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ABSTRACT

This second volume of the interim report provides detailed case study reports on each of the eight Youth Apprenticeship Projects. (Volume 1, an overview of data from the site visits, is available separately as CE 032 791.) Discussion areas covered in each site visit report are local context/operational environment, administrative information, program activities, developmental strategies, operational experiences, and other observations (evaluations regarding general achievement and possible issues in relation to project concepts and implementation). These projects are described: Cleveland Youth Apprenticeship Project, Houston Youth Apprenticeship Project, Nashville Youth Apprenticeship Project, New Orleans Youth Apprenticeship Project, Des Moines Youth Apprenticeship Project, New Jersey Youth Apprenticeship Project, Rhode Island Youth Apprenticeship Project, and Rockford Youth Apprenticeship Project. (YLB)

INTERIM REPORT
STUDY OF NEW YOUTH INITIATIVES IN APPRENTICESHIP
VOLUME 2: SITE VISIT REPORTS

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SITE VISIT REPORT ON THE

CLEVELAND YOUTH APPRENTICESHIP PROJECT

INTRODUCTION

The following report presents the findings of a site visit conducted at the Cleveland Youth Apprenticeship Project in Cleveland, Ohio, on August 27-31, 1979. Discussion areas in this site visit report are covered under separate section headings as follows:

- Local context, e.g., the general operational environment of the apprenticeship-school linkage demonstration;
- Administrative information, e.g., project staffing, BAT/SAC coordination, school system relationships, and staff supervision;
- Program activities, e.g., apprenticeship program registrations, individual apprentice registrations, job development, student recruitment and project performance to date;
- Developmental strategies, e.g., approaches and materials used to promote and continue the project in relation to local schools, employers, and the community as a whole;
- Operational experiences, e.g., areas in which specific problems have been encountered in project activities, including start-up difficulties, school and employer reactions to the project; and,
- Other observations, e.g., evaluations regarding the general achievements and possible issues in relation to project concepts and implementation.

These topic areas are discussed in detail in each of the following sections of this site visit report.

LOCAL CONTEXT

The Cleveland Youth Apprenticeship Project operates within the City of Cleveland and is contracted to the Cleveland Public School District. Cleveland, a city of about 639,000 in population in 1970, ranks eighteenth in population for all U. S. cities of at least, or in excess of, 100,000 population. However, like many major cities in the U. S., the City of Cleveland has been decreasing in population since the 1960s. For example, between 1970 and 1975, the population of Cleveland decreased by 14.9 percent. Much of this population change has been reflected in the move of middle class populations to the suburbs, a phenomenon often referred to as "white flight," but often more accurately characterized by middle class flight, both black and white. In the Cleveland situation, however, nearly forty percent of the city's population is black and, while there has been a general decrease in the total population of the city, the black population in Cleveland actually increased by 14.87 percent between 1970 and 1975.

Both Cleveland and the areas surrounding the city are rather heavily industrialized. In 1975, for example, 37.5 percent of the city's employed civilian labor force of about 182,000 was engaged in manufacturing. The production of transportation equipment in the Cleveland area, especially automobile bodies and parts, is second only to Detroit. Consequently, a large portion of the labor force is employed by General Motors, Ford, Chrysler Corporation and related suppliers of these firms. Other large industries include steel production, oil refining, and the production of chemicals and petroleum products. Cleveland also is one of the nation's largest producers of machine tools. Also, since the opening of the St. Lawrence Seaway in 1969, the City of Cleveland has become one of the largest seaports on the Great Lakes.

With such economic reliance on manufacturing industry in the area, Cleveland is somewhat subject to fairly wide ranges of employment and unemployment depending upon cyclical economic conditions. Unemployment among the city's black population, especially youth, has been high generally and extremely high during periods of economic recession. The current overall unemployment in the City of Cleveland is around seven percent.

The City of Cleveland has about 180 public schools in the school district, and the total elementary and secondary student enrollment in 1970 was nearly 181,000. The Cleveland Public School District has a fairly intensive vocational education program in the secondary schools and several separate, vocational-technical high schools. One school official estimated that nearly 64 percent of the eleventh and twelfth grade students in the district are enrolled in some type of vocational education course. Trade and Industrial (T&I) Education is taught in over fifteen of the high schools in Cleveland. The Max S. Hayes High School, a vocational-technical school, has one of the most extensive T&I programs in the city. In addition, the Max S. Hayes school provides apprenticeship related-training for fourteen building and construction trades, plus the service trade of auto mechanics.

The emphasis on vocational education in the City of Cleveland Public School District is reflected, in part, from a strong vocational education program promoted by the State of Ohio. In 1976, for example, about 715,000 students were enrolled in Federally aided vocational programs at both the secondary and post-secondary level. The FY 1976 budget for vocational education in the state was $209.3 million of which $174.8 million (83.5%) consisted of state and local funds. Also, the state has emphasized career education as an integral component of all education in

the public schools in recent years, but particularly in programs involving vocational education.

Several important factors about the City of Cleveland have impacted significantly on the public schools and public education. With the decreasing city population, both the city tax base has been declining and the public school enrollments have been decreasing. Failure of the city government to get city bond issues passed in public elections has created severe financial crises, not only for the financing of public education, but for other public services as well. Student dropouts are a significant problem in the city schools, and several programs have been developed to alleviate the student dropout problem. In general, both the city and its public school system are in a rather severe financial crunch. Schools have, on occasion, closed early because of insufficient funds to meet teacher payrolls. In 1977, at the start of the Cleveland Youth Apprenticeship Project, the public schools opened nearly eight weeks late because of a teachers' strike. Most of the teachers and public service employees in the City of Cleveland are unionized.

ADMINISTRATIVE INFORMATION

The Cleveland Youth Apprenticeship Project is contracted to the Cleveland Public School District and administered through the Department of Vocational and Technical Education. Project staffing consists of a project manager, three project coordinators, and a secretary. An advisory committee to the Youth Apprenticeship Project is made up of former members of the Cleveland Apprenticeship Information Council, a previous project funded by the Federal government. The development of the administrative and operating structure of the project has been particularly

interesting in terms of community-school system relationships. It appears that there was considerable uncertainty early in the project's implementation (when the project was experiencing severe start-up problems) as to whether the project would be directed by the school system or the project advisory committee which was later incorporated as the Northeastern Ohio Apprenticeship Council.

Depending upon whose side of the story one cares to listen to, it appears that there was considerable struggle going on for control of the project. In retrospect, however, it seems that there may have been many misunderstandings on the part of the advisory committee members, the local BAT Office, and the school system. From the outset, there was some question as to whether the Cleveland City School District would be the most effective sponsor to administer the project. This doubt was expressed initially by the Secretary of Labor's Apprenticeship Task Force when site locations were being chosen for the apprenticeship-school linkage projects. One compromise in naming the Cleveland City School District as the prime sponsor was to have the school district appoint part of the project staff and have the local BAT Office appoint the other project staff members. As it turned out, the school district appointed the project manager and the project secretary while BAT selected and appointed the project coordinators. According to the project's BAT monitor, this initial and informal agreement to appoint project staff separately was disputed by the Cleveland City School Board after the project contract was signed.

In addition, early controversy arose between BAT and the Cleveland Public School District concerning the withholding of salaries of project staff during the Cleveland teachers' strike in 1977. (During the strike, project staff operated out of their homes and cars in order to get the project underway.) The school

eventually paid the salaries of project staff out of its general funds rather than project funds for a period of three months at the start of the project. According to the project manager, the school system's financial office did not understand the procedures for project vouchers and a letter of credit under which the apprenticeship-school linkage project was to be funded. This led to some misunderstanding at the BAT National Office that Federal funds for the project were being meshed with the school system's general funds. This, of course, would have been a violation of Federal regulations. The school system, however, was paying project staff salaries out of general funds because of confusion about Federal project funding through a letter of credit.

These misunderstandings and some conflicts between the people involved with the project got the Cleveland Youth Apprenticeship Project off to a rather poor start. In addition, apparently there was a belief among some advisory committee members that the Cleveland City School Board was getting $250 for each student apprentice placed by the project. In fact, the $250 figure was used by the school system as a guide to estimate project overhead costs when negotiating the contract. In retrospect, most of the early conflicts have been resolved and the project at the time of the site visit was operating quite smoothly. The project monitor and advisory committee members all agreed that the project manager was the key person responsible for smoothing over the initial problems between local BAT personnel, the advisory committee members, and the school system.

PROGRAM ACTIVITIES

The Cleveland Youth Apprenticeship Project operates out of the Max S. Hayes High School, the vocational-technical high school mentioned earlier in

this report. While the project placed only 83 student apprentices during the first year of the contract, more progress was made during the second year of operation. As of the end of July 1979, 213 student apprentices have been placed in a variety of apprenticeable trades. Machinists, tool and die workers, and automobile mechanics are prevalent apprenticeable occupations included in the project. Table 1, following, presents the occupational areas of student employment as of May 31, 1979.

Table 1

AREAS OF STUDENT EMPLOYMENT*

Occupational Areas	Number of Students	Percent of Students
Machine Trades	104	50
Automotive Trades	48	23
Printing Trades	23	11
Small Motors	7	3
Drafting	6	3
Other	20	10
Total	208	100%

*As of May 31, 1979.

While most of the apprentices have been male (97%), there has been a high level of minority student participation in the program. Ninety-eight (46%) of the student apprentices are minority students. However, minority representation has not been a special focus of the program, but rather reflects the minority distribution of students in the Cleveland public schools. Nearly half of the students in the Cleveland public schools are black students. In fact, the BAT monitor and some of the project staff are strongly opposed to the establishment of minority, disadvantaged, or female target groups in the project.

Project coordinators are assigned to different schools and areas of the city for recruitment and job development activities. As of early May, 108 new apprenticeship programs had been registered as a consequence of the project. The project coordinators do the initial contacts and assessments of apprenticeship program potential with the area employers. Local BAT staff then contact the employers and write the program standards with the employers. BAT forwards the apprentice registration and program registration applications to the Ohio State Apprenticeship Council (SAC) since Ohio is an SAC state. The Ohio SAC then registers the apprenticeship programs and the apprentices. Apprentices still in high school are registered under a special designation, "student apprentice," but the designation has no significance other than to flag apprentices registered through the Youth Apprenticeship Project.

Coordinators recruit students primarily through vocational instructors in the different schools. Most of the student apprentices to date have come from the T&I programs in the Cleveland public schools. Consequently, over the two years of the project, coordinators have developed fairly systematic recruiting procedures with the T&I instructors in the vocational-technical schools. The screening of the students for apprenticeship positions, therefore, is fairly thorough. There are several reasons for this rather systematic screening. First, an exception in the amount of work release time has been made by the Cleveland City Public School District for the Youth Apprenticeship Project. Cooperative education (co-op) programs, for example, involve students in only six to eight weeks of actual work experience with employers, i.e., co-op students do not get on work sites until halfway through their senior year. By way of

contrast, student apprentices from the Youth Apprenticeship Project are permitted work release time by early October of their senior year.

Secondly, by law in the State of Ohio, employment experiences of students are credited toward high school graduation requirements. Therefore, the work experiences of the students (when school is in session) have to be graded by the instructors. Also, there are attendance requirements that instructors are responsible for documenting. Finally, for state vocational funding purposes, vocational instructors need a minimum of 15 students in their classes for the schools to be eligible for state reimbursements for vocational education programs. Reimbursements are allocated according to state mandated formulas which differ by the number of class hours in each vocational program. Some vocational instructors were concerned initially that they would lose credit for students who were employed in apprenticeship positions through the Youth Apprenticeship Project. It was determined early in the project that instructors would get credit for apprenticed students from their classes. Consequently, vocational class enrollments for the purpose of state funding have not been jeopardized by the apprenticeship-school linkage project.

Because of such situations regarding the policies and requirements of the school system, there is considerable interaction between the project staff and the T&I instructors in order to fully implement the project. For example, students need to be recommended for apprenticeship positions by the vocational instructors; student eligibility for work release time needs to be determined and approved by the scheduling counselors in the schools; and documentation of work hours and job performance evaluations on each student apprentice must be returned to the instructors for grading and attendance purposes. Vocational

course grades of the apprenticed students are determined by the employer's evaluations and by the performance on work-related instruction received in school.

The project manager of the Cleveland Youth Apprenticeship Project has worked out a detailed accounting system by which the information flow between project activities, instructors and the school system is maintained. Project coordinators are responsible personally for picking up each employer's stipend voucher and the appropriate student job performance evaluations according to a routine schedule. According to the project coordinators, this responsibility is extremely time consuming, but monitoring of the student apprentices at the worksites also is accomplished in the process.

Project coordinators, like the vocational instructors, also seem to involve themselves in the "screening" of the student applicants when selecting and placing the student apprentices. According to the project manager, the project staff emphasizes three important aspects in the apprenticeship project: (1) the well being of the individual student; (2) school performance, i.e., the work situation and time requirements must not jeopardize the student's school work; and, (3) the job or employment element. With this hierarchy of values in mind, students are selected and counseled prior to signing their apprenticeship agreements. Also, one project coordinator estimated that nearly eighty percent of the students were escorted to their job interviews and given instructions on how to handle the interview situation with a potential employer. The project coordinators seemed to view the screening and counseling activity as a way to protect both the students and the employers from high risk job placements and apprenticeship indentures.

The retention rate of the apprentices from the Cleveland Youth Apprenticeship Project was quite impressive at the time of the site visit. The project manager reported that the overall retention rate was nearly seventy-five percent for all student apprentices placed since the beginning of the project. In addition, the five employers interviewed during the site visit were enthusiastic about the program and about the skill level of the student apprentices they were obtaining through the project. The project manager stated that only one percent of the apprentices had been terminated by the employers for unsatisfactory performance. Employers reported that the usual reason for termination was some combination of poor work attitude and poor attendance, not usually inadequate skills related to tasks required on the job.

DEVELOPMENTAL STRATEGIES

Four primary strategies have been used by the Cleveland Youth Apprenticeship Project to promote the implementation and continuance of the apprenticeship-school linkage project. These four promotional strategies include:

- Personal contacts with union organizations to explain specific objectives and the scope of the project;
- Publication and distribution of a brochure to explain the project and how it operates (mostly for job development activities with employers);
- Presentations to various community organizations to outline the project activities and purposes; and,
- Production of an interview tape with the project manager to describe the project and its objectives over a local radio station.

Before the project was implemented, individual meetings were held with each major union in the Cleveland area to explain the purposes and limitations of the demonstration project. These individual meetings were followed up by a group

meeting with representatives from each of the union organizations contacted individually. Meetings were held in order to emphasize that the project would not get involved in the building and construction trades (construction activity in the City of Cleveland was fairly low in 1977, and unemployment in the construction trades was fairly extensive). It was emphasized that student apprentices would be placed mostly in non-union firms (93% of the student apprentices have been placed with companies whose employees are not organized). The major point of these meetings was to convince union representatives that the Youth Apprenticeship Project would not interfere with regular apprenticeship activities of the Joint Apprenticeship Councils (JACs). To date, most of the local unions have maintained a somewhat neutral stand about the project, i.e., neither lending support to the project nor formally approving of the apprenticeship-school linkage concept.

A brochure explaining the project was developed by project staff for distribution to selected firms and employer associations in Cleveland. Recently, because of complaints from Spanish-American groups in Cleveland about the number of Hispanics included in apprenticeship programs, the Cleveland project brochure was translated into Spanish. The project manager intends to distribute the brochure to the parents of Spanish-American students in the Cleveland public secondary schools. The brochure was developed in cooperation with the Spanish-American Association of Greater Cleveland and is intended to recruit more Hispanic students into vocational education programs and, possibly, into formal apprenticeship programs in the Cleveland area.

As another developmental strategy for the project, the project manager has been active in presenting the project concept and purposes to various community

and business groups. These presentations have included talks to various business associations and school-related organizations in the City of Cleveland. Also, as a project promotional strategy, a short interview tape with the project manager was produced professionally and played over a local radio station about five times a day for a period of two weeks before the beginning of the 1978-1979 school year. According to the project manager, however, the precise impact of mass media promotional strategies is not known. Some inquiries from employers have been directed to the project office, but it is not known what developmental strategy, if any, prompted the inquiries. According to the view of the project coordinators, recruiting employers is most effective when it involves personal contact with the employer at his or her place of business.

OPERATIONAL EXPERIENCES

As stated briefly before, the Cleveland Youth Apprenticeship Project got off to a rather shaky start in 1977. Part of the situation was attributable to circumstances, e.g., the 1977 teachers' strike which delayed the opening of the Cleveland public schools. However, part of the problem also was due to conflicts and differences of opinion about project responsibilities and operations. As noted by the project manager, the school system was somewhat forced to reaffirm local school board policy when pressed by outside inquiries concerning the project, e.g., the dispute about the payment of project staff during the teachers' strike. By contract, administration of the project was the responsibility of the Cleveland Public School District. It is possible, however, that some of the problems involving the school system and the BAT office might have been anticipated since the project staff appointments were divided between the school system

and BAT. Also, there were fairly clear indications during the site visit that the project's advisory committee had not functioned only in an advisory capacity. Whether the advisory committee's actions were intended to "save" the project from failure or not, the school system had sole responsibility for the project. Fortunately, the advisory committee situation was resolved. The project now seems to have a good working relationship with its advisory committee and vice versa.

With regard to the duties of the project coordinators, the amount of time involved in collecting stipend vouchers and apprentice progress reports from individual employers on a monthly basis may impinge upon job development and student recruitment efforts. This, in addition to escorting students to employment interviews, is extremely time consuming for the project coordinators. On the other hand, given the typical mobility of most high school age groups, the apprentice retention rates in the Cleveland project seem impressive.

