience were not substantial, and the jobs to which students were assigned were seldom related to their vocational education majors. These factors probably accounted for the lower completion rates of diversified programs.

The relatively low placement rates for programs located in cities with above average unemployment indicates that even though it may not have been difficult to find part-time work stations for students while they were in school, it was quite another matter for students to find full-time employment after graduation. Thus it would appear that if the ultimate outcome for cooperative education programs is considered to be placement of students in full-time jobs after graduation, this can be adversely affected by poor economic conditions.

Administrative and Program Overview

The major findings of the study regarding program administration and program content are summarized in this section.

The Role of the Coordinator

The internal organization of the typical program in the urban case study sample could not be simpler. It consisted of a coordinator and his or her students. Virtually all responsibilities relating to cooperative programs were turned over to coordinators, and once students became involved in cooperative programs, their ties with other school departments become increasingly weak. Most of the programs studied tended to be self-sustaining, even to the point that they were housed apart from other school programs.

The responsibilities of the typical coordinator included:

(1) In-school promotion and recruitment
(2) Selection of students
(3) Preparation of curricula
(4) Teaching of cooperative classes

(5) Job development and employer relations
(6) Referral of students to jobs
(7) Inspecting work sites and observation of student performance on the job
(8) Counseling of students
(9) Grading of students
(10) Placement (for high school students only and only in certain LEAs)
(11) Self-evaluation

Other findings relating to coordinators were as follows:

(1) **Training of coordinators:** Fourteen of the thirty coordinators said that they had received special pre-service training to prepare them for their responsibilities as coordinators; twenty responded that they had received in-service training. However, it appeared that the vast majority of coordinators interviewed did not consider special training a major priority. What appeared to be more important was the selection of coordinators, or the identification of individuals with the personality traits necessary for fulfilling the major responsibilities of a coordinator. Coordinators must enjoy and be adept at meeting employers, speaking to the public, and arbitrating problems that may arise between students and employers. It appeared that the coordinators of diversified programs needed help in devising strong curricula for the classroom portion of cooperative education programs directed toward students with a variety of school majors and working in jobs not restricted to a single occupational cluster (see below), and training in presenting world of work curricula.

(2) **Ratio of students to coordinators:** Although regulations in most states restricted the number of students per cooperative education class to twenty, coordinators were usually assigned two classes, thus the actual student-coordinator ratio was nearer 40:1. Higher student-coordinator ratios was one of the major reasons program expansion was possible. Most of the sample programs were operating at capacity; thus expansion would not have been possible without the creation of additional classes and the assignment of such

classes to the coordinators of existing classes. With respect to high student-coordinator ratios, the following are pertinent:

(a) It was beyond the scope of this study to determine definitively whether high student-coordinator ratios resulted in program deterioration. However, it appeared that the benefits accruing to the additional students participating in cooperative education programs, made possible by higher student-coordinator ratios, far outweighed whatever program deterioration (if any) may have occurred.

(b) Full-time coordinators appeared to have little trouble in performing all coordinator functions for forty students; coordinators who had school responsibilities other than their cooperative duties found it difficult to monitor job sites for forty or more students.

(c) However, based on study findings which show that the outcomes for work education students were not much different from those of regular vocational education students, it would not appear that student-coordinator ratios as low as 20:1 would be cost effective.

(d) Additional research is needed to determine the number of students one coordinator, working full time, can supervise on a regular basis. Such research should probe the time needed for the average coordinator to recruit students, develop curricula, teach classes, develop work stations, and monitor student work sites.

Advisory Committees

There was ample evidence to support the contention that active and involved advisory committees, both citywide and for specific programs, enhanced the quality of cooperative education programs. On the other hand, several programs were operating quite successfully without program advisory committees, or significant contributions from citywide committees. The consensus as to what constituted an active and involved advisory committee was that such a committee, composed of well-known

or high-level business or industry representatives, would meet often and perform two major functions, listed in order of their importance: (1) employer relations and job development, and (2) curriculum development and revision.

Eligibility Requirements

Eligibility requirements were strict for only three secondary, single occupation programs. Typically, eligibility requirements were established by the state education agency and administered by the LEAs. Most standards required that students be 16 years of age or older, be in the twelfth grade, and have an "occupational intent." Otherwise, student selection was left to individual coordinators whose decisions were to be based on the student's training objective, aptitude, interest, need, physical and mental competence, and other such qualifications deemed essential to successful employment.

Such regulations left broad discretion to coordinators. Although it was true that many coordinators tended to select those students whom they personally believed could improve themselves by means of participation in cooperative programs, more often than not these selections were made on the basis of personal interviews with all applicants. Grade point averages and past student attendance and conduct records were often ignored. This was particularly true with respect to diversified programs, but it was also true for many general occupation programs.

The result was that new types of students were being enrolled in new types of cooperative education programs.