T&I instructors may be "overscreening" students for the project, but the success of their students in the apprenticeship positions is partly a reflection of their instruction activity. There is some delay in getting senior students on the job and signed as apprentices simply because T&I instructors are assigned either to eleventh or to twelfth grade students. Therefore, since the instructors are involved in getting a new class of seniors started in their vocational courses, it is difficult for them to recommend any students early in the senior year. As a result, the project staff has to wait until early in October before they can place new seniors in apprenticeship positions. However, before this time delay was instituted in the project, some instructors were reporting the student apprentices as absent from school simply because they didn't know that

the students were working. To resolve the problem, employers were asked that student apprentices not be required to work between the end of August and the beginning of October. Some student apprentices, however, have gotten around this school issue by working after school hours and on weekends.

In general, the project staff has reacted somewhat negatively to the idea of a set number of apprenticeship registrations as the criterion for project evaluations. Instead, the project staff has emphasized the "quality" of student apprentice registrations both in terms of student and employer satisfaction. It has not been unusual, for example, for project coordinators to place a student in a job, even when there is no chance of registering an apprenticeship program with the employer. Also, project coordinators reported a certain amount of job counseling with students and even home visitations to iron out personal and family problems of the students.

Operating procedures in the Cleveland project are very systematic and detailed. This may reflect the training and background of the project manager, e.g., the project manager was once the Director of the Cooperative Office Education Program in the Cleveland public schools. Although the procedures required of project coordinators are time consuming, the careful and detailed internal monitoring of project activities means that the project manager knows the exact status of the project at any point in time, e.g., student placements, registrations, stipend payments to individual employers, and overall project budget balances.

To date, the project participation outcomes for the student apprentices have been quite good. For example, most of the student apprentices start work at about $4.00 per hour in their apprenticeship positions. In addition, nearly

eighty percent of the student apprentices are employed in excess of the 20-hour work week even while school is in session. A few student apprentices in Cleveland have earned over $6,000 in wages during their final year of high school. Employers (at least those interviewed during the site visit) were extremely enthusiastic about the program. In the machinist trades in particular this positive reaction about the project is understandable because of Cleveland's severe shortage of skilled labor in these occupations. One employer and owner of a machine shop reported that he had advertised a machinist opening for three months without receiving a single application for the position. Also, other employers reported that the skill level of the high school students was superior to most employees obtained from other machinist training programs, e.g., the Governor's 12-week crash training program for machinists.

Overall, the Cleveland Youth Apprenticeship Project seems to be operating effectively, after having overcome some severe problems at the beginning of the demonstration project. Now, the school system in Cleveland, the local BAT office, and the advisory committee are apparently working in concert to effectively demonstrate the viability of the apprenticeship-school linkage concept.

OTHER OBSERVATIONS

During the 1979-1980 academic year, the Cleveland Youth Apprenticeship Project will be operating in the Cleveland City Public School District and in the surrounding counties of Cuyahoga Lake and Lorain. In one sense, therefore, this spill-over into contiguous counties will impact on the program by broadening its base of operations. For one thing, the population of the project area will be almost tripled (from 638,000 to over 2 million). This broadening of the project

area may have profound effects on the project operations also in terms of travel and time for project coordinators to routinely pick up employer stipend vouchers and student performance evaluations. Further, the job placements of student apprentices will be more dispersed, a factor which may cause some transportation problems for some-student apprentices.

The Cleveland project has been successful enough for the Ohio State Department of Vocational Education to initiate efforts to expand the apprenticeship-school linkage concept to a total of eight major cities in the State of Ohio. Initial meetings are planned with the Vocational Education Directors from eight cities, BAT personnel, the Cleveland project manager, and government representatives from Ohio on September 19 to discuss expansion of the apprenticeship-school linkage concept. Two-thirds of the funds to employ project coordinators at eight city locations in Ohio have been promised by the State of Ohio. The remaining one-third of the funds for the local coordinators is being sought from Federal sources. This latter activity in expanding the youth apprenticeship and school linakge concept in Ohio appears to be a strong endorsement of the Cleveland Youth Apprenticeship Project from the state's vocational education community.

Finally, the Youth Apprenticeship Project in Cleveland deserves considerable credit for surviving and achieving success under some very difficult circumstances in implementing the youth apprenticeship demonstration. The discussion of the project's developmental problems in this site visit report is not intended to subtract from the project's achievements as evidenced by student apprentice and employer satisfactions expressed during the site visit. It appears that the difficulties involved in the initial stages of the project have not reduced the acceptance of the concepts behind the apprenticeship-school linkage project. In

fact, the project staff, the BAT monitor, and members of the advisory committee all seemed determined to make the Cleveland demonstration highly successful for students, employers and the community as a whole.

SITE VISIT REPORT ON THE HOUSTON YOUTH APPRENTICESHIP PROJECT

INTRODUCTION

The following report presents the findings of a site visit conducted at the Houston Apprenticeship-School Linkage Project in Houston, Texas, on February 25-29, 1980. Discussion areas in this site visit report are covered under separate section headings as follows:

- Local context, e.g., the general operational environment of the apprenticeship-school linkage demonstration;
- Administrative information, e.g., project staffing, BAT coordination, school system relationships, and staff supervision;
- Program activities, e.g., apprenticeship program registrations, individual apprentice registrations, job development, student recruitment, and project performance to date;
- Developmental strategies, e.g., approaches and materials used to promote and continue the project in relation to local schools, employers, and the community as a whole;
- Operational experiences, e.g., areas in which specific problems have been encountered in project activities, including start-up difficulties, school and employer reactions to the project; and,
- Other observations; e.g., evaluations regarding the general achievements and possible issues in relation to project concepts and implementation.

These topic areas are discussed in detail in each of the following sections of this site visit report.

LOCAL CONTEXT

The Houston Apprenticeship-School Linkage Project focused upon nine independent school districts in Harris County, Texas. In 1975, Harris County had an estimated population of 1,944,431 and ranked sixth in population among all the counties in the United States. The Houston area had experienced dramatic growth during the 1960's and experienced continued expansion during the 1970's. The area's economic base is strong and well-diversified. Houston is a major port city as well as the headquarters location for many U.S. petroleum companies. In addition, many other types of companies are relocating their corporate headquarters to the Houston area as part of the general southward shift taking place in American business. In addition to these private sector ingredients, Houston also is the site of NASA's Manned Spacecraft Center.

As a result of its diversified and expanding economy, employment opportunities in the Houston area are relatively abundant. During 1976, the unemployment rate in the Houston SMSA was 5.5 percent. In the central city, the rate was only slightly higher at 5.7 percent. For youths aged sixteen through nineteen, the 1976 unemployment rate in the central city of 16.8 percent, actually was slightly lower than the 17.4 percent rate of unemployment which prevailed in the SMSA. These statistics suggest that the labor market is relatively strong and also relatively homogeneous with respect to participation by the central city and the surrounding areas. Statistics on apprenticeship are compatible with these general statistics. It was reported that during 1979, more than half of the apprentice registrations for the State of Texas were within the jurisdiction of the Houston BAT office. All the statistics cited were reinforced by the observations made by respondents at the time of the site visit. Respondents consistently reported a diversity of employment

options, a corresponding abundance of opportunities for advancement, and a resulting high rate of turnover in most occupational areas. In summary, therefore, the Houston area appears to be characterized principally by its relatively high level of prosperity.

The educational system in the Houston area is unique in a number of respects. First, there is a sharp contrast in size between the Houston Independent School District and the small, surrounding school districts within Harris County. Based upon 1979 enrollment data, the Houston Independent School District was the seventh largest school district in the nation. By contrast, the school districts which surround Houston are much smaller, serving the different incorporated municipalities and unincorporated communities which lie outside the City of Houston but within Harris County. Because of this structural feature of the local educational system, the effort to establish a single Apprenticeship-School Linkage Project for the greater Houston area necessarily meant that the project would have to interface with school systems of very different sizes. Due to this disparity in size, many of the surrounding school districts were reluctant to participate in a joint endeavor such as the Apprenticeship-School Linkage Project. Officials of the school systems feared that the project would come to be dominated by their much larger neighbor in Houston.

In addition to this marked disparity in size between the urban and suburban school districts, another feature also makes the Houston educational setting somewhat unique. The junior colleges surrounding Houston have their own tax base and their own independent administrative structures. In contrast, the Houston Community College has no tax base of its own and is completely dependent upon the Houston Independent School District for local tax revenue.

As a consequence, the school board for the Houston School District also serves as the board of directors for the Houston Community College. As a result, the Houston Community College is, in effect, an adjunct of the Houston Independent School District.

The relationship between the Houston Independent School District and the Houston Community College is exemplified by the President of the Houston Community College, Mr. J.B. Whiteley. Mr. Whiteley served as Deputy Superintendent for Occupational and Continuing Education with the Houston Independent School District prior to the formation of the Houston Community College. When the Houston Community College was organized, Mr. Whiteley came to that organization as its chief administrator. Mr. Whiteley is a well known vocational educator whose proficiency in fiscal, technical, and management matters is widely acknowledged. The consortium consisting of the Houston Community College and the Houston Independent School District, which Mr. Whiteley has come to exemplify, is regarded with a mixture of deference, envy, and suspicion among officials of neighboring school districts and junior colleges.

The Houston Community College provides related instruction for many joint apprenticeship committees in the Houston area. The close link between the community college and the elementary and secondary school system enables the community college to use secondary school facilities for evening courses. This makes it possible for the community college to offer related instruction at a variety of convenient locations. The close link between local apprenticeship programs and the Houston Community College is explained partly on the basis of this convenience aspect, and partly on the basis of the fact that apprenticeship sponsors must conduct their related instruction courses in conjunction with an educational institution in order to qualify for State and

Federal vocational education funds. Thus, the cooperation between the apprenticeship sponsors and the Houston Community College is based, in part, upon this financial incentive. Accordingly, it was reported and observed that the relationship in Houston between the apprenticeship community and the vocational education community is not without the tensions and conflicts that have come to characterize relations between these related yet divergent groups.

One final factor made the situation in Houston a unique one for implementation of an Apprenticeship-School Linkage Project. Prior to initiation of the Apprenticeship-School Linkage Projects, Houston had been selected as one of ten sites for implementation of a Multi-Trades Project. Originally known as Community Apprenticeship Councils, these projects were included in the first wave of New Initiatives in Apprenticeship proposed by Secretary of Labor, William Usery. The Apprenticeship-School Linkage Projects were included in a subsequent wave of New Initiatives in Apprenticeship proposed by Secretary of Labor, Ray Marshall. Houston was the first city to be selected for implementation of both of these types of apprenticeship demonstrations. In addition, Houston Community College was selected to be the sponsor for both the Multi-Trades Project and the Apprenticeship-School Linkage Project in Houston.

ADMINISTRATIVE INFORMATION

The administrative arrangement implemented in Houston was quite different from the administrative arrangements implemented by the other sponsors of Apprenticeship-School Linkage Projects. The basic administrative components in Houston included the Houston Community College and the three participating school systems. The three participating school systems were:

- Houston Independent School District;
- Pasadena Independent School District; and,
- Galena Park Independent School District.

A total of eleven project staff members were assigned to these administrative units. The project director, an assistant project director/senior counseling specialist, and one secretary were assigned to the project's central office at the Houston Community College. Three counselors and one secretary were assigned to the Houston Independent School District. One counselor and one secretary were assigned to the Pasadena Independent School District and one counselor and one secretary also were assigned to the Galena Park Independent School District. Thus, the project staff consisted of a total of seven staff members at the professional/technical level and four staff members at the clerical level.

The most unusual feature of the administrative arrangement in Houston was the degree of administrative autonomy which was accorded the three participating school districts. Each district was given the opportunity to select the project staff members for the positions assigned to that district. In addition, direct supervisory authority over the project staff members assigned to the districts resided with the districts themselves and not with the central office project staff at the Houston Community College. Thus, central office project staff at the Houston Community College did not have direct supervisory authority over the outstationed project staff members, even though the salaries of these outstationed staff members were paid entirely out of project funds. The autonomy of the participating school districts gave rise to some conflict between the central office project staff and the supervisory staff in the school districts. However, this issue was not a source of serious concern

to the President of the Houston Community College. It was his belief that the Department of Labor had accepted the position of the Houston Community College; that it would function in a coordinative rather than a strictly administrative capacity. This role was consistent with Mr. Whiteley's perception of the inherent autonomy of local school systems and his previous experience implementing other projects for State and Federal education agencies.

The perceptions of the President of the Houston Community College were not shared by the Houston BAT Area Director, Mr. Claude Gray. Mr. Gray, who served as the Project Monitor, felt that since the Houston Community College was the contractor for the project, this organization should be fully accountable for all aspects of project operations. The Project Monitor's primary concern was the project's basic funding structure, not the tradition of local school district autonomy. In addition, the Project Monitor firmly believed that the project should reflect the priorities of the Department of Labor and not the priorities of educational organizations.

Because of their differences of philosophy and approach, the President of the Houston Community College and the BAT Project Monitor did not have a cordial working relationship. The Project Monitor deplored the administrative structure of the project and intervened frequently as specific issues arose. The President of the Houston Community College staunchly defended the principle of local school district autonomy and accused the Project Monitor of exceeding the authority conferred by his role. This conflict compounded the difficulties inherent in the Houston project's loose administrative structure.

PROGRAM ACTIVITIES

As of September 30, 1978, the Houston Apprenticeship-School Linkage Project reported 108 apprentice registrations to the Department of Labor. During

the site visit, available project records were reviewed. This record review effort revealed a total of 111 apprentice registrations. Obviously, the discrepancy is very slight and it is reasonable to assume that a few apprentices were overlooked in the midst of the haste and confusion associated with the cancellation of the contract. For the purpose of computing the statistics reported in this section, therefore, the total of 111 apprentice registrations identified in the course of the record review has been employed.

As described previously, three school districts actively cooperated with the Houston Apprenticeship-School Linkage Project. Of the total number of registered apprentices, 80 (72 percent) were from the Houston Independent School District; 19 (17 percent) were from the Pasadena Independent School District; 6 (5.5 percent) were from the Galena Park School District; and 6 (5.5 percent) were from three other school districts which were not actively cooperating with the project. Due to the combined influence of late project start-up during the 1977-78 school year and an aggressive effort during the summer of 1978, only 58 student apprentices (52 percent) were members of the graduating class of 1978 while 53 student apprentices (48 percent) were members of the graduating class of 1979.

The employers with whom student apprentices were placed may be viewed within three major groups. First, the Maintenance Division of the Houston Independent School District employed 40 student apprentices (36 percent). The Houston Joint Apprenticeship and Training Committee for the Electrical Contracting Industry cooperated with the project and found employment for 19 student apprentices (17 percent). Therefore, the 59 student apprentices employed through these two organizations represent more than half (53 percent) of the total number of student apprentices placed by the Houston project. The

remaining 52 student apprentices (47 percent) were employed by a variety of small businesses in the area.

Table 1, following, presents the occupational profile of the student apprenticeships developed by the Houston project. It is noteworthy that construction trades are well represented among the occupational areas presented in Table 1. Five occupational areas may be considered construction trades (Electrician, Carpenter, Painter, Plumber, and Building Maintenance Mechanic). Taken in combination, these five occupational areas include 41 student apprentices (37 percent). The 41 student apprentices employed in construction trade occupations are divided roughly equally between the Houston Electrical JATC (19 apprentices) and the Maintenance Division of the Houston Independent School District (22 apprentices in the five construction trade areas). It was reported that staff members associated with the Houston project were aware of the Department of Labor's prohibition on construction trade occupations for the Apprenticeship-School Linkage Projects. However, the determination of those involved with the project to pursue these areas had been communicated to the relevant national officials and this determination had been accepted, if not fully approved, by these officials.

The Houston Apprenticeship-School Linkage Project enrolled significant numbers of minority participants. Overall, 60 student apprentices (54 percent) were from minority groups. These minority enrollees included both Blacks and Spanish Americans. Therefore, there really were three relevant groupings of student apprentices. Of the total number of students registered, 51 were White (46 percent); 44 were Black (40 percent); and, 16 were Spanish American (14 percent). This high level of minority participation is remarkable in light of the fact that these registrations were recorded during the

TABLE 1

AREAS OF STUDENT EMPLOYMENT

Occupation	Number of Students	Percent of Students
Auto Mechanic	26	23
Electrician	22	20
Carpenter	9	8
Air Conditioning Mechanic	6	5
Landscaper	5	5
Painter	4	4
Plumber	4	4
Drafter	4	4
Machinist	3	3
Offset Printer	3	3
Building Maintenance Mechanic	2	2
Dental Assistant	2	2
Auto Body Repairer	2	2
Floral Designer	2	2
Jeweler (Goldsmith)	2	2
Exterminator	2	2
Butcher/Meatcutter	2	2
Other	11	10
	111	100%*

*Percentages do not add to 100 due to rounding.

first year of Apprenticeship-School Linkage operations. At that time, the Department of Labor had not placed any particular emphasis upon the enrollment of minority or economically disadvantaged students by Apprenticeship-School Linkage sponsors.

The overall statistics on minority enrollment reflect a combination of the predominantly minority enrollment pattern which prevailed in the Houston Independent School District and the predominately non-minority enrollment pattern which prevailed in the smaller suburban school districts. Within the Houston Independent School District, taken by itself, 43 of the student apprentices were Black (54 percent); 23 of the student apprentices were White (29 percent); and 14 of the student apprentices were Spanish American (17 percent). Thus, the student apprentices from the Houston Independent School District included over 70 percent minorities.

With respect to sex, the enrollments in the Houston Youth Apprenticeship Project reflect a pattern of predominantly male enrollments. Overall, 103 of the student apprentices were male (93 percent), while 8 were female (7 percent).

The overall numerical performance of the Houston Apprenticeship-School Linkage Project may be compared with the performance of the other three projects which were operating at the same time. This comparison may be based upon the statistics reported by each project as of August 31, 1978 since the Houston contract expired on September 5, 1978. The performance of the four original sponsors at that time is presented in Table 2.

TABLE 2

COMPARATIVE PERFORMANCE OF THE ORIGINAL APPRENTICESHIP-SCHOOL LINKAGE PROJECTS*

Sponsor	Number of Apprentices	Percent of Goal
Delgado Junior College	302	101
Houston Community College	106	35
Greater Nashville Community Committee	62	31
Cleveland Public Schools	83	28

*As of August 31, 1978.

Two clear impressions emerge from an examination of Table 2. First, Delgado Junior College in New Orleans clearly is in a class by itself in terms of performance. Second, the Houston project compares very favorably among the other three projects, which, as a group, trail significantly behind the New Orleans project. At the time of the comparison, the Houston project had enrolled a greater number of student apprentices than either of the other two projects. In addition, the Houston project also had achieved a slightly higher percentage of its goal than either of the other two projects. In terms of numerical accomplishments, therefore, it is clear that the performance of the Houston Community College was inferior only to the performance of Delgado Junior College at the time the contract with the Houston Community College was cancelled.

DEVELOPMENTAL STRATEGIES

Probably the most significant developmental strategy implemented in Houston was the involvement of the Maintenance Division of the Houston Independent School District and the Joint Apprenticeship and Training Committee for the

Electrical Contracting Industry. As previously described, these two organizations accounted for more than half of the student apprentices employed in Houston. In numerical terms, the employment provided by the Houston School District is the more significant of the two. However, in qualitative terms, the participation of the Houston Electrical JATC is the more interesting phenomenon.

Although the employment provided by the Houston School District made a significant contribution to overall project performance, some respondents had a rather negative view of this special relationship between the project and the Houston Independent School District. First, it was pointed out that exactly half of the student apprentices from the Houston School District were employed by the School District itself. Second, it was implied that these were relatively easy placements for project staff to make. Finally, some respondents questioned the propriety of paying employer stipends to the Houston School District which already was benefitting from the provision of full-time funding for three coordinators and one secretary who were operating under the direct supervision of School District personnel.

Among the other Apprenticeship-School Linkage Projects, there is one other instance of a school district which cooperated both by referring students and by providing employment for students. The Jefferson Parish School District cooperated with the New Orleans project by employing student apprentices in its maintenance unit. However, the School District had independent funding for these positions from the Youth Employment and Training Program. As a result, the Jefferson Parish School District did not receive employer stipends from the Apprenticeship-School Linkage Project. As a result, the Houston Independent School District appears to be the only participating

school district which received a significant amount of funding through employer stipends.

The cooperation of the Houston Electrical JATC with the Apprenticeship-School Linkage Project is completely unique to this implementation. No other Apprenticeship-School Linkage Project has had such a relationship with a construction industry JATC. The unique character of the relationship is underscored by the Department of Labor's general prohibition against such linkages, on the one hand, and the unrestrained enthusiasm which the Coordinator for the Electrical JATC displays toward the Apprenticeship-School Linkage concept, on the other hand.

At the time that the contract for the Houston Youth Apprenticeship Project was cancelled, the Coordinator of the Electrical JATC wrote a letter to the BAT Area Director in which he strongly criticized the decision to cancel the contract. Some two and one-half years later, this Coordinator still cites five positive features of his experience with the Houston Apprenticeship-School Linkage Project. First, cooperation with the project helped the JATC to identify qualified minority applicants for the electrical trade. Second, part-time employment during the senior year gave prospective applicants an opportunity to test their interest in the trade before they (and the JATC) made a more lasting commitment. Third, the student apprentices who stayed with the trade after graduation were regarded as above average, both in motivation and in skill level. Fourth, those student apprentices who remained beyond graduation displayed an unusually high rate of retention. Finally, the counselors in the high schools were considered to have played a crucial role by referring highly promising candidates to the Electrical JATC. The only negative feature cited by the Coordinator was the fact that the project was

terminated. In light of his unique status as the sole construction industry JATC representative who cooperated with an Apprenticeship-School Linkage Project, the Coordinator agreed to waive the confidentiality of his identity for this report so that the results of his experience might become more widely known. The Coordinator further asserted his own firmly held belief that any local construction trade JATC that wanted to cooperate with an Apprenticeship-School Linkage project should be permitted to do so.

In addition to the involvement of the Maintenance Division of the Houston School District and the Houston Electrical JATC, there are some other relevant aspects of the developmental approach followed in Houston. First, within the Houston School District, the three project coordinators specialized their performance somewhat. Two of the coordinators emphasized job development contacts with employers while the third coordinator emphasized personal interaction with the students. Project staff sought to convert some existing cooperative education positions to registered apprenticeship but they encountered stiff opposition from the co-op coordinators. The co-op coordinators in Houston generally feared that the long-term implications of apprenticeship would cause the converted positions to be lost to them during subsequent school years.

Project staff also encountered relatively stiff resistance from many employers who were approached concerning participation in the project. Some employers were suspicious of involvement with a program funded by the Federal Government. For some, this suspicion was related to their low opinion of the local CETA program. Other employers were suspicious of involvement with apprenticeship because of its union connotations. One final factor was relevant to the lukewarm reception that the project received among employers. In

the context of the expanding local economy, there is a widely held belief that any qualified individual can find employment without special help from a program. Related to this belief, is the experience of many employers that the booming local economy encourages a high rate of turnover, particularly among younger workers.

In light of the relatively high resistance with the project encountered among co-op coordinators and among employers, for all the reasons cited above, it is well that project had the two blocks of positions for student apprentices with the Houston Independent School District and with the Houston Electrical JATC.

OPERATIONAL EXPERIENCE

In light of the fact that the three older Apprenticeship-School Linkage Projects now are heading toward their fourth year of funding while the four newer Youth Apprenticeship Projects now are heading toward their third year of funding, the most salient operational feature of the Houston project is that it did not survive beyond its first year of funding. Accordingly, during the site visit, a significant effort was devoted to determining the sequence of events and the juxtaposition of factors which led to the cancellation of the Houston contract. This section of the report is devoted to presenting the information which came to light concerning this subject.

As previously described, there was a history of some conflict between project staff at the Houston Community College and school district personnel responsible for supervising the outstationed project staff. In addition, there also was a history of some conflict between the President of the Houston Community College and the BAT Project Monitor. This latter conflict was

intensified somewhat by the fact that the Houston Community College was the sponsor for both the Multi-Trades Project and the Apprenticeship-School Linkage Project. This situation tended to place a dual strain on the same basic set of relationships which existed between the Project Monitor and the President of the Houston Community College.

Houston was the first city in the nation to have both a Multi-Trades Project and an Apprenticeship-School Linkage Project. Therefore, Houston was the first place that these two types of projects had the opportunity to interact with each other in the same local labor market. Due to the demands of the reporting system which was imposed by the Department of Labor, both types of projects tended to emphasize the same basic activity - contact with employers to develop new apprenticeship programs. In the case of the Multi-Trades Projects, employers were encouraged to implement apprenticeship programs for full-time workers on an unsubsidized basis. In the case of the Apprenticeship-School Linkage Projects, employers were encouraged to implement apprenticeship programs which initially would involve part-time employment for students on a subsidized basis. In Houston, this meant that the same employer might be contacted by one person who was promoting one approach to apprenticeship through the Multi-Trades Project and another person who was promoting a somewhat different approach to apprenticeship through the Apprentice-School Linkage Project. This created some confusion and consternation among employers in Houston.

As a result of the overlap and competition between the two different types of projects, local BAT staff sought to have the two projects merged so that one unified project staff would be able to introduce both of these program concepts to employers at the same time. In March of 1978, local BAT

staff prepared a memorandum attempting to justify a merger of the two projects. In April, BAT's National Office replied that such a merger was not acceptable. In many ways, this exchange, between the local and the national levels of BAT, marked the beginning of the chain of events which ultimately led to the cancellation of the Houston contract. The issue of merging the two projects was one which surfaced again in subsequent exchanges between the local and national levels of BAT. It appears that local BAT officials did not realize that national BAT officials might not have the contractual flexibility to merge these two program concepts. On the other hand, national BAT officials appeared unable to understand how these two types of projects, which were so different in their conceptual origins, could come to engage in the same basic types of activities at the local level.

This first exchange, in March and April of 1978, concerning the proposed merger of the two types of projects was the first of four major exchanges which took place during 1978 between BAT's National Office on the one hand, and the field on the other hand, concerning the Apprenticeship-School Linkage Project in Houston. Within this conceptual framework, the "field" consists of both the regional and the local levels of BAT operations. In this first exchange, therefore, the field asked the National Office for permission to merge the two projects. The National Office replied that this was not acceptable. The subsequent series of events which led to the cancellation of the Houston contract may be conceptualized in terms of three further exchanges between the National Office and the field.

In May of 1978, BAT's National Office requested the field to undertake negotiations with sponsors of Apprenticeship-School Linkage Projects concerning extension of the existing contracts. Regional and local BAT representa-

tives met with key staff of Houston Community College to discuss the conditions of extension. Following this meeting, the President of the Houston Community College sent a letter to the BAT Regional Director outlining three alternative arrangements. Two of these alternatives involved shifting sponsorship elsewhere, while the third proposed maintaining the Houston Community College as contractor for funding purposes while shifting accountability directly to the participating school districts. BAT field staff concluded that the Houston Community College was lukewarm toward the Apprenticeship-School Linkage Project and, consequently, did not recommend extension of the contract with the Houston Community College. Therefore, this second major exchange, which took place during May and June, may be characterized as one in which the National Office asked the field to determine whether or not it was appropriate to extend the existing Apprenticeship-School Linkage contracts. In the case of the project sponsored by the Houston Community College, the reply from the field was that an extension was not appropriate.

Following the meeting between BAT staff and Houston Community College staff, BAT staff sought an alternative sponsor. Since BAT field staff were not favorably inclined toward any of the alternatives offered by the President of the Houston Community College, BAT staff worked with staff from the Institute of Labor and Industrial Relations at the University of Houston in order to develop alternative proposals for both the Apprenticeship-School Linkage and the Multi-Trades Projects. These proposals were developed during June and July and were submitted to BAT's National Office for approval and funding in late July. BAT's National Office did not approve these proposals for funding on the grounds that the administrative arrangement was too cumbersome and too expensive. Thus, this third major exchange may be characterized as one in

which the field asked the National Office for approval and funding of the arrangement devised in conjunction with the University of Houston. The National Office replied that the proposed arrangement was not acceptable.

At the same time that the National Office turned down the proposals from the University of Houston, the National Office once again instructed the field to consider an extension of the existing contract with the Houston Community College. Thus, the fourth and final exchange between the field and the National Office began with the National Office asking for a second time whether it was appropriate to extend the Apprenticeship-School Linkage contract with the Houston Community College. A memo requesting an extension was prepared at the local level and forwarded to the regional level. The final decision on this matter was made at the regional level during August of 1978.

A number of factors appear to have entered into the final decision not to recommend an extension of the contract. The first and most important factor was that the basic administrative arrangement for the contract was perceived by BAT field staff to be unacceptably flawed. The Houston Community College, as contractor, was perceived to have inadequate control over project activities conducted by the participating school districts. At the same time, because of its unusually close ties with the Houston Independent School District, the Houston Community College was perceived to have inadequate breadth of appeal in enlisting participation by other school districts in the area.

A second important factor in the final decision was the poor working relationship between BAT field staff and the President of the Houston Community College. BAT field staff and the President of the Houston Community College had, in effect, already agreed that the existing arrangement was not

satisfactory and that an alternative arrangement would be preferable for both parties. In so agreeing, key sponsor staff and BAT field staff had effectively dissolved their bond of common interest in the project. None of the alternative arrangements proposed by the President of the Houston Community College were acceptable to BAT field staff. Similarly, the alternative arrangement proposed by BAT field staff was not acceptable to the BAT National Office. After all these alternatives had been proposed and rejected, it would not have been an easy matter to return to the original arrangement.

A third factor which may have influenced the final decision was turnover in the project staff which took place during the summer of 1978. During May, the Project Director became seriously ill and one of the coordinators was named Acting Director on a temporary basis. In July, the Acting Director resigned and in August, the original Project Director submitted a final resignation. These staff changes further diminished the possibility of resuming the original contractual arrangement under an extension of the contract.

A fourth, and somewhat more speculative factor, also may be advanced to help explain the termination of the Houston project. As previously indicated, the Apprenticeship-School Linkage Project operated by Delgado Junior College in New Orleans was the only project which had achieved a significant level of success during the first year of operation. The New Orleans project and the Houston project both were located in Region VI. When the final decision on the Houston project was being made at the regional level, the striking contrast between the Houston project and the New Orleans project may have influenced the decision to cancel the Houston contract. The fact that the two Apprenticeship-School Linkage Projects operating in other regions were granted contract extensions, despite their own significant problems in administration,

and performance, may have been less evident in Region VI than the marked contrast between the New Orleans and the Houston projects.

Other factors could be cited to help explain the demise of the Houston project, but the influence of these other factors is uncertain, at best. The level of detail devoted to this subject in this report seemed warranted, based upon the unique irrevocability of the contract cancellation decision and the much longer period of survival for all the other Apprenticeship-School Linkage Projects.

OTHER OBSERVATIONS

A detailed examination of the record compiled by the Houston Apprenticeship-School Linkage Project during its brief period of operation reveals unusually stark contrasts. In many ways the performance of this project was very promising. Its overall numerical accomplishments were second only to the New Orleans project. The proportion of minorities enrolled by the Houston project was not matched by any of the other Apprenticeship-School Linkage Projects at that time, nor has it been matched by any of the other projects to date. Finally, the Houston project was the only project of its kind which succeeded in establishing a linkage with a construction industry JATC. Based upon the reports received, this linkage appears to have generated positive results, both for the Apprenticeship-School Linkage Project and for the participating JATC. This linkage alone was sufficiently unique and interesting to justify continuation of the project so that the results in this area could have been documented on the basis of a larger number of enrollees over a longer period of time.

Despite the promising performance in the areas described above, the Houston Apprenticeship-School Linkage Project was plagued with a loose administrative structure and a poor working relationship between BAT field staff and key sponsor staff. In addition, the history of the project reveals a not unfamiliar pattern in which everything that possibly could go wrong, did seem to go wrong. As a result, the experience of the Houston Apprenticeship-School Linkage Project unmistakably demonstrates the overriding importance of a satisfactory administrative arrangement and a constructive working relationship between Department of Labor staff and staff of the sponsoring organization. These conclusions are entirely consistent with the findings concerning the other seven Apprenticeship-School Linkage Projects. However, by its untimely demise, the Houston project more forcefully demonstrates the importance of these factors than the other seven projects do by their varying patterns of survival.

SITE VISIT REPORT ON THE

NASHVILLE YOUTH APPRENTICESHIP PROJECT

INTRODUCTION

The following report presents the findings of a site visit conducted at the Nashville Youth Apprenticeship Project in Nashville, Tennessee, on August 6-10, 1979. Discussion areas in this site visit report are covered under separate section headings as follows:

- Local context, e.g., the general operational environment of the apprenticeship-school linkage demonstration;
- Administrative information, e.g., project staffing, BAT coordination, school system relationships, and staff supervision;
- Program activities, e.g., apprenticeship program registrations, individual apprentice registrations, job development, student recruitment and project performance to date;
- Developmental strategies, e.g., approaches and materials used to promote and continue the project in relation to local schools, employers, and the community as a whole;
- Operational experiences, e.g., areas in which specific problems have been encountered in project activities, including start-up difficulties, school and employer reactions to the project; and,
- Other observations, e.g., evaluations regarding the general achievements and possible issues in relation to project concepts and implementation.

These topic areas are discussed in detail in each of the following sections of this site visit report.

LOCAL CONTEXT

The Nashville-Davidson Standard Metropolitan Statistical Area (SMSA) consists of Davidson County (which includes Nashville) and seven surrounding counties. In 1976, the SMSA had a total estimated population of 763,500 with 454,900 of these in Davidson County. The eight county SMSA is the target area for the Nashville Youth Apprenticeship Project. Although the entire SMSA is targeted, the original emphasis in establishing the project was upon Davidson County.

The Nashville area has a vigorous and diversified economic base. Nashville is best known as "Music City" and the music industry in the area includes sound recording, record manufacturing, and printed music publication. In addition, there is a significant manufacturing base. One respondent advised that Nashville is regarded as "The Machine, Tool and Die Capital of the South." Observation of the area supports this assertion. In addition to manufacturing of this type, there also are several major fertilizer and chemical production facilities, including one operated by Dupont. In 1975, manufacturing accounted for 27.6 percent of the employment in the SMSA and 22.2 percent of the employment in Davidson County. In recent years, the unemployment rate in the area has been relatively low. In 1976 the unemployment rate in the Nashville-Davidson SMSA was 4.9 percent.

The level of unionization in the Nashville area has been declining steadily in recent years particularly in the construction industry. There is, however, a relatively strong apprenticeship tradition, not only in the construction trades, but also in the metal trades. During the post-World War II period, many returning

GIs collected both veterans benefits and wages by entering metal trades apprenticeship programs at several large plants then operating in the Nashville area. These apprenticeship programs were sponsored principally in conjunction with the International Association of Machinists (IAM). Today, many of these World War II veterans occupy senior level positions in manufacturing firms in the area. In addition to the traditional involvement of the IAM, metal trades apprenticeship also currently is supported and advanced in the Nashville area by the National Tool, Die and Precision Machining Association, an employers' organization.

In 1962, citizens of Nashville and Davidson County voted to merge their separate city and county governments into a unified metropolitan government for Nashville-Davidson. From the educational standpoint, this involved the merger of the separate city and county school systems into the Metropolitan Public School System. The initial transition in this process was completed around 1967. In 1971, the new consolidated school system was directed to comply with an ambitious court-ordered busing plan to achieve racial integration. This plan currently continues in effect. One respondent suggested that recent years actually have witnessed an effort to merge four school systems--a black and a white city school system and a black and a white county school system. Obviously, an undertaking as demanding as this has resulted in significant alterations in both the structure and the process of education in the area.

In 1974, the Metro Public Schools launched an ambitious secondary school construction plan known as "Schools for the 1980s." At the heart of the plan was construction of 12 new comprehensive high schools. Once completed, these comprehensive high schools were to replace all of the previously existing high

schools. Each school was to be comprehensive in that it would include at least 50 percent vocational enrollments. However, it was not anticipated that each school would offer all vocational curricula. Rather, it was anticipated that each school would specialize in certain vocational offerings. The execution of this plan currently is at an uncomfortable midway point. Eight of the comprehensive schools now are in operation. However, due to the unpopularity of school closings, nine older, academic high schools also continue parallel operations, as does the city's historic vocational-technical high school. The planned construction of the other four comprehensive high schools has been delayed and has become embroiled in controversy.