Job Development

More than half the coordinators interviewed said that job development was adequate, but a large minority (43 percent) said the opposite. Since in only one city, where the unemployment rate was at depression levels, was it difficult to develop an adequate number of work stations, the dissatisfied coordinators were concerned either with the quality of work stations, or the time required to perform job development. Coordinators who were brought on board one month before the fall term began, solely for the purpose of job development, were far less harassed than

those who had to enroll students, develop jobs, and begin classes all at the same time.

Promotion and Public Relations

Promotional and public relations activities were directed toward the general public, employers, and vocational education students. The first was solely an LEA activity; the second was partly the responsibility of LEAs and partly that of individual coordinators; and the third was a school responsibility.

Over half the nonparticipating students interviewed said that they had heard of the cooperative programs in their schools, and 70 percent said that they would like to be enrolled in cooperative programs. Most of the programs had far more applicants than they could handle, indicating that on-campus promotion was not a major problem.

Eight out of ten of the nonparticipating employers interviewed responded that they were aware of cooperative education programs, and nearly half said that their participation had been solicited by schools. These figures indicate that the promotional and public relations activities conducted by LEAs, schools, and coordinators were effective.

Instruction

Participating and nonparticipating students were asked: "How closely is the work that you perform on the job related to your classwork?" Although participant responses were generally more positive than those of nonparticipants, the difference between the two groups in the "very closely" category was not significant, and a large minority of participants (30 percent) responded "not at all."

These figures indicate that a close look should be taken at the various kinds of related instruction provided to the students enrolled in cooperative education programs. The major problem appeared to be with the "world of work" instruction provided to students enrolled in diversified programs. Very often these classes were loosely structured and some resembled group counseling sessions. Researchers who chatted informally with students came away with the impression that most students in world-of-work type classes did not take their classwork too seriously. "It's

fun," one student said, "but it doesn't have much to do with my job." One coordinator said that he was unsatisfied with the classwork, but that it was difficult to prepare classes for students who were not only working in a variety of occupational programs but whose school majors were in different areas. World-of-work textbooks were stacked on shelves in several classrooms, but there was no evidence that they were used. One coordinator called them "useless."

Thus the classwork component of diversified programs appeared to be a problem to students and coordinators alike. Yet employers seemed unconcerned. Only 6 percent of the participating employers complained that inadequate school training was a constraint limiting the expansion of cooperative education programs. It was evident, however, that the classwork portion of diversified programs was in need of improvement. Since diversified programs had helped open cooperative education to a wide range of urban students, considerable thought should be given to their improvement. Two major areas where improvement is needed are classroom curricula and the training of coordinators to present such curricula.

School-Employer Cooperative Relationships

The matching of students to jobs and the cooperative relationships between schools and employers were very informal:

(1) **Job matching**: For most programs, students were referred to jobs on the basis of job orders available and student interviews with coordinators. Although matching the "right students" with the "right jobs" was given considerable lip service, such matching often was not possible, either because coordinators did not seek jobs suited to individual students, or because job matching on an individualized basis was not practical (because of the scarcity of jobs suitable to individual students). At the post-secondary level, the job matching process was moot, since the vast majority of post-secondary students found their own jobs.

(2) School-employer cooperative relationships: The following points are pertinent to school-employer relationships:

(a) Most of the participating employers interviewed (73 percent)

said that they did not sign formal agreements with the schools (8 percent said that they didn't know whether contracts were signed or not).

(b) Less than half the coordinators interviewed said that formal agreements were used. Moreover, twelve out of sixteen coordinators responded "no" to the question: "Would programs be better if there were formal agreements between employers and schools?"

(3) **Training and supervision on the job:** Training and supervision on the job was usually left up to employers, and in most cases, no "training plan" or contract stipulations were written for employers to follow.

(4) **Grading and evaluation of students:** Most employers participated in the grading process; however, without specific training plans, employer ratings of student performance, although by no means unimportant, were only marginally related to educational objectives.

Counseling

Students were asked whether they discussed cooperative education with their counselors and, if they did, whether the discussions were helpful. Of the participants, 62 percent responded "yes" to the first question, and 97 percent responded "very" or "somewhat" to the second question; the corresponding figures for nonparticipants were 55 and 89 percent respectively. Thus the responses of both groups indicate that the counseling provided by the schools was relatively effective.

Coordinators, probably because they spent a major portion of their time counseling students, were less enthusiastic than their students about school counseling departments. Eleven of the thirty coordinators said the counseling available was inadequate; eighteen said that it was "adequate."

Eighteen coordinators said that placement services were available for their students; ten said "no"; and one failed to respond. When asked to comment on the effectiveness of placement services, nineteen coordinators

said that they were adequate, seven said inadequate, and four failed to respond.

Half the coordinators interviewed said that they conducted yearly follow-up surveys of the previous year's graduates. All were secondary school coordinators, responding to state or LEA regulations which required such follow-up.