Currently, the comprehensive school plan is under challenge in the Federal courts. Representatives of the minority community contend that the plan has created a circle of new, suburban schools surrounding the city and has threatened to eliminate the inner city's own neighborhood high school with its convenient location and cultural traditions. Further, minority advocates contend that the prevailing system of transfers among the comprehensive schools undermines the court-ordered desegregation plan. Since the comprehensive schools specialize in their vocational offerings, some transfer system among them is necessary. However, it is claimed that the current system is easily abused since it is possible for a student to transfer to a preferred school on the pretext of interest in a vocational curriculum offered only at that school. As a consequence, the comprehensive vocational plan currently is challenged and strained both by the unpopularity of closing schools and by the difficulty of achieving racial integration.

During the 1978-79 school year, the Recruitment and Training Program, Inc. (RTP) sought cooperation from the Metro School System to operate a Youth Career Development (YCD) project funded by the Office of Youth Programs (OYP). As with the Youth Apprenticeship Projects, this effort did not receive funding from DOL until after the start of the school year. Consequently, Metro Schools refused to cooperate for the 1978-79 school year. In addition, Metro Schools insisted that RTP obtain the approval of the State Department of Education to operate a program for out-of-school credit. During the 1978-79 school year, therefore, RTP made the necessary arrangements with the State education agency and piloted the YCD project in a small residential school for wards of the state. RTP received approval from the state and offered an out-of-school credit program in conjunction with Metro Schools during the 1979-80 school year. Participation is directed toward seniors and, to a lesser extent, juniors. Students participate at a location provided by RTP and not in the public school buildings. Students receive academic credit for participating, just as they do when participating in Junior Achievement and other similar programs.

There is no State Apprenticeship Council (SAC) in Tennessee. Hence, BAT is the only agency concerned with apprenticeship. The BAT State Director has an office in Nashville and currently is the only Apprenticeship and Training Representative (ATR) with responsibility for Nashville and a large surrounding territory. The BAT Regional Director previously served as the BAT State Director for Tennessee.

ADMINISTRATIVE INFORMATION

In order to understand the administration of the Nashville project, it is necessary to understand the events surrounding the origin of the project. Most of the current administrative problems of the project may be traced directly to decisions made and approaches taken at the outset of the project.

In 1977, two members of the BAT Task Force for the Apprenticeship-School Linkage Initiative visited Nashville. These two Task Force members were BAT apprenticeship and training representatives (ATRs) from Wisconsin and Kansas. Respondents in Nashville indicated that the youth apprenticeship concept previously had been rejected in the home states of the two Task Force members. Consequently, the two Task Force representatives had received permission from the BAT Regional Director to seek a sponsor for the program in Nashville. The BAT State Director was in the hospital at the time of the visit by the Task Force representatives. Therefore, the Task Force representatives were assisted in their efforts by the BAT Regional Director and an ATR from another city in Tennessee.

The Task Force representatives first approached the Metro School System about the possibility of sponsoring the Youth Apprenticeship Project. The school system declined to act as sponsor because they did not want responsibility for another Federal grant. The school system was particularly concerned about being accountable to the Department of Labor since they had no prior experience or familiarity with that agency. In addition, Metro Schools may have perceived the potential for competition between the Youth Apprenticeship Project and existing Metro School System programs.

Following the refusal by the Metro School System, the Task Force representatives discussed sponsorship of the program with the Executive Secretary of the local Mechanical Contractors' Association. It was agreed that an independent, nonprofit corporation would be established to sponsor the project. The corporation was named the Greater Nashville Community Committee, Inc. (GNCCI). The corporate officers and their affiliations are as follows:

President	- Leroy Brown, Executive Secretary, Nashville Mechnical Contractors' Association
Vice President	- Dorothy Pease, Director of the Division of Guidance, Metropolitan School System
Secretary/ Treasurer	- Leonard Wills, Apprenticeship Coordinator, Nashville United Association of Plumbers and Pipefitters

Ms. Pease had served previously on the advisory committees for the local Apprenticeship Information Center and the Local Hometown Plan. Thus, she was a logical choice to represent the school system. Ms. Pease has been a consistently effective supporter of the project within the school system and has provided direct linkages with the guidance counselors in the schools. However, the participation of Ms. Pease did not provide a direct linkage between the Youth Apprenticeship Project and the vocational education division of the school system. Mr. Wills's participation balanced the participation by the Mechanical Contractors' Association by providing active participation by organized labor at the highest level of the project.

After the sponsorship by GNCCI was agreed upon, a proposal was prepared for the project. Once the project was funded, the events surrounding the selection of the project staff created serious rifts which have hampered project operations since that time. The Project Director for the ASL Project had been nominated in

the proposal and had participated with the President of GNCCI in the formulation of the approach to the project. The nominee for the Project Director position had experience as a staff member of local units of the National Electrical Contractors of America (NECA) and the Associated General Contractors of America (AGC), as well as experience as a staff member with the local "Hometown Plan" organization. The BAT Regional Director was aware of the nomination of this individual prior to the submission of the proposal. However, since the BAT State Director was hospitalized at the time these arrangements were made, he was not aware of the nomination. Upon his return, the BAT State Director was somewhat dissatisfied when he learned of the nomination because he knew that a former BAT State Director who had retired from Federal service was available to serve on the project. The BAT State Director wanted the former State Director to be appointed as Project Director of the Youth Apprenticeship Project. However, since another candidate already had been nominated as Project Director and had been approved by the BAT Regional Director, the BAT State Director urged the President of GNCCI to hire the former State Director to fill one of the four coordinator positions. The BAT State Director maintained that this was necessary in order to insure that at least one member of the project staff would be an individual with direct experience in apprenticeship.

The Metro School System insisted that there be minority and female representation among the four coordinators hired by GNCCI. The school system threatened not to cooperate with the project if this requirement was not satisfied. The former BAT State Director, who was being considered for one of the coordinator positions, had worked closely with a black woman in a position he had held previously. The President of GNCCI had interviewed another black female whom he

intended to hire. The BAT State Director urged that the candidate who had worked with the former BAT State Director be given serious consideration for the position. The candidate recommended by the BAT State Director was hired to fill the coordinator position.

Upon award of the contract with GNCCI, the BAT State Director officially assumed the role of Project Monitor. The President of GNCCI found that, in addition to the special consideration accorded the two coordinator candidates favored by the Project Monitor, two other coordinator candidates also had their own claim to special consideration. Two individuals with personnel experience in private corporations had assisted the BAT Task Force representatives in promoting the apprenticeship-school linkage concept. Upon award of the contract, one of these individuals asserted that he had been promised a position on the project by the Task Force representatives. This individual asserted that he would press his claim in court if the position was denied him. Thereupon, the President of GNCCI made telephone contact with the Task Force representatives who acknowledged that they might have given such an impression to both the individuals who assisted them. Consequently, the President of GNCCI felt compelled to honor the commitments apparently made by the Task Force representatives and, therefore, both the individuals who had assisted the Task Force were hired as coordinators on the project.

As a consequence of all these factors, two of the coordinator positions were filled by the two candidates recommended by the Project Monitor. The other two coordinator positions were filled by the two individuals favored by the Task Force representatives. The resulting project staff was organized as follows at the time of the site visit:

Project Director - Mr. Robert Grimm

Coordinators - Mr. Harry Garrett
Ms. Valeria Whiting
Mr. Ken Conn
Mr. Ken Coffman

Secretary - Ms. Lola Stanley

As a result of the events surrounding the selection of the staff members, some sponsor staff members feel that their organization did not have adequate authority and autonomy in staffing the project. Conversely, some BAT staff members appear to feel that their organization did not have sufficient input regarding staffing decisions since the former BAT State Director could not be designated as the Project Director. As a consequence, the individuals associated with the Nashville Youth Apprenticeship Project are divided into two camps. On one side are the GNCCI President, the Project Director and two of the coordinators. On the other side are the BAT Regional Director, the BAT Project Monitor and the other two coordinators. Each side feels that the other side is preventing proper implementation of the project. Obviously, both the effectiveness and the efficiency of the Nashville Youth Apprenticeship Project have been significantly hampered by this division in the administration of the project.

In addition to the project staff, there is a Project Advisory Committee which was established at the outset of the project. Some members no longer attend. Other members represent employers whose initially projected potential to hire participants never materialized. As a consequence, the Advisory Committee is almost totally devoid of industry and community leaders who could be expected to exercise constructive advocacy efforts on behalf of the project.

Even the two separate factions of the Youth Apprenticeship Project agree that the Advisory Committee, as currently constituted, is not a significant asset to the project. Hence, both sides have expressed an interest in revamping the Advisory Committee.

PROGRAM ACTIVITIES

The Nashville Youth Apprenticeship Project encompasses a wide variety of educational settings with which the employment component of the program interfaces. This variety in the educational setting appears to be a basic determinant of the shape that the implementation takes. Of the eight eligible counties in the Nashville SMSA, three county school systems are actively cooperating with the project. This section of the report first describes the educational setting in each county, including a description of one school from each county that interfaces with the project. Then, this section of the report concludes with an analysis of some of the educational dimensions which are relevant to the Youth Apprenticeship implementation.

Davidson County

The core of the Nashville SMSA is Davidson County. A basic description of the Metro School System in Davidson County was provided in the first section of this report. In the Metro School System, the administrators have insisted that the Youth Apprenticeship Project work through the existing cooperative education program in the secondary schools. This has been a basic determinant of project operations in Davidson County. Schools cooperating with the project include most of the newer comprehensive high schools, some of the older general high schools, and the one vocational-technical high school. In the Metro School

System, there are no vocational counselors. All counseling is comprehensive in approach, embracing both the vocational and the academic aspects of student counseling.

At Davidson County's sole vocational-technical school, the cooperative education coordinator is favorably disposed toward the Youth Apprenticeship Project and has several co-op students currently registered as apprentices in the program. For seniors, vocational courses are taught in three-hour blocks. In addition, the co-op coordinating classes all are held during the morning. Since a senior must take the co-op class in order to participate in the Youth Apprenticeship Project, and since most seniors also must take at least one academic credit (English), student apprentices are precluded from taking a vocational course in the morning. Since co-op involves working during the afternoon school hours, student apprentices also are precluded from taking a vocational course in the afternoon. Thus, at this school, a senior must make a choice between taking a senior level vocational course in an area of interest or participating in the Youth Apprenticeship Project as a co-op student.

Sumner County

Sumner County adjoins Davidson County and has some characteristics of a suburban adjunct of the more urban Davidson County. In addition, Sumner County has a flourishing industrial base of its own. Three schools in Sumner County are eligible to participate in the Youth Apprenticeship Project and two of these schools have significant levels of participation. The third school is a comprehensive high school with its own co-op program. Since the co-op coordinators at this school view the Youth Apprenticeship Project as a rival to their own program,

there is no meaningful participation by this school. One of the two participating schools is an area vocational center serving three feeder high schools. Student apprentices from these three schools take academic courses at the home high school in the morning, vocational courses at the vocational center in the afternoon, and work during after-school hours. The second participating school is a comprehensive high school which is described in the paragraph which follows. All high schools in Sumner County have academic counselors. In addition, the area vocational center and the two comprehensive high schools each have one specialized vocational counselor funded by the local CETA program.

One of the two comprehensive high schools in Sumner County cooperates enthusiastically with the Youth Apprenticeship Project. There is no co-op program at this school. All senior vocational courses are taught in two-hour blocks in the morning. Consequently, it is possible for seniors to take both a required academic course and a vocational course of interest in the morning. Then, they can be dismissed from school in the afternoon to go to work for either a Youth Apprenticeship Project employer or another employer of their choice.

Robertson County

Robertson County provides an interesting contrast to both Davidson and Sumner Counties since Robertson County is basically rural and agricultural in character. In addition, Robertson County includes relatively little suburban "spillover" from the Davidson County core. There are four high schools in Robertson County. All four of these schools send students to the County's area vocational center. There are academic counselors at the home high schools and a vocational counselor at the center.

Senior students in Robertson County high schools may enroll in courses at the area vocational center in the afternoon. The center cooperates with the Youth Apprenticeship Project by permitting seniors to work for project employers during vocational class hours. Thus, the vocational instructors are permitting the on-the-job experience of project participation to substitute for vocational training at the center. As a result, students simultaneously receive academic credit and on-the-job experience. In order to grade the students accurately, vocational center staff and project staff cooperated in developing a comprehensive performance evaluation which is completed monthly by the employers of project participants in Robertson County.

Analysis of Factors

The three county school systems described above provide examples of factors that are relevant to implementation of the Youth Apprenticeship concept. Based upon these examples, six relevant factors may be identified. First, the nature of the educational facility interfacing with the Youth Apprenticeship Project is important. In general, a comprehensive high school or a vocational-technical high school can interface more easily with the project than an area vocational center. Area vocational centers already have one set of logistical problems in linking with their home high schools; thus, they may not have adequate flexibility to link effectively with the Youth Apprenticeship Project.

The second relevant factor is the presence or absence of a cooperative education program at participating high schools. The school linkage aspect of the Youth Apprenticeship Project appears to take hold more effectively, at least in the Nashville area, when there is no existing co-op program. Where there is

a co-op program; the threat of competition may block project participation. Alternatively, a school's participation in the Youth Apprenticeship Project may be channeled through the co-op program. Based upon observation of Davidson County, it appears that there are potential pitfalls in a marriage of the Youth Apprenticeship Project and co-op. This relationship between the Nashville Youth Apprenticeship Project and the co-op program in Davidson County is discussed further in a subsequent section of this report.

The third relevant factor is whether student apprentices work during school hours, or only during after-school hours. The fourth factor, which is related to the third, is the students' flexibility in scheduling academic courses, vocational courses and co-op coordinating sessions in conjunction with working. The fifth factor, which also relates to the two previous factors, is whether or not the student is working on a released time basis from a vocational course.

The sixth and final relevant factor concerns the type of counseling services available at participating schools or centers. It appears that academic or comprehensive counselors are not very likely to have much interest in the apprenticeship-school linkage approach. It tends to get lost amidst their numerous other concerns. Vocational counselors, on the other hand, appear to exhibit interest and enthusiasm in the concept. When vocational counselors are aware of the program, they have the capacity to become the project's "contact person" within the school, striving to achieve an optimum interface between the school and the project, and between the students and the employers.

DEVELOPMENTAL STRATEGIES

The organizational setting of the Nashville Youth Apprenticeship Project does not provide any obvious avenues for the developmental approach. Unlike all the other Youth Apprenticeship Projects, the Nashville sponsor is not affiliated with any educational organization. Consequently, the Nashville implementation does not have at its disposal the system of contacts and relationships within schools which could be utilized on behalf of the developmental effort. Rather, the sponsoring organization has roots in the construction industry, but the Youth Apprenticeship Projects are forbidden to operate in the construction trades. Finally, the Project Advisory Committee has not proved to be a great asset in promoting the concept. Obviously, the Nashville Youth Apprenticeship Project was not provided with any readily available context or approach which would have assisted in pursuing project development.

The emphasis of the project in Nashville has been upon job development. In fact, the four coordinators are commonly called job developers. One emphasis of the job developers has been to develop jobs for project participants which begin after completion of the eleventh grade. Ideally, 1980 graduates would have had a full-time job during the summer of 1979 and then would have continued to work part-time for the same employer during the 1979-80 school year. Although many participants work full-time in the summer and a few also work full-time during the school year, DOL's contract with GNCCI does not permit sponsors to receive subsidies for more than 28 hours per week for each participant.

Partly because of the administrative problems described previously ,there is relatively little communication or coordinated planning among the project

staff. The Project Director and the coordinators have made some contacts with relevant associations, but the primary emphasis is upon contact with individual employers. In making employer contacts, the coordinators operate with relative autonomy. Originally, each coordinator was assigned a geographic territory consisting of part of Davidson County and one or two outlying counties. However, these territories have been abandoned for the most part. One result of this change is that it has become possible for the coordinators to develop a measure of specialization in particular occupational areas.

As with employers, contacts with schools and students are on a more or less individual basis. Formal meetings between project staff and relevant school personnel were held initially at all eligible schools in Davidson County. However, the project has always received a mixed reception in Davidson County and the participation of the schools continues to be uneven. In addition to Davidson County, Sumner and Robertson Counties (described in the previous section) also have agreed formally to participate with the Youth Apprenticeship Project. Rutherford County initially refused to participate at the administrative level, but project staff obtained the informal cooperation of a single school in that county. Subsequently, administrative approval of the arrangement was granted. The other four counties in the project target area have refused to participate. Consequently, no schools are participating with the Youth Apprenticeship Project in four of the eight target counties.

The lengthy bureaucratic processes involved have discouraged the project staff from directing significant efforts towards the development of apprenticeship in occupational areas not previously considered apprenticeable. One coordinator developed three new occupational areas in the health field, but abandoned

this approach when it took more than a year to receive approval of these occupations that were noticeable. Consequently, coordinators generally emphasize job development in occupational areas which currently are accepted as apprenticeable, but which lie outside the domain of the construction trades. In addition, most of the employers brought into the program are new sponsors of apprenticeship and operate on a non-joint basis, since their workers generally are not represented by labor unions. BAT policy requires apprentices who are still in school to be registered with the words "Pre-Apprentice" or "Student Apprentice" on the top of the apprenticeship agreement form. Upon graduation, those apprentices still employed are registered again without the qualifying phrase and they are given credit for previous experience for the time spent in apprenticeship prior to graduation.

Like other aspects of the developmental approach, making arrangements for related instruction is left to the discretion of the individual coordinators. Apprentices are not required to participate in related instruction while still in school. Therefore, GNCCI takes the position that provision of related instruction is an obligation incurred by the employers. GNCCI further maintains that since this obligation occurs after project participation, it is the responsibility of BAT to assist employers in this area. Accordingly, some GNCCI coordinators assist employers with related instruction arrangements, but this is left to their own initiative and they are not instructed by the Project Director to undertake such activities on a routine basis.

In summary, the emphasis of the developmental approach at this location is upon the individual. It emphasizes the independence of the individual coordinators, job development efforts with individual employers, and individual relation-

ships with interested schools and students. Since the project lacks any supportive institutional linkages with schools or employers, success or failure in obtaining the cooperation of any relevant organization is, to a considerable extent, dependent upon the personal relationships established by the coordinators.

QPERATIONAL EXPERIENCES

Previous sections of this report have treated relevant aspects of the project administration, the participating school systems, and the approach to job development. Some information concerning basic operational experiences in those areas was included in conjunction with those topics. Therefore, this section will not repeat the information already provided concerning those areas. Rather, this section will be limited to treatment of two topics. First, the overall numerical accomplishments of the project will be detailed. Second, the relationship between the Youth Apprenticeship Project and the cooperative education program in Davidson County will be examined in some detail.

Numerical Accomplishments

Table 1, following, presents the different areas of student employment in the Nashville Youth Apprenticeship Project as of June 22, 1979.

Table 1

AREAS OF STUDENT EMPLOYMENT*

Occupations	Number of Students	Percent of Students
Auto Mechanic	32	21
Tool and Die Maker	25	17
Machinist	18	12
Cabinet Maker	16	10
Auto Machinist	9	6
Transmission Mechanic	9	6
Cook	6	4
Dental Technician	6	4
Tractor Mechanic	5	3
Drafter	4	3
Other	21	14
Total	151	100%

*As of June 22, 1979

As of August 1979, the Nashville Youth Apprenticeship Project had registered 154 student apprentices. This total included 30 students who were graduated in 1978, 94 students who were graduated in 1979, and 30 students who were to be graduated in 1980.

Metal working trades accounted for 36 percent of the total registrations. Mechanical trades accounted for 34 percent of the registrations. The mill-cabinet trade accounted for 11 percent of the registrations and other, miscellaneous trades accounted for 19 percent of the total registrations. Of the students registered, 84 percent were white males, 5 percent were white females, 9 percent were minority males, and 2 percent were minority females.

The Nashville Youth Apprenticeship Project enrollments reflect increasing emphasis upon the outlying counties. Combined data for the 1978 and 1979 graduates indicate that approximately 65 percent of these students were from Davidson County, 10 percent from Sumner County, 20 percent from Robertson County, and 5 percent from Rutherford County. The more recent enrollees (1980 graduates) include approximately 40 percent from Davidson County, 30 percent from Sumner County, 20 percent from Robertson County, and 10 percent from Rutherford County. These figures suggest that the Nashville Youth Apprenticeship Project has attempted to compensate for a disappointing level of achievement in Davidson County by shifting its emphasis to the cooperating outlying counties.

Apprenticeship-School Linkage and Cooperative Education in Davidson County

It would appear that competition with the existing cooperative education program is one important factor which helps to account for the disappointing performance of the project in Davidson County. Over the past few years, the relevant educational administrators have increased significantly the number of students that a cooperative education teacher must instruct in order to qualify for full-time salary reimbursement from state vocational funds. Whereas, a co-op coordinator could qualify for full-time funding with less than 40 students a few years ago, a co-op coordinator today must have 69 students to qualify for full-time funding. In order to maintain stable staffing levels for co-op coordinators, it appears that there has been increased pressure to accept into the co-op program all students who meet the basic credit requirements. Previously, student applicants for co-op were screened for admission. Obviously, in a situation such as this, the co-op coordinators want to include every eligible

student to help justify funding for their positions. Administrators in the Metro School System appear to have supported the interests of the co-op coordinators by insisting that all project participants also must participate in the cooperative education program.

The increase in the minimum enrollment level for co-op coordinators seems to have resulted in somewhat intensified competition between the co-op coordinators and the vocational instructors. As described in a previous section, a decision by a senior student in Davidson County to co-op may well make it impossible for that student to take any vocational courses during the senior year. Obviously, the vocational instructors want to have the better vocational students participating in their senior classes. This desire is based not only upon the satisfaction inherent in teaching better students, but also upon the need to have a sufficient number of students to justify funding of their positions, just as is the case with the co-op coordinators. Therefore, vocational instructors may discourage promising students from entering the co-op program and may encourage them instead to take another year of vocational instruction. Vocational instructors frequently have their own circle of contacts in industry and can promise an able student a good recommendation for an attractive job upon graduation. Therefore, it appears that many of the better vocational students do not enter the co-op program.

In the current situation, a Youth Apprenticeship Project coordinator may approach a Davidson County co-op coordinator in search of a student to fill an apprenticeship slot. More than likely, the co-op coordinator has several students available for employment since co-op coordinators generally have some

difficulty finding jobs for the expanded number of co-op students. However, project coordinators report that the available co-op students frequently are not qualified for the apprenticeship positions they have developed. As a result, the project coordinator is not able to fill the apprenticeship position. Conversely, promising vocational students taking senior level courses cannot qualify for the apprenticeship position because they are not enrolled in the co-op program. In such instances, promising employment positions and promising vocational students are not able to be linked because they cannot reach each other through the mediating cooperative education mechanism.

Despite the administrative policy of the Metro School System, which forbids Youth Apprenticeship Project participation without co-op participation, the individual principals also can exercise a measure of influence in this area. For those employed seniors who are not participants in the Youth Apprenticeship Project, principals are authorized to approve early dismissals for employment without requiring the students to participate in the co-op program. Despite the Metro School System's official policy to the contrary, some principals have extended their prerogatives in this area to the Youth Apprenticeship Project as well. Thus, some Davidson County vocational students are participating in the project without participating in the co-op program. Some of them participate based upon an early dismissal while others participate on a released-time basis from vocational classes.

OTHER OBSERVATIONS

Three problem areas are prominent in the Nashville Youth Apprenticeship Project. First, the sponsoring organization represents a make-shift arrangement devised specifically for this implementation. This arrangement has not provided any significant benefits to the project, either in terms of educational contacts or in terms of employer contacts. Second, the project has been deeply divided by the conflict between BAT staff and key sponsor staff. There can be little doubt that the effectiveness and efficiency of the project have been impaired by this conflict. Third, the Metro School System in Davidson County has provided lukewarm support for the youth apprenticeship effort.

Despite these three major problem areas, it still is possible to perceive the benefits of the apprenticeship-school linkage concept in those instances in which the problems do not predominate. Schools benefit by having a high quality work experience situation to offer to the students. Employers benefit by receiving the subsidy and by having a referral source for promising employees based upon vocational instructors' assessments of the candidates' performance and potential. Students benefit by receiving a substantial wage and by acquiring meaningful work experience while still in school. The National Apprenticeship Program benefits by the addition of new programs and apprentices. Since these benefits are apparent in spite of the problems which exist in the Nashville implementation, it would appear that there is considerable inherent strength and potential in the apprenticeship-school linkage concept.

SITE VISIT REPORT ON THE

NEW ORLEANS YOUTH APPRENTICESHIP PROJECT

INTRODUCTION

The following report presents the findings of a site visit conducted at the New Orleans Youth Apprenticeship Project in New Orleans, Louisiana, on August 13-17, 1979. Discussion areas in this site visit report are covered under separate section headings as follows:

- Local context, e.g., the general operational environment of the apprenticeship-school linkage demonstration;
- Administrative information, e.g., project staffing, BAT/SAC coordination, school system relationships, and staff supervision;
- Program activities, e.g., apprenticeship program registrations, individual apprentice registrations, job development, student recruitment and project performance to date;
- Developmental strategies, e.g., approaches and materials used to promote and continue the project in relation to local schools, employers, and the community as a whole;
- Operational experiences, e.g., areas in which specific problems have been encountered in project activities, including start-up difficulties, school and employer reactions to the project; and,
- Other observations, e.g., evaluations regarding the general achievements and possible issues in relation to project concepts and implementation.

These topic areas are discussed in detail in each of the following sections of this site visit report.

LOCAL CONTEXT

The New Orleans Youth Apprenticeship Project operates within a five parish (county) area around New Orleans, Louisiana. The parishes include Jefferson, Plaquemines, St. Bernard, St. Tammany and Orleans, the parish in which the City of New Orleans is located. Thus, the project service area includes the four parishes of the New Orleans SMSA, plus the parish of Plaquemines. As of July 1, 1976, the New Orleans SMSA ranked thirty-third in population among the 163 SMSAs in the U.S. The City of New Orleans, with an estimated 1976 population of about 581,000 was the nineteenth largest city in the U.S. The Parish of Orleans and the City of New Orleans, however, are declining in population while surrounding parishes are having modest to fairly substantial population growth. For example, between 1970 and 1975, Orleans Parish had a 4.9 percent decrease in population and the City of New Orleans experienced a 5.7 percent decrease. By comparison, the contiguous parishes of Jefferson and St. Tammany had 1970-1975 population increases of 17.0 percent and 20.2 percent, respectively. In 1975, the total population of the five-parish area in which the apprenticeship project operates was about 1,121,000 with over half of this population in Orleans Parish.

Besides being the second largest seaport in the U.S., New Orleans is noted as a center for the production of natural gas and crude oil, much of which is produced through off-shore drilling. Petro-chemical industries, refineries and related service industries, therefore, constitute a large portion of the area's industrial activity. Other large industrial activities focus on salt mining, commercial fishing, aluminum production and agriculture. In the City of New Orleans, tourism and related activities are fairly extensive. In general, manufacturing is not a large component of the industrial activity in the area.

e.g., only 14.1 percent of the New Orleans SMSA civilian labor force of 387,828 in 1970 was engaged in manufacturing. This compares to 15.9 percent for the state as a whole and a U.S. rate of 25.9 percent.

Unemployment estimates vary among the five parishes, e.g., the unemployment figure for Orleans Parish in 1970 was 5.8 percent, compared to only 3.7 percent for Jefferson Parish. Also, the distribution of minority populations in the New Orleans SMSA is varied. Orleans Parish had about a 45 percent black population in 1970, while the black population of St. Bernard Parish (much of the Parish tends to be rural) was 5.1 percent. The concentration of blacks in Orleans Parish is even more pronounced in the public school enrollments. Some school officials estimated that nearly 80 to 85 percent of the public school students in Orleans Parish were black as compared to 15 to 20 percent black student enrollments in Jefferson Parish.

The public schools in the New Orleans area are operated on a parish-wide basis. Parish school boards generally are active and politically powerful groups. School board members are elected officials who are selected from the school districts within each parish. The State of Louisiana, of course, has considerable control over the educational system in general, but considerable autonomy is exercised at the local (or parish) level. Within state regulations, the parish school boards establish educational policy and approve the yearly school budgets. Vocational education, like the educational system generally, tends to operate fairly autonomously at the parish level. Until recently (about 1973), there has been relatively little state direction in vocational education.

Vocational education enrollments in the State of Louisiana in 1976 were 220,000 including post-secondary enrollments in Federally aided vocational programs. By vocational area, the 1976 enrollments were distributed as follows:

- Consumer Education and Homemaking (26.4%);
- Office Education (28.2%);
- Trade and Industrial Education (15.9%);
- Agriculture (10.5%);
- Other (19.0%).

The state budget for vocational education in FY 1976 included $48.7 million for vocational programs, of which $37.4 million (76.8%) was supported through state and local funding. The level of state funding for public education, including vocational education, varies in each parish according to state formulae. One school board member estimated that local funding for public education in Jefferson Parish was probably close to 60 percent, while in Orleans Parish the figure was closer to 40 percent.

About sixty-eight secondary schools operate in the five-parish area of the apprenticeship project, but only four of the schools are separate, vocational-technical high schools. The number of public and parochial secondary schools in each parish is presented in Table 1, following:

Table 1

NUMBER OF SECONDARY SCHOOLS BY PARISH

Parish	No. of Secondary Schools
Jefferson	15
Orleans	37
St. Bernard	4
Plaquemines	5
St. Tammany	7
Total	68

Most of the vocational education activities in each parish are implemented through comprehensive high schools. Students are transported to appropriate

schools for half a day of vocational instruction in schools with vocational curricula.

ADMINISTRATIVE INFORMATION

The New Orleans Youth Apprenticeship Project is contracted to Delgado College, a community-technical college located in Orleans Parish. The college, which started as a proprietary school in trade and technical education and is now one of the state colleges, has a long history of activity in vocational education, both at the post-secondary and secondary level. The present school linkage project started at the college in 1977 as one of the original four BAT funded apprenticeship initiatives in school to work linkages. New Orleans was chosen as a project site as the result of a visit and investigation by the Apprenticeship Task Force established by Secretary of Labor, Ray Marshall. According to the project's BAT monitor, the Apprenticeship Task Force visited New Orleans in part because BAT already had an apprenticeship-school linkage through a part-time apprenticeship program involving eleventh and twelfth graders in the Orleans Parish School District. This project encompassed part-time apprenticeship training in maintenance and related occupations. After some deliberation about a possible sponsor for the project in New Orelans, Delgado College was selected because of its historical involvement in related training for apprentices. Also, Delgado College was already providing hands-on training in various trades for several of the public schools in the area.

The staff of the New Orleans Youth Apprenticeship Project consists of a project director, four project coordinators (at the time of the site visit) and secretarial and clerical support staff. The present project staffing is somewhat below the level established in the proposal. None of the present staff was

involved in the development of the proposal for the school linkage project. The project director was at one time the training director for a large corporation in New Orleans. This experience and his work at Delgado brought considerable employer contacts to the project. Project coordinators were recruited from within the Delgado College system and the parish school systems. Some school board members, particularly in Orleans Parish and Jefferson Parish, initially were reluctant to allow non-school project personnel to work within their school systems.

Project coordinators generally are assigned to specific parishes and the schools within these parishes. Project coordinators also are involved in a direct working relationship with the project director on a day-to-day basis and share their field experiences among themselves. This staff camaraderie may account for the fact that the present staff seems to be a cohesive group of dedicated individuals. For example, they expressed considerable pride in developing apprenticeship programs and in placing student apprentices in positions with career potential.

Apprenticeship agreements and the paper work necessary to apply for program registration are carried out by the project coordinators under the supervision of the project director. The apprenticeship agreements are forwarded to the local BAT offices for review and then forwarded to the Louisiana State Apprenticeship Council (SAC) for apprentice and program registration. The registration process is facilitated by the use of a "short" form which serves as an application for registration of the apprentice and of the apprenticeship program simultaneously. A single BAT representative coordinates all the school linkage registrations which, at the time of the site visit, were cumulatively in excess of 200 program registrations and 500 apprentice registrations.

The advisory committee to the Youth Apprenticeship Project was recruited from the Advisory Board to Delgado College. The advisory committee consists of representatives from labor, management and education. At present, advisory committee meetings are held on call, rather than on a regular basis. The advisory committee members thought that this arrangement was satisfactory since they believed that the project has been successful and effectively administered.

PROGRAM ACTIVITIES

The New Orleans Youth Apprenticeship Project is the only program of the new youth initiatives in apprenticeship to have achieved, and exceeded, its apprentice registration goals. At the time of the site visit, the cumulative number of apprentices registered was 533. This is 233 over the target goal of 300 established at the beginning of the project in 1977. Figure 1, following, shows the monthly progress of apprentice registrations through July of 1979.

The peak registration figure in April of 1978 represents the registration of apprentices in the Youth Employment and Training Program (YETP) of the Maintenance Department of the Jefferson Parish School District. The low months of registration activity, i.e., May and June of 1979, represent a project close-out period since continuation of the project was in doubt for the 1979-1980 school year. For the most part, the apprentice registrations have occurred in the areas of automobile, machine, and maintenance occupations. Table 2, following, illustrates the occupational areas of student employment as of July 31, 1979.

With only a few exceptions, all the applications for apprentice and program registrations have been accepted by the Louisiana SAC. The exceptions relate generally to modifications in the work processes for particular occupations and program sponsors, e.g., legal secretary apprenticeship positions. For the most

FIGURE 1

APPRENTICE REGISTRATIONS (OCTOBER 1977 to JULY 1979)
FOR THE NEW ORLEANS YOUTH APPRENTICESHIP PROJECT.