Records on placement were available for all secondary school programs, and follow-up records were available for those fifteen programs which conducted follow-up surveys. With the exception of three programs, placement and follow-up records were not available for post-secondary programs.

Program Constraints

Besides identifying several internal and external constraints, the findings also demonstrated that certain hypotheses, often assumed to be constraints limiting the initiation or expansion of urban cooperative programs, tested out negatively. This section, therefore, is divided into three subsections: (1) nonconstraints, (2) external constraints, and (3) internal constraints.

Nonconstraints

The evidence appeared to show that the following factors, often identified as constraints limiting the initiation or expansion of cooperative education programs in urban areas, were not significant:

(1) **Reluctance of urban employers:** The vast majority of all coordinators interviewed said that employer reluctance was not a constraint limiting the initiation or expansion of cooperative education programs in urban areas. Employers were said to be "accessible" and agreeable to accepting student referrals. The fact that most urban employers do not live in the cities where their places of business are located was not considered an obstacle to obtaining employer cooperation.

(2) **Attitudes of urban students:** Participating employers were overwhelmingly positive in their ratings of urban student enthusiasm,

intellectual ability, vocational skills, and student success in programs. These employer ratings were particularly significant in view of the fact that the enrollments of well over a third of the sample programs consisted predominately of students with average or below average grade point ratings.

(3) Other: Participating employers responded that the factors listed below were relatively unimportant barriers to their participation in cooperative education programs:

(a) Poor class instruction
(b) Opposition from regular employees
(c) Students difficult to supervise
(d) Safety reasons
(e) Insurance reasons
(f) Legal reasons

External Constraints

Adverse Economic Conditions. Although the evidence was mixed, over all it supported the conclusion that adverse economic conditions have a constraining effect on the initiation and expansion of cooperative education programs. Certainly, this was true in Detroit, a city with one of the highest unemployment rates in the nation. In the other cities, unemployment had not reached a level where it seriously affected the development of student work stations, but in those cities with above average unemployment rates, adverse economic conditions appeared to affect post-school placement rates negatively.

Union Opposition. Union opposition was not a constraint, primarily because most of the work stations to which students were assigned were not in union jurisdictional areas. Whether union opposition would be a constraint if schools attempted to develop work stations in areas where union influence was strong had not been adequately tested. Several of the long-standing single occupation programs had union support, but only one program was a relatively recent example of school-union cooperation.

Public Transportation. In several cities, notably Los Angeles, Houston, and Oklahoma City, the inadequacy of public transportation, coupled with the vast distances central city students were required to travel to work stations, limited enrollment in cooperative programs to students with private automobiles, or who had the use of automobiles. Although this did not appear to be a significant factor limiting the initiation of cooperative programs, it could be a factor in limiting program expansion.

Internal Constraints

Lack of Coordinators. The most serious obstacle to program expansion was the lack of additional coordinators. Whether this was an "internal" or "external" constraint depended on the observer's point of view. School administrators, accustomed to the flow of federal funds for work education programs, would no doubt cite "lack of funds" as the major reason why it was not possible to hire additional coordinators. Others would say that better personnel management on the part of LEAs and individual schools would result in program expansion. This would involve a better understanding on the part of school personnel of maximum and minimum coordinator case loads, intra-staff cooperation at the school level, and increased supportive services to coordinators by LEAs and community college districts.

Lack of Time for Coordinator Promotion. Coordinators complained of too little time for job development and employer promotion. Most began their job development efforts each fall term at the same time applicants were being interviewed and registered and classes were being organized. The best solution to this problem appeared to be the hiring of coordinators one month before the beginning of the fall term, solely for the purpose of job development.

Program Structure. At the secondary level, the development of an adequate number of part-time positions was hampered by the alternating work education structure adopted by most high schools. This structure called for students to attend school in the mornings and work in the

afternoons. Structures which paired students on jobs, so that employers were receiving the equivalent of full-time employees, might increase the number of job orders received from employers of machine operating personnel, including some business machines. Such pairing could be on a daily, weekly, or term basis, so long as cooperative education students are not segregated in their academic classes.

THE FOLLOW-UP STUDY

The follow-up study consisted of re-interviews with 803 participants in work education programs and a cohort group of 701 nonparticipants who were first interviewed in 1973 during Part I of the study. The objectives of the study were:

(1) To measure program outcomes by determining current employment status, past year employment stability, wage levels, job satisfaction, and reflective school satisfaction (two years after having had participated in work education programs) of those currently working

(2) To determine, if possible, environmental, administrative, and institutional variables which are predictors of program success

(3) To compare the employment experiences of this sample with those of vocational education students who responded to a national longitudinal follow-up study sponsored by the National Center for Educational Statistics

The Part I participants were enrolled in three types of work education programs: (1) specific occupation (or the equivalent of cooperative education programs), (2) dropout prevention programs, and (3) career exploration programs. Table 2 shows the number of interviews completed by educational level and program type. Because of the limited number of pro-

TABLE 2

Completed Interviews by Educational Level and Program Type

Category	Post-secondary		Secondary	
	Partici-pating	Nonpartici-ipating	Partici-pating	Nonpartici-ipating
Specific occupation training programs	266	193	280	302
Dropout prevention programs	43	50	146	93
Career exploration programs			68	63

grams and students in post-secondary dropout prevention and secondary career exploration programs, these groups were not included in the analysis which follows.

Current Employment Status

Table 3 summarizes the current employment status (as of March-April 1975)[1] for those interviewed as part of the follow-up study. Positive outcomes for this measure included "working" or "in the service." The major following points emerged from Table 3:

(1) Judged solely on the basis of total group percentages, program participants fared less favorably than their nonparticipating counterparts; that is to say, participants reported holding jobs slightly less often than nonparticipants.

(2) Students participating in secondary programs were more likely to be working if they were males. At the secondary level, no differences were found between males and females and the percentage holding current jobs.

[1]Interviewing for the follow-up study covered a six-week period from March to April 1975. The 52-week employment period will shift slightly, depending upon when each interview was conducted. In general, the period ranges from March-April 1974 to March-April 1975.

(3) Post-secondary students who were members of minority groups reported holding current jobs more often than nonminorities; the opposite was true at the secondary level.

TABLE 3
Current Employment Status
(Percentages)

Current Employment Status	Post-secondary Specific Occupations[a]		Secondary			
			Specific Occupations[b]		Dropout Prevention	
	Participating	Nonparticipating	Participating	Nonparticipating	Participating	Nonparticipating
Working or in the service	77%	83%	71%	75%	64%	66%
Going to school	7	12	9	12	10	11
Not working, but looking for work	5	1	10	4	9	4
Not working and not looking	11	4	11	8	17	19

[a]Chi square significant at the 0.01 level.

[b]Chi square significant at the 0.10 level.

An examination of the data from the national longitudinal study for those participating in secondary programs (either specific occupation or dropout prevention) confirmed the trends identified above, namely:

(1) Males reported working more frequently than females.

(2) Whites reported working more frequently than blacks and other minorities.

Employment Stability

Measured employment stability for the 52-week period immediately preceding the follow-up interview showed that the average number of weeks worked increased steadily from a low of 33 out of 52 for dropout prevention participants to a high of 38 out of 52 for post-secondary participants. Between participating and nonparticipating students, no significant differences were found for the total groups (Table 4).

TABLE 4

Employment Stability

Average Number of Weeks Worked/Past 52 Weeks

	Post-Secondary Specific Occupation						Secondary Specific Occupation						Secondary Dropout Prevention					
	Participating Working			Non-Participating Working			Participating Working			Non-Participating Working			Participating Working			Non-Participating Working		
	Mean	SD	Median	Mean	SD	Median	Mean	SD	Median	Mean	SD	Median	Mean	SD	Median	Mean	SD	Median
AGGREGATE	38	15	44	37	16	44	35	16	43	37	14	43	33	17	41	33	16	38
Sex																		
Male	39	14	44	37	15	44	37	15	44	39	13	43	37	14	43	37	13	42
Female	37	16	44	37	16	44	33	18	42	36	16	43	27	19	25	26	18	29
Ethnic Group																		
White	36	16	44	39	14	44	37	15	43	38	14	43	34	17	43	32	16	37
Black	42	13	46	18	21	4	28	19	35	33	20	43	27	15	25	33	13	33
Chicano	40	13	45	39	16	45	39	13	44	37	19	44	47	00	47	47	00	47
Other	40	12	45	40	15	45	37	13	40	20	00	20	9	10	5	00	00	00

Again for those trained at the secondary level, sex was the discriminatory factor between the average weeks employed. On the average, men were more consistently employed than women. This finding held true for both participating and nonparticipating secondary students. At the post-secondary level, however, no differences between men and women were found in measured employment stability. Blacks participating in post-secondary specific occupation programs worked more weeks of the year than blacks in the nonparticipating comparison groups. This finding further confirmed the positive effects of post-secondary specific occupation programs on the economic outcomes of blacks and other minorities.

Where comparable data were available, no differences were observed between the national longitudinal sample and the Part II follow-up sample for the key findings reported above.

Current Weekly Earnings

At the secondary level, program participation appeared to have little effect on the average weekly earnings of those interviewed. On the other hand, at the post-secondary level, participating respondents earned substantially more than their nonparticipating counterparts. A sizable portion of the advantage enjoyed by participating students in post-secondary specific occupation programs may be attributed to those trained in manufacturing, marketing and distribution, and health care areas.

Most of the significant relationships regarding current weekly earnings appeared within subgroup comparisons. For example:

(1) Generally, for all programs, men earned more per week on the average than women.

(2) In post-secondary specific occupation programs, whites and blacks earned more per week than their comparison group members.