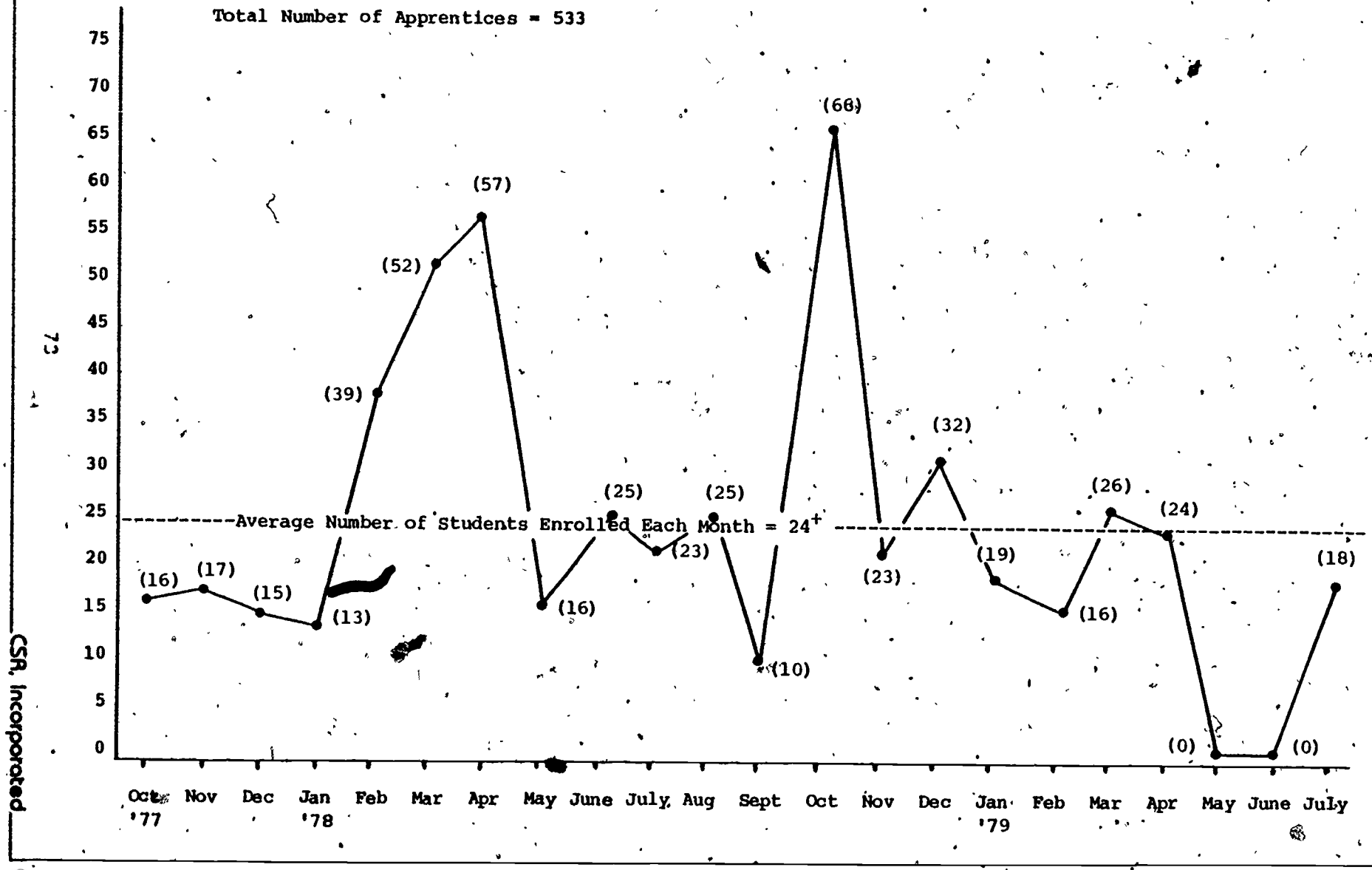

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Table 2

AREAS OF STUDENT EMPLOYMENT

Occupations	Number of Students	Percent of Students
Automobile Occupations	112	21
Maintenance Occupations	85	16
Machine Repair & Mfg.	69	13
Health Occupations	61	11
Large Diesel Engine Mechanics	40	8
Other	36	7
Carpentry & Plumbing	28	5
Environmental	19	4
Culinary	17	3
Secretarial (Legal/Medical)	17	3
Photography	16	3
Printing	13	2
Drafting	8	2
Welder	7	1
Painter/Decorator	4	*
Totals	533	99%**

*Less than 1%

**This percentage is not equal to 100% because of rounding.

part also, the apprentice indentures have been in traditionally apprenticeable occupations. Apprentice and program registration normally are accomplished by the Louisiana SAC within three to four weeks after application. Although the New Orleans project staff did register student apprentices in previously established apprenticeship programs, the vast majority of programs are new accounts which have been developed by the project staff.

Figure 2, following, shows the monthly addition of new apprenticeship programs since October of 1977. According to the project's BAT monitor, the project built apprentice registrations on already existing accounts (about 10-12) at the beginning of the project. In some cases also, employers cooperating with Trades and Industrial (T&I) Cooperative Education programs with junior and senior T&I students formally registered their training programs after the implementation of the project. In some ways, therefore, the New Orleans project was able to capitalize on existing programs, e.g., the YETP and cooperative education programs, in order to achieve the goal of 300 apprentice registrations.

Apprentice and program registrations, however, have varied considerably from parish to parish. Over half of the apprentice and program registrations have occurred in Jefferson Parish. Table 3, following, shows the relative percentage of apprentice and program registrations for each parish served by the school linkage project.

FIGURE 2

PROGRAM REGISTRATIONS (OCTOBER 1977 TO JULY 31, 1979)
OF THE NEW ORLEANS YOUTH APPRENTICESHIP PROJECT

Total Number of New Programs = 233

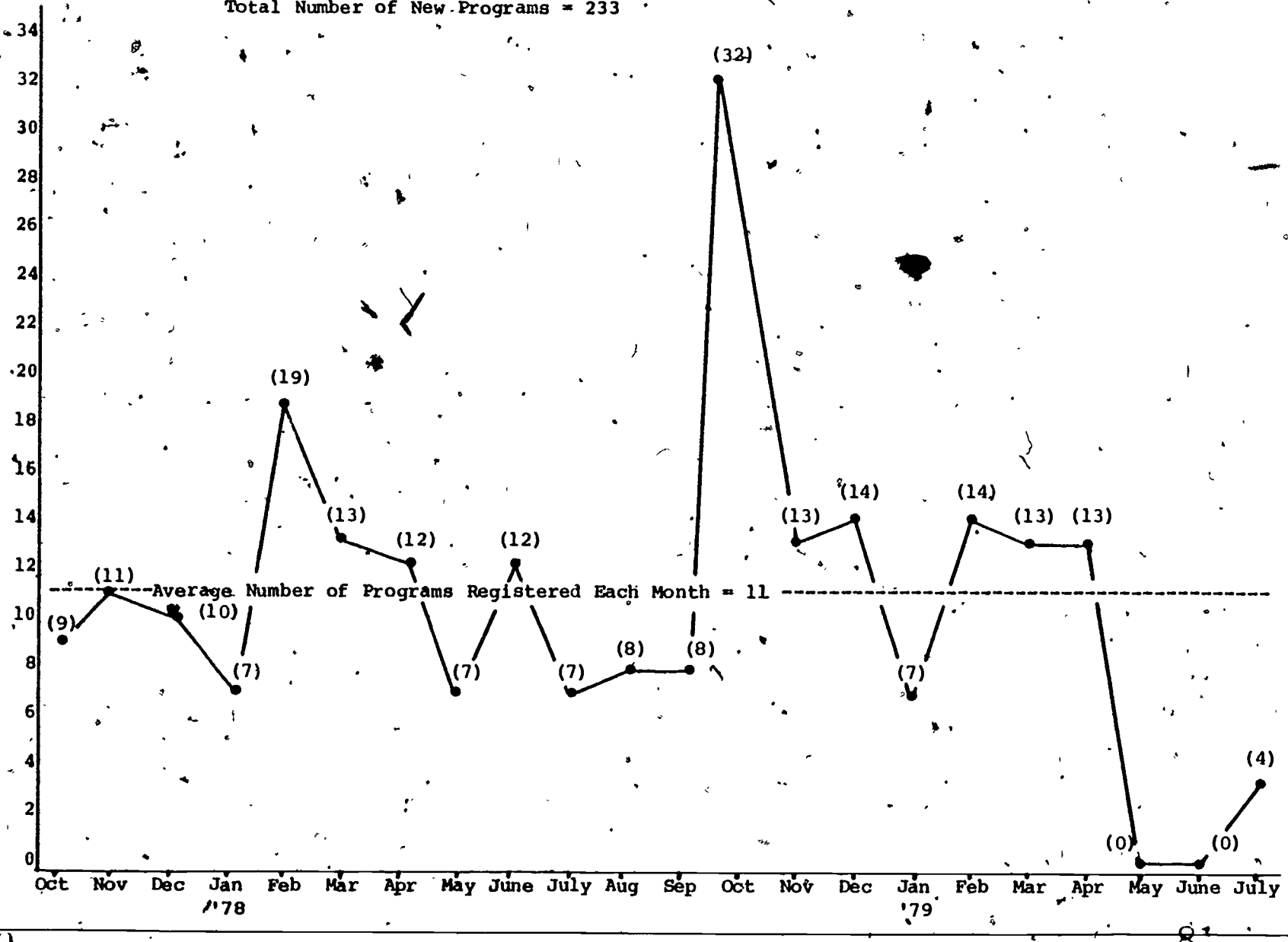

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Table 3

APPRENTICE AND PROGRAM REGISTRATIONS BY PARISH

Parish	Registration*	
	Apprentices(%)	Programs (%)
Jefferson	57	50
Orleans	20	21
Plaquemines	4	14
St. Bernard	13	5
St. Tammany	5	7
Total	99%	99%

*Totals do not equal 100% because of rounding.

Coordinators attribute the success in Jefferson Parish to a fairly progressive school system and an emphasis on vocational education. One former coordinator now working for the Orleans Parish School District stated that, by contrast, the Orleans Parish School Board tended to place little emphasis on vocational education. Of the 68 secondary schools in the five-parish area, apprentices have been registered from 35 schools (51%).

Various people associated with the project estimated that the retention of apprentices in the local project has ranged from 50 percent to nearly 70 percent. Unfortunately, data were not available to verify the level of retention in the project. Some partial data, however, suggest that the actual retention rates may tend toward the lower estimate. Finally, while the New Orleans project has not targeted either disadvantaged or female students, project performance with regard to registration of minority and female apprentices has been quite successful. To date, 29 percent of the apprentices have been female and about 32 percent of the

apprentices have been black. The project director estimated that nearly 75 percent of the registered apprentices would qualify as economically disadvantaged.

DEVELOPMENTAL STRATEGIES

As stated previously in this report, the New Orleans Youth Apprenticeship Project was initiated by the visit of the Secretary of Labor's Apprenticeship Task Force. This investigative body explored the possibility of several different locations for youth apprenticeship projects across the U.S. Different sponsors for the New Orleans project were discussed, including the formation of a completely new organization to administer the project, e.g., incorporation of an advisory group, a strategy similar to that used to form Community Apprenticeship Councils.

Meetings were held in New Orleans with organized labor, BAT, SAC, management representatives and representatives of the educational systems in the area. Because of its historical involvement in apprenticeship, Delgado College was chosen as the ideal project sponsor. Apparently, this decision was conditioned by the belief that Delgado could cut across the jurisdictions of the separate, parish school systems. Also, the college had the experience with apprenticeship and the organization that could expedite implementation of the project. For the most part, organized labor in the area has maintained a supportive, but rather inactive position with regard to the project. By design, most of the apprenticeship placements have been outside of union firms and outside of the construction trades.

Besides a considerable number of personal contacts with employers and school system representatives, the New Orleans Youth Apprenticeship Project team developed brochures which were mailed to about 1500 employers in the five-parish area. According to an early project report, only about sixty employers responded to this

initial mail-out. Thus, the most effective strategy in developing job slots for student apprentices has been through personal contacts with employers.

Students, also, have been recruited with the use of a brochure which describes the program. However, use of this brochure has been more selective, i.e., distributed to students through cooperative education coordinators and school counselors. Apparently, initial resistance was encountered with some cooperative education staff in the school systems (in part because of the permanent employment aspect of apprenticeship placements). An effective strategy employed by the project staff was development of their own job bank of available apprenticeship positions. Thus, by cooperating with the project, education personnel were adding job slots to their ongoing cooperative education programs. According to the project coordinators, this strategy has resulted in a mutual sharing of job development activities by both the project staff and school personnel. For example, when project staff identify an employer who would like to hire a student, but the position is nonapprenticeable (or the employer does not want to participate in a registered apprentice program), the job slot information is conveyed to the appropriate school counselors or cooperative education coordinators. By the same token, counselors and cooperative education personnel inform project staff of newly developed job slots that might be apprenticeable.

Another project strategy that seems particularly efficient in the apprentice and program registration activities is use of the project coordinators to complete registration applications under the supervision of the project director and with review by BAT. With proper monitoring by BAT and the project director, project coordinators have become quite adept in assessing worksite apprenticeship training

potential and writing apprenticeship standards. No formal training has been provided to the coordinators, but the project director provides considerable ongoing guidance and monitoring in this important activity.

The advisory committee to the project (although not particularly active at this stage) has been a strong advocate of the project. This support probably was extremely important in the initial stages of the project. However, it is important to note that the New Orleans project started with an advisory committee intact, and the committee has been informed of project activities from the initial development of the project to the present. The project director deals directly with each of the committee members when problems arise that may affect the project, or when particular problems occur that may be of special concern to individual committee members.

OPERATIONAL EXPERIENCES

Findings from the site visit suggest that the New Orleans Youth Apprenticeship Project is a highly successful demonstration project. This conclusion is based upon the following evidence:

- Apprenticeship registrations have far exceeded the goals established in the project contract;
- More apprenticeable job slots are available than the project staff can fill with student apprentices;
- Employer satisfaction both with the student apprentices and project operations seems very high; and
- Generally good working relationships have been developed between the project staff and local school system personnel.

Apprenticeship registration goals have been achieved by diligent efforts of the project staff and by capitalizing on some programs that were in operation before the project was implemented. Also, in the YETP situation with the Jefferson Parish School System, over thirty students were registered with one sponsor. In Jefferson Parish, in particular, there has been strong support from the vocational education system, in part because the project coincides with the school system's recent emphasis on vocational education and youth employment. In short, the project achieved "early success," a fact which may have promoted further growth in apprenticeship registrations. One school board member in Jefferson Parish, noted that the project provides visibility for the vocational education efforts of the parish, especially among employers.

Another factor which has had a positive impact for the project is a shortage of skilled labor in certain occupations, e.g., machinists and welders. One coordinator stated that many small businesses were encountering difficulties in finding skilled labor. Larger companies, especially off-shore drilling companies, offer extremely good wages and job opportunities, a situation that hurts recruiting potential for smaller firms.

The project has more job slots available than the coordinators can fill with student apprentices in some occupations, e.g., welding, TV and radio repair, diesel mechanics. In general, this places the project in the enviable position of having a ready supply of apprenticeship positions for those students who are interested in apprenticeship. Also, if the project coordinators can fill vacated apprenticeship positions with other apprentices, it appears that employers are willing to accommodate some degree of attrition. The five employers interviewed during the site visit were enthusiastic about the project. However, employer reaction

toward the wage stipends varied considerably. Three employers emphasized the quality of the apprentices they were getting through the project, but two employers admitted frankly that they were participating only because of the wage stipends.

Project coordinators mentioned that the most common resistance they encountered in "selling" the project to employers was the employers' hesitation to get involved with a Federally sponsored program. This type of reaction was especially evident with small employers in the more rural sections of the project area. Also, some employers expressed concern about government audits and Occupational Safety and Health Administration (OSHA) monitoring as a side effect of their participation.

The major operational problem encountered in the New Orleans project has been staff turnover with project coordinators. This problem, however, appears to have been resolved as the result of a new administration at Delgado College. Because of financial difficulties at the college, the previous administration moved college personnel around on Federally funded projects, including the New Orleans Youth Apprenticeship Project. Consequently, it was difficult for the project to maintain ongoing relationships with employers and school systems when different people were shifted around within the college, i.e., there was little stability in the project coordinator positions. In some cases, the cooperation of schools was nearly lost because four or five different project coordinators were contacting the schools. In one case, a project coordinator had to appear before a local school board to explain why, after the school board had approved of the project, there had been no follow-through and placement of student apprentices.

To the credit of the New Orleans project (and the sensitivity of the later coordinators), staff turnover problems have been remedied and new relationships established with most of the employers and school systems. The project director, the BAT monitor, and the project coordinators maintain that the success of the New Orleans Youth Apprenticeship Project has been attributable largely to the ability of the staff to initiate and maintain good interpersonal relationships with school system personnel and area employers.

OTHER OBSERVATIONS

There are some aspects of the New Orleans Youth Apprenticeship Project which are somewhat unique in terms of program operations. In particular, the sheer number of registrations appears to have caused some record keeping difficulties, both in terms of student accounting and in terms of employer vouchers and student apprentice evaluations. Apprentice cancellations, for example, are sometimes unreported by employers. Consequently, an immediate account of the number of active student apprentices in the project is not always available. However, project staff mentioned that the project records were to be computerized in September. Such a record keeping system should be of great assistance in keeping an up-to-date accounting of the apprentice placements and in identifying apprenticeship programs which may have job openings due to attrition.

The project's BAT monitor and the project coordinators stated that the most effective way of keeping the school linkage project going on a continuing basis would be to extend more efforts on apprenticeship recruiting into the lower grades, e.g., tenth and eleventh grade. With such advance notification students could select vocational curricula and other courses with the prospect of having an

apprenticeship position available in their senior year. At present there are no informational or recruiting efforts extended to other than senior students who are eligible for work release.

Project coordinators also were cognizant of the possibility of students using the apprenticeship project as a means of obtaining employment without being committed to apprenticeship. In general, however, this concern was of less importance than the possibility of some employers exploiting the student apprentices. While most of the apprenticeship positions are fairly well-paying positions with career potential, some of the apprenticeable occupations are limited both in terms of pay and career potential, e.g., some occupations in health and child care. Thus, in some cases the coordinators did not even anticipate that the student apprentices would stay with their apprenticeship positions after graduation from high school. However, both the coordinators and the five employers interviewed agreed that most apprenticeship terminations were usually voluntary. Employers, especially those with small firms, did not seem concerned that some apprentices would terminate their apprenticeships. As one employer stated, the problem is no more acute than with older apprentices and, in fact, the skill level (hence, productivity) of the students is sometimes greater than that of the out-of-school apprentices.

Finally, the New Orleans Youth Apprenticeship Project staff is proud of its accomplishments in the New Orleans area, and this pride is shared by some school personnel and advisory committee members. For example, one advisory committee member, a union representative, stated that it was nearly impossible to discuss youth employment issues in meetings with labor and management without some mention being made of the New Orleans Youth Apprenticeship Project and its potential

for reducing youth unemployment. Overall findings from the site visit at the New Orleans project suggest that the concept of apprenticeship-school linkage is both viable and successful for most participating students, employers, and school systems in the area.

SITE VISIT REPORT ON THE

DES MOINES YOUTH APPRENTICESHIP PROJECT

INTRODUCTION

The following report presents the findings of a site visit conducted at the Des Moines Youth Apprenticeship Project in Des Moines, Iowa, on August 27-29, 1979. Discussion areas in this site visit report are covered under separate section headings as follows:

- Local context, e.g., the general operational environment of the apprenticeship-school linkage demonstration;
- Administrative information, e.g., project staffing, BAT coordination, school system relationships, and staff supervision;
- Program activities, e.g., apprenticeship program registrations, individual apprentice registrations, job development, student recruitment and project performance to date;
- Developmental strategies, e.g., approaches and materials used to promote and continue the project in relation to local schools, employers, and the community as a whole;
- Operational experiences, e.g., areas in which specific problems have been encountered in project activities, including start-up difficulties, school and employer reactions to the project; and,
- Other observations, e.g., evaluations regarding the general achievements and possible issues in relation to project concepts and implementation.