Since men earned more than women consistently across all programs, this gave rise to the question as to whether the difference in average weekly earnings could be attributed to differences in occupation. Both participating and nonparticipating students were stratified by program type, general occupation classification (both current job and school job),

and finally by sex as shown in Table 5. The general findings revealed in the table indicate that men start with a relative earnings advantage while still in their training programs, regardless of the general areas of occupational experience. This relative advantage continues and in some cases increases following training.

Weekly earnings comparisons were also made between participating and nonparticipating students for the first jobs they held after training. The results show that post-secondary participating students again enjoyed a relative advantage over their nonparticipating counterparts in terms of

TABLE 5

Weekly Earnings of Men and Women Trained in or Working in Similar Occupations

	Post Secondary Specific Occupation				Secondary Specific Occupation				Secondary Dropout Prevention			
	Participating		Non-Participating		Participating		Non-Participating		Participating		Non-Participating	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
Professional												
Current Occupation	$228	$145	$156	*	*	*	*	*	*	*	*	*
(School Occupation)	($ 60)	($ 36)	*	*	*	($ 26)	*	*	*	($ 31)	*	*
Clerical												
Current Occupation	$140	$111	$106	$114	$138	$110	$ 81	$ 95	$ 97	$106	*	*
(School Occupation)	($ 53)	($ 30)	($ 76)	($ 47)	($ 53)	($ 34)	($ 43)	($ 33)	($ 48)	($ 28)	*	*
Sales and Management												
Current Occupation	$213	$ 86	$180	*	$115	$ 71	$ 88	*	*	*	*	*
(School Occupation)	($ 83)	($ 34)	*	($ 46)	($ 57)	($ 31)	($ 44)	*	*	*	*	*
Blue Collar												
Current Occupation	$178	$155	$131	$ 96	$148	$ 69	$150	$ 86	$149	*	$147	*
(School Occupation)	($ 83)	*	($ 60)	*	($ 50)	*	($ 42)	*	($ 54)	*	($ 38)	*
Service												
Current Occupation	$242	$101	*	$ 76	$ 66	$ 67	$ 76	$ 96	*	$ 63	*	*
(School Occupation)	($ 76)	*	($ 65)	($ 58)	($ 42)	($ 24)	($ 43)	($ 28)	($ 27)	($ 30)	($ 51)	($ 26)

*Cells with less than five observations were suppressed.

weekly earnings. Moreover, secondary students trained in specific occupation programs enjoyed a slight advantage over nonparticipating students on their first post-school jobs. Conversely, secondary students participating in dropout prevention programs earned $10 less per week on the average than their nonparticipating counterparts. While the data are insufficient to provide direct evidence, they do suggest that in the long run participants in secondary dropout prevention programs may have benefited from their work education participation by closing the earnings gap with their nonparticipating counterparts. On the other hand, those in secondary specific occupation programs were unable to maintain their original advantage over nonparticipants.

In all comparisons involving weekly earnings, the greatest impact of participation definitely appeared to be focused on post-secondary programs. Whites and blacks and men and women who participated in such programs out-earned comparison cohorts in all cases.

The national longitudinal sample of participating and nonparticipating students revealed a somewhat lower level of earnings. However, wages increased with inflationary pressure over a twelve-month period separating the two points in time of measurements, thus providing those in the Part II follow-up study with a slight earnings advantage due solely to inflation.

The trends identified earlier in the follow-up study were substantiated for those responding in the national longitudinal follow-up period namely:

(1) Males earned more than females.

(2) Whites earned more than blacks.

Differences in earning power favored participants in specific occupation training programs over comparison group members. On the other hand, participants in dropout prevention programs were at a slight earnings disadvantage when compared to nonparticipants.

Current Job Satisfaction

To measure satisfaction with jobs currently held, those interviewed were asked a series of questions focusing on satisfaction with pay and

fringe benefits, working conditions, challenge, and opportunities. Measures of job satisfaction with current jobs suggests the following:

(1) Participating students in post-secondary specific occupation programs expressed more positive attitudes toward their jobs than their nonparticipating counterparts.

(2) The least satisfied group on the basis of the average of their job satisfaction was those who participated in secondary dropout prevention programs.

(3) In terms of overall job satisfaction, participants in secondary specific occupation programs occupied a middle position between the other two groups.

There were few significant differences between subgroups either at the secondary or post-secondary level. In general, men and women expressed about the same levels of satisfaction with their current jobs across educational levels and types of programs. Whites and blacks did not differ significantly in their expressed levels of job satisfaction.

Expressed job satisfaction between national longitudinal and Part II follow-up study participants showed no measurable differences, and in general trends were parallel for both studies.

The Training Program: Carryover and Attitudes

Respondents were asked to reassess the value of the training they received while in school. Also the amount of job carryover was measured by determining how many were at the same or similar jobs to the jobs held while in school. Since there was a 24-month period between the benchmark and the follow-up study, the following trends emerged:

(1) Positive carryover of training to current jobs was highest for participants in post-secondary specific occupations. Four in ten were working at the same jobs they held during the benchmark study, three in ten were in the same field as their training jobs, and four in ten were working in unrelated fields.

(2) Participants in secondary specific occupation programs showed the next highest level of consistency between training and current jobs.

Specifically, three in ten in this group were working at the same jobs they held while in training, two in ten were working in the same general fields, while five in ten were working in unrelated jobs.

(3) As expected, the lowest training to current job carryover was measured among participants in secondary dropout prevention programs. Specifically, two in ten were working at the same jobs they held while in the program, two in ten were working in the same fields, while six in ten were working at unrelated jobs.

(4) Over all, attitudes expressed toward training programs remained positive. Positive evaluations were voiced more frequently by participants in post-secondary specific occupation programs than by those in other groups. Secondary level participants were somewhat less enthusiastic in their retrospective evaluation of training programs.

(5) Asked to assess the job relevance of the training they received while in school, the strongest positive comments came again from participants in post-seocndary specific occupation programs. Participants in specific occupation and dropout prevention programs at the secondary level were significantly less likely to give their programs high marks.

(6) The area where training programs received their highest negative marks was in the assessment of job preparation. Following a now familiar pattern, participants in post-secondary specific occupation programs were more likely to judge their preparation for jobs favorably than participants in either specific occupation or dropout prevention secondary level programs.

CONCLUSIONS AND RECOMMENDATIONS

The findings outlined in the previous sections were based on an assessment of a purposive sample of urban cooperative programs, and the results of follow-up interviews with former participants (and a cohort group of

nonparticipants) in both cooperative and other kinds of work education programs located primarily in suburban and rural areas of the country. Moreover, the programs included in the urban Part II sample, and the primarily non-urban Part I sample, were selected from universes of programs nominated by educators and other vocational education experts. Thus the conclusions listed below apply primarily to the urban cooperative case study sample and, with respect to the follow-up study, the fifty programs included in the Part I sample; they do not necessarily apply to all work education programs in operation throughout the nation.

The conclusions are arranged in three categories: (1) general conclusions, (2) recommendations based on an integration of the findings of the urban case study assessment and the follow-up study, and (3) recommendations relating solely to urban cooperative programs.

General Conclusions

(1) **Effect of 1968 set-aside amendments:** Based on the number of program nominations received, which account for only a small portion of all cooperative education programs in operation in the nation's hundred largest cities — the vast majority of which have been initiated since 1970 — it can be concluded that the cooperative education set-aside provision of the 1968 amendments to the Vocational Education Act of 1963 has increased substantially the number of cooperative programs available to urban vocational education students, and has resulted in extending such programs to students who heretofore have been considered "unqualified" for enrollment in cooperative education programs —

(a) Substantial numbers of minority, disadvantaged, and average to below average students were being enrolled in urban cooperative education programs.

(b) Programs have been designed specifically for students of below average to average academic standing, and disadvantaged students.

(2) **Employer cooperation:** According to the coordinators interviewed,

there was no lack of employers willing to participate in urban cooperative education programs.

(3) **Urban student attitudes:** According to employers interviewed the urban students participating in cooperative education programs were enthusiastic, well motivated, and competent, thus disproving the commonly held assumption that in urban areas the lack of well-motivated students with positive attitudes toward work is a constraint limiting the expansion of cooperative education.

(4) **Occupational areas:** Based on an analysis of the program nominations received, less than half of the cooperative education offerings were in the traditional areas of distributive education and business and office occupations. Moreover, the field work showed that the emphasis was shifting toward "general occupation" and "diversified" programs (especially the latter) and away from traditional single occupation programs.

(5) **Participants versus nonparticipants:** Participants in urban cooperative education programs expressed more positive attitudes toward school and work than nonparticipants. However, there were differences by educational level, sex, and minority status —

(a) Post-secondary participants expressed more positive attitudes than secondary participants.

(b) Post-secondary minorities expressed more positive attitudes than post-secondary nonminorities; the opposite was true at the secondary level.

(c) Women at both educational levels were less satisfied with school and jobs than their male counterparts.

(6) **Completion and placement rates:** Average completion and placement rates for secondary school urban cooperative education programs were high. However:

(a) Placement rates in cities with above average unemployment rates were considerably lower than those in cities with average and below average unemployment rates.

(b) Completion rates for diversified programs were considerably lower than those for general and single occupation programs.

(c) Single occupation programs had the highest training related placement rates, and more students in single occupation programs responded favorably to the question: "Did your program help you decide on a career?"

(7) **Size of city:** Students in large cities (populations of one million and over) rated job responsibility lower than students in medium-size and small cities, and had poorer attitudes toward their jobs. Drop-out rates were also higher in large cities. On the other hand, more students in large cities were likely to recommend programs to friends, and large city participants expressed higher job satisfaction than their counterparts in medium-size and small cities.