These topic areas are discussed in detail in each of the following sections of this site visit report.

LOCAL CONTEXT

The geographical area in which the Des Moines Youth Apprenticeship Project operates is the City of Des Moines which is located in Polk County, Iowa. The Des Moines SMSA is made up of both Polk County and Warren County. Currently, the population of Des Moines City is estimated at 200,000, while the current population estimate of the Des Moihes SMSA is 328,391.

Des Moines is regarded as second only to Hartford, Connecticut, as a location for the corporate headquarters of major insurance companies. Also, the Des Moines SMSA is heavily oriented toward agri-business. Two of the four major employers identified in the area, John Deere Tractor Company and Massey-Ferguson, Incorporated, are manufacturers of farm equipment. Firestone Tire and Rubber Company and the Meredith Corporation (publishers) are also major manufacturers in Des Moines. A host of light industrial firms and other agri-business establishments also are found in the Des Moines SMSA.

For economic purposes, Polk County and Warren County bound the relevant labor market for the City of Des Moines. Employment in the Des Moines SMSA has been relatively higher on a per capita basis than the national average. In 1978, the Des Moines SMSA labor force was listed as 180,200, while the average unemployment in 1978 was only 7,100 (3.9%). At the time of the site visit, unemployment was still regarded as less than four percent.

Iowa is a "Right-to-Work State." That is, by state law, collective bargaining arrangements must provide for an "open-shop." In other words, bargaining agreements cannot force union membership, an arrangement which tends to weaken the bargaining position of unions. Iowa is not regarded as a strong

union state and, at this writing, all apprenticeship slots in the Youth Apprenticeship Project had been developed in nonunion firms. However, this pattern may be broken in the near future.

The Des Moines Independent Community School District includes forty-nine elementary schools, eleven junior high schools and six senior high schools. There is one "area school," the Des Moines Area College, which corresponds to a traditional two-year, vocationally oriented community college. For the academic year 1978-79, enrollment in the six secondary schools (grades 10-12) was listed as 8,392. High school enrollment is declining and posing a severe reorganizational problem within the school district.

Des Moines is said to have four private trade and technical schools, but vocational-technical education tends to be dominated by Des Moines Technical High School (Des Moines Tech). Des Moines Tech is one of the six comprehensive high schools managed by the school district. Des Moines Tech receives a very modest amount of state vocational education monies, since state policy has guided Federal vocational education funds to the area colleges. The Des Moines Area College, like the local public schools, is under the auspices of the Iowa State Department of Education and the state's Superintendent of Public Instruction.

Vocational education enrollments in the project area need some explanation. The six public high schools of the City of Des Moines are regarded as comprehensive high schools. Even Des Moines Tech, a high school with a clear technical orientation, has a comprehensive and academically oriented curricula. However, tradition in the school district has Des Moines Tech as the only school charged specifically to administer Trade and Industrial (T&I) cooperative education

programs. Office Education (OE) and Distributive Education (DE), vocational cooperative programs, as well as vocational home economic programs, are located in all six high schools. Students enrolled at Des Moines Tech have an opportunity for cooperative education in T&I, OE, and home economics. Consequently, cooperative education programs in Des Moines Tech are well established.

The Des Moines Independent Community School District receives a modest 23 percent of the teacher's salaries for operating its vocational education classes from state and Federal allocation of vocational education monies, since state priority for the distribution of these monies is toward the area colleges. Thus, the Des Moines school district is left with the substantial responsibility of covering the operational and equipment costs in vocational programs through its local budget.

There are other CETA programs in the project area. The New Horizons Program operates out of five of the local high schools. Career Education has been a goal of the district since 1972. A variety of Career Education programs and activities are currently operating at all grade levels and in all schools in the district.

The Des Moines project has the smallest funding of any of the eight projects. Its initial target was fifty placements during the first year of the project. Due to a late start on the project, however, that target has not been met to date. However, accomplishments must be viewed as exemplary. The initial proposal specified that half of the fifty initial placements would be identified out of Des Moines Tech with the balance coming from the other five high schools. This portion of the proposal was based upon an assessment that the Des Moines Tech

students are more vocationally oriented, more inclined to respond to apprenticeship opportunities, and more likely to have the kind of qualifications to which employers would respond. However, current data show that only 25 percent of the placements have involved students from Des Moines Tech.

Within the school district office, administrative support for the apprenticeship project is solid. Office facilities and clerical assistance are provided for the project coordinator who works closely with, and receives supervision from, the Supervisor of Career Vocational and Industrial Education. There is evidence that the objectives of the apprenticeship project are clearly understood and that there is a good faith effort to test the apprenticeship-school linkage concept in the school district.

Against this background lies the fact that, historically, Des Moines Tech has been the presumptive deliverer of vocational education. There is considerable pride in that history. Also, there is a prevailing set of philosophical views about what is meaningful vocational education, what is cooperative education, who has responsibility for these educational missions, who has responsibility for apprenticeship development and coordination, etc. As of the visitation dates, there have been eight placements out of the Des Moines Tech student body. These placements relied upon the communication of the project coordinator with individual instructors and counselors who mostly operate on their own initiative in guiding students to the apprenticeship opportunities.

A variety of important issues related to the apprenticeship-school linkage project in Des Moines can be identified. These are listed below:

- Are there adequate education/work programs in the district now?
- Is there a demand for apprenticeship and cooperative education programs outside of Des Moines Tech?
- How strong is school district demand for employment/job development programs?
- How favorable is the opportunity to develop apprenticeship and/or cooperative education opportunities within the Des Moines economic area?
- Is the apprenticeship approach sufficiently unique and does it offer the school district adequate new opportunities for seniors to merit continuation?
- How can the apparent competition between cooperative education and other job development and placement programs be minimized?
- How can the counselors in the schools be brought in as informed partners in the apprenticeship recruitment process?

While it is quite likely that this project will meet its targeted goals, most of the above questions or issues need to be dealt with in the next six to nine months if the question of program continuation is to be dealt with systematically.

There are very few community, union, or industry issues which would mitigate against the success of the project or its potential for future success. In fact, there has been a recent breakthrough in the relationship with an AFL-CIO affiliated union which should expand apprenticeship opportunities. At this writing, the Machinists' Union Local 254 has agreed to waive certain conditions about entry level wages and about the operation of apprenticeship programs for any high school seniors placed in the the shops of new truck dealers. This creates the opportunity to negotiate apprenticeship positions with the new truck dealers with the cooperation from the Machinists' Union. This tentative agreement reflects an acute awareness both of the shortage of truck mechanics and of the relative

high costs of current union-sponsored apprenticeship programs. If the waiver of entry level wage and apprenticeship requirements allows the placement of high school seniors in such apprenticeships, it may provide a model to extend this to other unionized areas. The waiver by the Machinists' Union is viewed as potentially beneficial to all parties. Within small industries, especially, there is an interest in cooperating with any program that can assist in building a skilled and reliable work force.

There is one potential issue or question relevant to industry. This concerns the acceptability of an apprenticeship program that may lack a wage subsidy element. If it turns out that the economics of the Targeted Tax Credit program offset the loss of the wage subsidy in the project, there may be no problem. However, the wage subsidy seems to be important in influencing employer participation. It may not be the dominant factor, but it is significant nonetheless.

There is a long history of labor-industry-education collaboration within the Des Moines school district, and much of the leadership has been provided by Des Moines Tech. While it was possible to identify constructive criticism of the Des Moines Tech program among employers regarding how up-to-date some of the Des Moines Tech programs are, how attuned the instructors are to industry needs, and how equipment needs to be improved, still there was a high confidence in the role of Des Moines Tech programs and in existing collaboration efforts.

There is also a range of issues which relate to BAT and which may not be unique to the Des Moines project. However, they need to be listed. These include:

- How can the monitoring of apprenticeship progress be assured after graduation?

- How can related training be developed and/or coordinated after graduation?
- In the absence of a wage subsidy, will employers be receptive to the project concept?
- Will the flexibility that employers give to the interpretation of work processes undermine the integrity of the apprenticeship programs?

ADMINISTRATIVE INFORMATION

The Des Moines Independent Community School District is the contractor for the Des Moines Youth Apprenticeship Project. District administration is characterized by an elected school board, each member serving a three-year term. Dr. Dwight M. Davis is the administrative officer or Superintendent of Schools, responsible for administering school district activities. Dr. Davis reports and is accountable to the school board of the Des Moines Independent Community School District. The Des Moines school district has a long history in the development of vocational and career education curricula and in the delivery of education in such areas.

The Des Moines project is characterized by a single staff position of project coordinator which is filled by David L. Billings. Mr. Billings was hired expressly to coordinate the project and reported for work on November 1, 1978. The Des Moines project is physically housed in the school district offices. The coordinator is under the supervision of Mr. Richard Gabriel, Supervisor, Career, Vocational and Industrial Education. The coordinator of the project assumes all responsibilities, including:

- program public relations;
- student recruitment and promotion;

- direct communications with instructors working in the high schools and with high school counselors;
- screening and counseling of students who express interest in the program;
- job development activities, working in one-to-one relationships with prospective employers;
- monitoring of placed apprentices prior to graduation;
- maintenance of project records; and,
- maintenance of liaison with BAT.

David Billings has long been associated with training, apprenticeship, and education in the private sector. His most recent position was Assistant Director for Training, National Electrical Contractors' Association. Prior to that, he was an area sales instructor/sales manager for Northwestern Bell Telephone Company.

Billings has a very easy and comfortable communication style; he does not have an advanced degree nor has he worked in a school system. These could pose immense problems for many people filling the coordinator's role. However, Billings is well accepted within the school district office and in the high schools. He is also very well received by employers and advisory board members.

The decision-making process in this project is quite simple. Except on matters involving school district policy, or on matters having to do with budget or programmatic dimensions requiring BAT sign-off, the coordinator manages the program and makes appropriate decisions. There is an advisory committee that meets regularly with an established agenda, but the coordinator establishes the agenda. A member of the advisory committee is Mr. Perry Chapin who is President, South Central Iowa Federation of Labor, AFL-CIO. Mr. Chapin is also on the board of the Des Moines Area College. Advisory committee agenda items deal with

broad project goals and/or accomplishments. The committee does not get involved in the details of project administration. The advisory committee activities are important to the project, but some restructuring of the committee is likely since three members have not been active on the committee. Day-to-day project activities are monitored by the coordinator, while the BAT monitor and the Supervisor of Industrial and Vocational Education provide distant monitoring.

Planning must be viewed loosely since this is a small project. The fundamental objective is to meet the goal of fifty targeted placements and then proceed to a second fifty placements. Planning involves how to be more successful in communicating the program's opportunities to the instructors and counselors, identifying prospective employers, and establishing a plan for reporting to the district superintendent's office on the accomplishments of the project. The coordinator, with the assistance of his supervisor and the BAT monitor, handles all of these planning dimensions.

PROGRAM ACTIVITIES

The program is administered out of the school district offices. Students are recruited from the six local high schools in Des Moines. All training for the students is on-the-job at worksites negotiated one-to-one with employers. Information on the apprenticeship opportunity is disseminated through brochures which are made available to high school counselors and Industrial Education instructors. The coordinator also visits Industrial Education classes at the invitation of instructors in order to communicate the apprenticeship opportunity to students.

As of August 26, 1979, there were 31 registered apprentices. Of that list, there were four minorities and five females, but minority and female are not necessarily mutually exclusive. Table 1, following, presents the prevalent occupational areas of employment of the students registered as apprentices through August 15, 1979.

Table 1

Areas of Student Employment*

Occupations	Number of Students	Percent of Students
Auto Mechanic	4	13
Carpenter/Maintenance	3	10
Web-Press Operator	3	10
Cabinet Maker	3	10
Compositer/Printer	2	6
Electronic Technician	2	6
Drafter	2	6
Upholstery Cutter	2	6
Other	10	32
Total	31	99%**

*As of August 15, 1979

**Total does not equal 100 percent because of rounding.

Of the 31 apprenticeship placements, eleven of the students were graduated from high school with the class of 1979; the balance will be graduated in 1980. Of the 11 graduates of 1979, ten are still working as apprentices. One apprentice is known to have been terminated. The precise reason for the termination is not clear, but, apparently, the employer felt there was a discipline problem. The placement record shows 28 separate employers. These are all in the small employer class with the number of employees in the 7 to 12 range.

There is no teaching staff working directly for this project, but instructors serve as referral agents for prospective apprentices. However, curriculum development efforts began during the summer of 1979. The coordinator has developed a related training course for apprentices. This course will involve a textbook entitled, Work: Pathway to Independence, American Technical Society, 1979; course outlines are in the process of being completed.

When an apprenticeship candidate is identified, the coordinator has an initial one-to-one conversation with the candidate to outline the purpose and responsibility of apprenticeship. The coordinator then attempts to identify the area in which the student would want an apprenticeship and tries to discern the student's degree of commitment and motivation. The coordinator then attempts to identify a set of prospective firms which might offer apprenticeship opportunities. The telephone directory yellow pages provide a starting place. The city directory provides additional information on the character of the firms. Personal visits are made to the prospective employer, and, if an employer expresses an interest, the established work processes associated with the relevant occupation are discussed. If the employer expresses further interest in apprenticeship, work processes are "negotiated" to account for differences in the way the trade may be structured at the firm. The employer, however, is reminded that apprenticeship programs entail a diverse set of work experiences and apprentices cannot be limited to singular or low-skill tasks.

The Des Moines project has not registered any new apprenticeship programs in nontraditional areas. One new program was suggested but, upon consultation with the BAT monitor, consensus was reached to withdraw the proposal. A three to

four week turn-around time has been typical in the BAT registration process and is not regarded as a problem. Also, technical assistance from BAT has been adequate and timely. The assistance comes in facilitating registration, facilitating meetings with employers or unions, and in providing encouragement about apprenticeship within the school district.

Career development counseling appears limited at the five traditional high schools. With the exception of business and distributive education curricula, there are no systematic job development and placement programs in these five high schools. Des Moines Tech is an exception to this since, fundamentally, it is a career-oriented high school.

However, the school district maintains a strong counseling staff which varies in size according to student enrollments at the different high schools. The counselors are all certified in counseling and their positions are full time. In the Des Moines Youth Apprenticeship Project, counselors are only involved indirectly. Like the instructors in the schools, the counselors serve as referral agents for students interested in apprenticeship. Counselors have been made aware of apprenticeship opportunities and have been encouraged to think about the relevance and appropriateness of such opportunities for their students. Also, counselors sometimes receive student referrals from the instructors.

Three apprentices who were interviewed during the site visit seemed particularly impressed with their apprenticeship opportunity. They were aware that apprenticeship involved an investment of their time, but they felt that they could count on its paying off over a working lifetime. The students revealed that they

were receiving a very broad range of work experiences, that they were working within their identified work processes and beyond, and that their employers were good to work with.

On the employers' side, also, enthusiasm about the project was noted. Since Des Moines employers who have participated in the project are basically in the "small employer" class, identifying and training skilled workers is more difficult than for the larger firms. The Youth Apprenticeship Project provides a way for the small employer to make a meaningful investment in training with some expectation that the investment will pay off for the firm. Employers were very pleased with the quality of screening in the placement of student apprentices. All four employers interviewed said that the wage subsidy was important in their decision to participate in the project, but not necessarily the dominant factor.

DEVELOPMENTAL STRATEGIES

The project coordinator had no involvement in the pre-project planning or the proposal for the Des Moines Youth Apprenticeship Project. The Des Moines project came into being largely because of the experience and interest of the BAT monitor, because of past Des Moines experience with career and vocational programs, and because of some motivated people within the school district. The BAT monitor, Carl Heninger, who had previous project experience with the New Orleans Youth Apprenticeship Project, also was aware of Des Moines Independent Community School District's experience in career and vocational education areas. Consequently, the youth apprenticeship concept seemed an appropriate fit for Des Moines. The Supervisor of Industrial Education, Vocational, and Career

Education, the Executive Director of Secondary Education, and the Director of Planning and Development in the Des Moines school district structured the proposal and made a commitment to the project on the part of the local school. The initial thinking was that (1) the project was timely; (2) it provided opportunities for high school seniors in the five traditional high schools; (3) it would complement opportunities available at Des Moines Tech; and (4) it would provide a useful mechanism for structuring a coordinated program in which the counselors and instructors would become involved in career and vocational placement activities. None of these initial school system objectives has changed in the course of the project.

Following the appointment of David Billings as project coordinator, the Chamber of Commerce sponsored a breakfast meeting to which area employers were invited. The purpose of the meeting was to communicate the character of the apprenticeship opportunity to the area employers. However, the meeting had a small turnout. Consequently, subsequent contacts with employers have been on a one-to-one basis. Also, since the coordinator was appointed after the start of the school year, no opportunity was available to communicate with instructors or counselors before the start of the school year. Thus, the coordinator went to each high school and worked largely on a one-to-one basis with the school counselors and instructors.

In the Des Moines project, no specific target occupations or target industries have been identified, but effort has been directed toward targeting disadvantaged and female students. While the minority population in Des Moines (4-5%) is lower than the national average, and not atypical for the state as a

whole, there is still a clear project interest to identify both minority and women apprenticeship applicants.

Beyond efforts to involve the Des Moines Chamber of Commerce and the Iowa Association of Manufacturers, the coordinator has developed a professional slide-tape material for use in public presentations. The excellent presentation is approximately eight minutes long and appropriate for use in public service or employer organizations, in classrooms with students, and for acquainting counselors and instructors with the program.