(8) **Training and supervision on the job:** Programs with highly rated training and supervision on the job, and integration of classroom instruction and on-the-job training, had higher success outcomes in the following categories —

(a) Job satisfaction of students
(b) Student school satisfaction
(c) Program helped decide student occupation
(d) Overall student rating of programs
(e) The likelihood that students would recommend programs
(f) Attitudes toward programs
(g) Attitudes toward jobs

(9) **Part I participants versus Part II participants:** Based on comparisons between the attitudes of Part I participants (when they were first interviewed in 1973) and Part II urban participants, it can be concluded that the outcomes of the urban programs were approximately the same as those for non-urban programs; and in several important outcomes (job satisfaction and program helped decide career) were better. Thus cooperative education in urban areas is perceived by students to be as beneficial (and in some ways more beneficial) than cooperative education programs in non-urban areas.

(10) **Constraints:** The major potential constraints to expansion of cooperative education programs are discussed below —

(a) **Lack of coordinators:** The most serious obstacle to program expansion was the lack of additional coordinators. Whether this was an "external" or "internal" constraint depended on the observer's point of view. School administrators, accustomed to the flow of federal funds for work education programs cited "lack of funds" as the major reason why it was not possible to hire additional coordinators. Others might say that improved personnel management by LEAs, community college districts, and individual schools would result in program expansion. Regardless of whether the reasons were internal or external, however, lack of coordinators was the major constraint limiting program expansion.

(b) **Adverse economic conditions:** Adverse economic conditions was the major external factor limiting program expansion. Even if it were possible to increase the supply of coordinators, program expansion probably would not be advisable in cities suffering severely high unemployment rates.

(c) **Union opposition:** Whether union opposition was a constraint had not been adequately tested. Too few union representatives had been approached by school officials, and too few attempts had been made to place students with employers who had collective bargaining agreements with unions.

Urban Case Study Follow-Up Recommendations

The following conclusions and recommendations integrate findings from the follow-up study with the urban case study assessment.

1. **Outcomes for Post-secondary Students.** The follow-up study shows that post-secondary specific programs were the most successful of those studies. Minority and women graduates of these programs were earning higher wages and working more regularly than their respective comparison

groups. Perhaps the greatest beneficiaries of the post-secondary participation were minority women who were working and earning more than nonminority female participants. The urban assessment shows that the attitudes of post-secondary cooperative education participants toward their programs, and the wages they were earning on the job, were more positive and higher, respectively, than those of secondary school participants. The combination of these findings indicates that the positive post-school trends of post-secondary participants had their beginnings in school experience.

Recommendation: Consideration should be given to placing even more emphasis on the funding of post-secondary cooperative education programs. Obviously, such a decision should not be based solely on the results of this study, but the question is pertinent and points to future policy consideration.

2. **Outcomes for Minorities.** Post-secondary minorities benefited more from cooperative education programs than any other group, both in terms of post-school outcomes and in-school satisfaction. High school minorities, on the other hand, were slightly less satisfied with their cooperative experience than their nonminority counterparts. This may be because the occupations range was narrower for minorities than for nonminorities, and the wages received by minorities were lower.

Recommendation: Special efforts should be made to place high school minority participants in a wider range of occupational offerings, especially among blue collar occupations, and to assure that minorities receive wages at least equal to those of nonminorities.

3. **Outcomes for Women.** Both the follow-up study and urban cooperative education assessment point out clearly that the outcomes for women participants were much lower than those for men. The range of occupational offerings in which women participated was narrower than that of men, and the wages paid women, both while they were in school and after they had entered the labor market, were significantly lower than the wages paid men — even when both had been trained in the same occupational areas.

Recommendation: Special incentives should be provided to school districts which show a willingness to initiate innovative educational programs and placement services that would encourage a wide range of female labor force participation, and to assure that the wages paid women are at least equal to those paid men when both are working in the same occupational areas. Such programs should involve counselors and coordinators who often play a major role in influencing the career goals of students and in developing jobs.

4. **Outcomes for Secondary Students.** The follow-up study indicates that although the attitudes of high school work education participants were much more positive than nonparticipants while they were in school, two years later little difference was found between the two groups. Furthermore, the outcomes for high school participants, in terms of current employment status, past year employment stability, wage levels, and job satisfaction, were about the same as those for nonparticipants — even though the first jobs obtained by participants paid higher wages than those obtained by nonparticipants.

Recommendation: The shift in emphasis from single occupation to multiple occupation programs, and the extension of cooperative education to students who in previous years would not have been considered qualified for cooperative education programs, may account for the short duration of the positive outcomes cited above. Thus traditional assumptions regarding cooperative education should be reexamined. Attention should be given to whether the same administrative and program techniques, which have been successful in the past with respect to single occupation programs, apply to diversified and general occupation programs. The goal should not be to discontinue diversified and general occupation programs, but to find ways of strengthening them, particularly for students who have not been served well in the past.

5. **Upgrading of School Jobs.** The follow-up study shows that participant outcomes were better for students whose school jobs:

a. Paid higher than average wages

b. Employed students for more than the average number of hours per week

c. Lasted longer than the average job

d. Offered more job responsibility and challenge

The urban case study assessment revealed that strong relationships existed between success criteria and the following:

a. Highly rated training and supervision on the job

b. Highly rated integration of classwork and on-the-job training

Recommendation: Continued efforts should be made to upgrade the quality of work stations and to seek agreements between schools and employers which will assure adequate training and supervision on the job, and maximum integration of classwork with on-the-job training.

Urban Case Study Recommendations

6. **Outcomes for Diversified Programs.** The outcomes for diversified programs were lower than those for other types of programs. For example, completion rates were lower, fewer of the students interviewed said that the jobs related to their career interests, the programs were given lower student ratings, fewer students were likely to recommend the programs to friends, and student attitudes toward diversified programs were less positive than the average for the total sample of cooperative education students. Since many diversified programs were directed toward disadvantaged students, potential dropouts, and students with below average to average grade point averages, the findings cited above should not come as a surprise, and should not be used to discourage the initiation of such programs (see below).

Recommendation: Diversified program enrollment should be limited to those students who have not made a choice of an occupational cluster for their career. These students can most benefit from the freedom to shift from one occupational cluster to another without changing school schedules.

7. **Outcomes for Students with C, D, or F Grade Point Averages.**

Although the evidence indicates that participants with C, D, or F grade point averages had far less positive attitudes toward school and their cooperative jobs than students with A or B grade point averages, a higher percentage of average to below average students wanted full-time jobs in the same occupational areas as their school jobs. What this means is that the C, D, and F students were more concerned with their post-school employment prospects than A and B students. Thus programs directed toward C or lower students (for example, many diversified programs) were meeting a student demand, or need.

Recommendation: Diversified and other programs designed to serve students with average and below average grades should be continued and strengthened.

8. **Student-Coordinator Ratio.** Student-coordinator ratios were relatively high (often 40:1). Although it was beyond the scope of this study to evaluate the coordination function, it appeared that the benefits of high student-coordinator ratios (program expansion and extension of cooperative education programs to the disadvantaged, including students with low grades) far outweighed possible program deterioration. Moreover, it is highly doubtful that student-coordinator ratios as low as 20:1 would be cost effective in most school and community college districts. Definite conclusions regarding student-coordinator ratios are difficult because of the lack of available information on the time needed by coordinators to fulfill all of their functions.

Recommendation: Additional research is needed to determine the number of students that one coordinator, working full time, can supervise on a weekly basis and to determine if the type of cooperative education program affects this ratio. Such research should seek to determine the time needed for the average coordinator to recruit students, develop curricula, teach classes, develop work stations, and monitor student work sites.

9. **Job Development.** A large percentage of coordinators did not believe that they had adequate time to perform job development and employer promotion. Most began their job development efforts each fall term at the

same time applicants were being interviewed and registered and classes were being organized.

Recommendation: Consideration should be given to hiring coordinators one month before the fall term primarily for the purposes of job development. Where this was done, the development of work stations was not a harassing problem, and coordinators were able to increase substantially their employee contacts.

10. **Program Structure.** At the high school level, the development of an adequate number of part-time positions was hampered by the alternating work education structure adopted by most high schools. This structure called for students to attend schools in the mornings and work in the afternoons. Part-time jobs involving the use of expensive machines, including some office machines, were not available to students who were available for only half a day.

Recommendation: Consideration should be given to the adoption of structures which allow students to be paired on jobs involving expensive equipment on jobs, so that such equipment can be kept in operation full time. Pairing should be accompanied by assurances that full-time employees will not be replaced.

11. **Instruction.** Although participant rating of integration of classroom instruction and on-the-job training was generally higher than that of non-participants, the difference between the two groups in the "very closely" category was not significant, and a large minority of participants (30 percent) responded "not at all." This may be due to the large number of diversified programs included in the sample (30 percent) in which the world of work classroom instruction was only marginally related to the work students performed on the job.

Recommendation: Attention should be given to improving world-of-work curricula used in both diversified and general occupation programs. These curricula pose problems for both students and coordinators and are in need of improvement.

12. **Work Stations.** It appears that in the rush to expand the number of programs after the passage of the 1968 amendments, the matching of stu-

dents to jobs and the cooperative relationship between schools and employers became increasingly informal. This may be one of the reasons why participants rated overall quality of work stations slightly below nonparticipants (who rated their jobs), and training and supervision on the job about the same as nonparticipants.

Recommendation: Consideration should be given to tightening formal relationships between schools and employers, at least to the extent that on-the-job training is related meaningfully to educational objectives.