OPERATIONAL EXPERIENCES

To understand this section, a preface is in order. The school district was not notified of the project award until September 1978, and the project coordinator was not recruited and on board until November 1, 1978. By this time the school year was underway, the seniors were enrolled in structured curricula, and no groundwork about the project had been established with instructors and counselors in the schools. Thus, the program was handicapped in its start-up. Because of this time factor in implementing the project the initial goal of placing 50 apprentices in the first year seemed unlikely. It is now the objective of the project to accomplish the goal of 50 apprenticeship registrations by the end of the coordinator's first year of duty, a goal that very likely will be achieved. However, there are two related problems which will influence the achievement of the registration goal. One problem involves outreach methods and the other involves relationships with staff. These two areas primarily involve Des Moines Tech.

The opportunity to promote the apprenticeship program and to reach students depends upon access to instructors and counselors. At the five traditional high schools, access to and cooperation from the instructors and counselors have been very positive. Student placements from Hoover and Roosevelt High Schools have been limited, but this is accounted for by the fact that North High School is very academically and college oriented as are the instructors and the counselors. Access to instructors and to counselors in Hoover and Roosevelt High Schools, however, has been easy compared to Des Moines Tech. For reasons involving tradition, educational philosophy, and views about the division of labor, there is a sense of competition between sponsored programs at Des Moines Tech and the Youth Apprenticeship Project.

This fact is cited here as a matter of record. It is unlikely that this situation will interfere with the achivement of the project goal or the generation of favorable employer and student reactions to the project. What is illustrated, however, is the problem of initiating a program which has some similarity with other institutional programs when the relative roles and the programmatic balance have not been carefully delineated.

By all parties communicated with in the site visit, the project coordinator is viewed as very effective in all aspects of the project. Further, it will be an outstanding accomplishment if this single coordinator can manage all dimensions of the project and place 40 to 50 apprentices in a single calendar year. This accomplishment will be particularly significant since relationships with school staff and job opportunities need to be developed on a one-to-one basis.

Linkages with the schools have been described previously, but the linkage with organized labor needs to be noted. Thus far, no apprentice placements have

taken place in a union shop. This is not by design. It is just that the open-shop environment of Iowa and the orientation towards small employers weighs against direct linkage with organized labor. The project coordinator has attempted to place apprentices in truck mechanic positions with new truck dealers. However, most of the dealers are unionized, and their bargaining agreement with the Machinist Union Local 254 contains an apprenticeship provision. The apprenticeship provision is viewed as quite expensive by the employers, and implicitly acknowledged by organized labor. Recently, the Machinists' Union has agreed to waive certain starting wage rate provisions for high school seniors placed as apprentices in the dealers' shops. The arrangement between the union and the project remains to be tested, but there is every reason to believe that this is a good faith offer which will encourage the apprenticeship concept and identify prospective union members.

OTHER OBSERVATIONS

On the basis of the site visit, the Des Moines project appears to be very sound in terms of school district support, employer and student support, placement accomplishments, programmatic momentum, and relevance to the Des Moines educational setting. There remain several questions or issues, however, which will influence the future of the project in Des Moines.

First, enrollments in the high schools have been declining steadily. There is now a concern within the school board regarding the need for closing down one of the Des Moines high schools. A recommendation has been made to the school board to move Des Moines Tech to the North High School site since North High is

operating at or below fifty percent of its enrollment capacity. The closing and transfer issue has been aired publicly in the Des Moines Tribune. The debate is likely to focus around the merits and role of neighborhood schools and about the specific role and location for Des Moines Tech. The issues are very political. An alternative proposal to moving Des Moines Tech would be to cluster various vocational curricula among the remaining five high schools. The different high schools would, hence, specialize in particular career and vocational fields. Under either this proposal or the proposal currently before the school board, the basic role of Des Moines Tech is likely to be altered substantively. Such an alteration in Des Moines Tech's traditional role is likely, under any circumstances to require a new approach to both cooperative education and apprenticeship type programs. The Des Moines Youth Apprenticeship Project will provide the Superintendent of Schools and the school board with the opportunity to examine an alternative model in the school-to-work concept.

Beyond this, there is a question of how many career, vocational, and job development type programs the school district requires. Also, what are the threshholds for developing employment opportunities for high school students? Equally important, does apprenticeship provide a significantly novel opportunity for high school students? It appears that all of these questions will be approached and dealt with by the Des Moines school district over the next six to nine months. Also, there are indications that a commitment will be made to examine closely the future potential of programs like the Youth Apprenticeship Project.

SITE VISIT REPORT ON THE

NEW JERSEY YOUTH APPRENTICESHIP PROJECT

INTRODUCTION

The following report presents the findings of a site visit conducted at the statewide New Jersey Youth Apprenticeship Project in New Jersey, on August 27-30, 1979. Discussion areas in this site visit report are covered under separate section headings as follows:

- Local context, e.g., the general operational environment of the apprenticeship-school linkage demonstration;
- Administrative information, e.g., project staffing, BAT coordination, school system relationships, and staff supervision;
- Program activities, e.g., apprenticeship program registrations, individual apprentice registrations, job development, student recruitment and project performance to date;
- Developmental strategies, e.g., approaches and materials used to promote and continue the project in relation to local schools, employers, and the community as a whole;
- Operational experiences, e.g., areas in which specific problems have been encountered in project activities, including start-up difficulties, school and employer reactions to the project; and,
- Other observations, e.g., evaluations regarding the general achievements and possible issues in relation to project concepts and implementation.

These topic areas are discussed in detail in each of the following sections of this site visit report.

LOCAL CONTEXT

With a population of 7,349,000 New Jersey ranks eighth in population of all of the states of the Union while ranking forty-sixth in total land area. Politically, the state is divided into 21 counties and 610 individual school districts. All of the New Jersey schools operate under strong county educational systems.

The FY 1979 secondary school enrollment of 455,000 was distributed among 303 comprehensive high schools and 42 vocational-technical (vo-tech) high schools. Of the total secondary school enrollment, 179,863 (40%) were enrolled in vo-tech courses. Of those students enrolled in vo-tech courses in the New Jersey secondary schools, 50 percent were enrolled in Business and Office Occupations, 30 percent in Trade, Industrial and Technical Occupations, and the remaining 12 percent were distributed among Agriculture, Distributive Education, Health, and Occupational Home Economics.

Cooperative education (co-op) programs exist in Agriculture (7), Distributive Education (210), Health (14), Home Economics (51), Office Occupations (214), and Industrial Education (330). In total, including 33 Work Experience and Career Education Programs, there were 859 co-op programs for FY 1978 involving 17,418 students who worked 11,372,973 hours during the school year and earned $29,099,664 while earning academic credits required for graduation. The Cooperative Industrial Education (CIE) programs involved 7,395 students (79% male) in 4,756,872 hours of work for which they earned $12,601,999.

In the field of vocational education in New Jersey, there are three distinctive categories of schools. The different types of schools are:

- Full-time county vocational schools;
- Shared-time county area vocational-technical schools; and,
- Area vocational schools administered by independent boards

The majority of area vo-techs are a part of the county school system and, as such, are supported by county school taxes and by state aid funds which include Federal aid under the Vocational Education Acts. FY 1978 state financing of vo-tech education (as derived from both state and Federal sources) totaled $100 million in general aid, plus $7 million for special grants. The Vocational-Education and Career Preparation Division of the New Jersey Department of Education, while having suffered a considerable staff reduction in the past few years, is currently staffed adequately. There is a strong relationship between the state office and the county vo-tech systems. Meetings are held regularly between state and local administrators.

The New Jersey Youth Apprenticeship Project staff has the cooperative support of the Division's Director of Apprentice Training. The staff member assigned to that position controls the linkage to apprentice coordinators in the county vocational schools. Indeed, the Director of Apprentice Training runs a tightly controlled operation as an equal partner with BAT in the conduct and promotion of apprenticeship training in New Jersey. To promote apprenticeship throughout the state, the New Jersey Department of Education has developed an operational guide entitled, Apprenticeship Program Coordinator's Manual. Consequently, the project's lines of communication and coordination to state agencies are good and operational. Also, there is a good relationship between the apprentice coordinators in the schools and the BAT field representatives. BAT and the school

system personnel use common forms and are equipped equally to work out new apprenticeship programs in their areas. This BAT-vocational education relationship in the arena of apprenticeship has existed since 1936. Over the years the cooperative arrangement has generated excellent labor-industry-education relations and stimulated apprenticeship in New Jersey (now ranks ninth nationally).

Labor, industry, and education are represented on the advisory committee for the New Jersey Youth Apprenticeship Project. In the course of the first two meetings of the committee, there have been no indications of issues which would be detrimental to the project.

New Jersey is heavily industrialized. It is a major manufacturing center with a heavy demand for skilled craftspersons and service personnel--a prime prospect for the expansion of apprenticeship. For example, approximately 27 percent of the total number of employees in nonagricultural establishments in 1977 were engaged at manufacturing firms. An assessment of employment opportunities, 1978-82, prepared by state agencies in New Jersey, provides a measure of employment supply by occupational categories and also provides projected annual labor market demand and vocational education output supply data. This report projects an annual demand for 43,430 workers in trade and industrial occupations between 1979 and 1982. For the same time period, it is estimated that the annual output from vocational education in these same occupations will average about 19,100.

ADMINISTRATIVE INFORMATION

The New Jersey Department of Education, Division of Vocational-Education and Career Preparation is the contractor for the New Jersey Youth Apprenticeship Project. Dr. William Wenzel, Assistant Commissioner for Vocational Education, is the responsible official. However, operating authority has been delegated down the line for contract administration. There are no subcontracts for administration of the project. Further, the project contract with the New Jersey Department of Education does not include funds for wage stipends to employers who participate in the project. Thus, in the New Jersey Youth Apprenticeship Project there are no direct, financial incentives provided to employers who decide to hire students for apprenticeship positions.

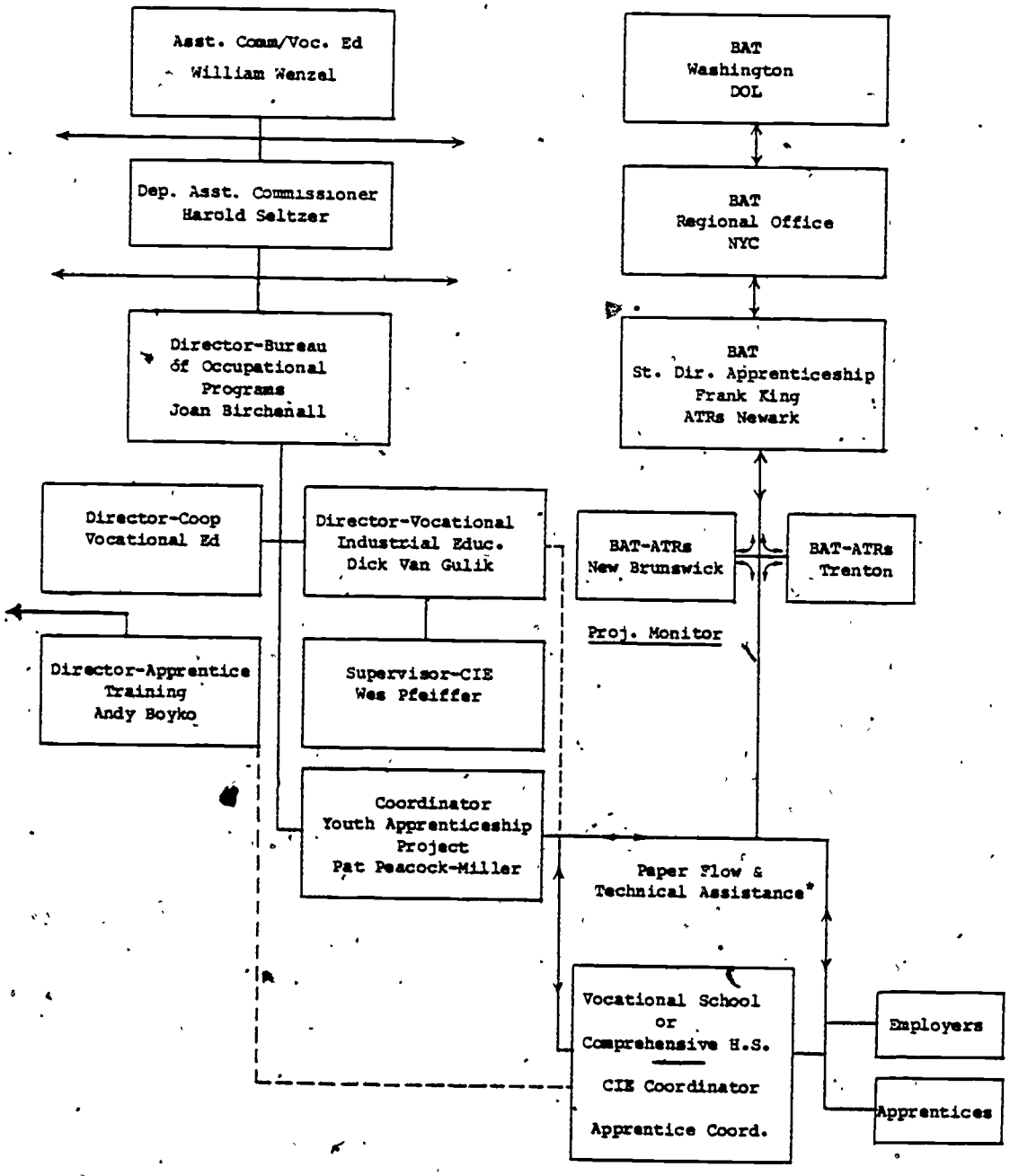
As previously noted, there is extensive experience in education, training, and apprenticeship within the several bureaus of the division and especially within the Bureau of Occupational Education. This experience has been heavy in the area of cooperative industrial education and in apprenticeship. Also, there exists a wealth of experience and success in labor and industry relationships.

The organizational structure and lines of authority for the New Jersey Youth Apprenticeship Project are presented in Chart 1, following.

Chart 1

NEW JERSEY STATEWIDE YOUTH APPRENTICESHIP PROJECT

Administrative Network



*Both BAT and the NJ Dept. of Educ. use common forms because of a joint agreement regarding apprenticeship.

The project operates with a minimal staff. However, there is cooperative support from other professional members of the Bureau of Occupational Programs. The assigned project staff is as follows:

- Project Coordinator – Patricia Peacock-Miller
- Secretary – Gail Kessler

Major support for the project staff is provided by:

- Richard Van Gulick, Director of Vocational Industrial Education.
- Wes Pfeiffer, Supervisor of Cooperative Education, who provides the linkage with the CIE coordinators in the schools.
- Andy Boyko, Director of Apprentice Training, who provides the linkage with the apprentice coordinators in the counties.

In addition, the project has used, under an agreement, two chapters of the Senior Corps of Retired Executives (SCORE) in Monmouth and Camden counties. SCORE members have provided field activity support in the development and analysis of potential employer worksites for the apprenticeship-school linkage project.

The pace of the project activities is monitored and evaluated regularly by the staff. A master log and a diary are maintained, and the BAT project monitor is provided with duplicate data on a regular basis. These data are supplemented with a comprehensive monthly report prepared by the Youth Apprenticeship Project coordinator and sent to BAT.

PROGRAM ACTIVITIES

Table 1, following, presents the employment areas for students who had been registered as apprentices through the project as of August 31, 1979. In addition to the 110 registered apprentices shown in Table 1, 108 individual apprenticeship registration applications, at the time of the site visit, were in process at BAT.

Officially, the project had reached 28 percent of its registration goal of 400 by the end of August. If these individual apprenticeship registration applications at BAT are all accepted, the number of registered apprentices is 55 percent of the project goal. This registration performance in the project represents fairly substantial progress over an operating period, which, effectively, has been only eight months.

Table 1

AREAS OF STUDENT EMPLOYMENT*

Occupations	Number of Students	Percent of Students
Machinist	34	32
Auto Mechanic	10	9
Tool and Die Maker	10	9
Carpenter	7	6
Electrician	5	4
Plumber	5	4
Diesel Mechanic	4	4
Auto Body Repairer	3	3
Other	31	29
Total	110	100%

*As of August 31, 1979

For the most part, training facilities for student apprentices have been generated within the boundaries of the school districts served. However, in a few cases, establishments in adjacent counties have been used in order to match student interest with employer needs. In no case are travel distances prohibitive. The state's requirement that CIE coordinators visit trainees at the job site twice per month tends to mitigate against remote locations for the student apprentices.

Apprenticeship information and career development information are provided by the Bureau of Occupational Programs and project staff through the CIE and apprentice coordinators. Student recruitment, orientation, and selection is also a responsibility of the CIE coordinators and the apprentice coordinators. In the vo-tech schools, vocational counselors also participate in the recruitment and selection activity. However, in the comprehensive high schools, counselor participation in the recruitment and selection of student apprentices is minimal. Therefore, the CIE coordinators do most of the student recruiting for the project in the comprehensive high schools.

At the time of the site visit, there were 87 employers participating in the project. At a later date, however, data were provided which listed 117 participating firms for the 1979-80 school year. Of these 117 firms, eighty firms had work forces of less than 25 employees and only twelve of the firms employed 100 employees or more. The three largest employers participating in the project had work forces of 1,000, 850, and 800 employees, respectively. Most of the 117 firms participating in the project fall into the 6-10 employee category. Employers of the apprentices are located in 19 of the 21 counties of the state; the only counties not represented with employers are Cape May County and Atlantic County. Because there are no wage subsidies for employers, few apprenticeship terminations are anticipated in the project. There have been a few terminations of student apprentices prior to high school graduation. However, in each known instance, the termination seemed justified.

Instructional staff for the project participants is composed of CIE coordinators who conduct a coordinating class for one period per day. There has been little curriculum development related specifically to the project. Use is

being made of available material developed for apprentice-related instruction, as well as the specific basic units developed previously for use in the co-op coordination classes. The Project Manager has stimulated curriculum revision in such areas as blue-print reading, safety and industrial math.

The design activity for the on-the-job training (OJT) in each of the apprenticeship work processes has been worked out by BAT Apprenticeship and Training Representatives (ATRs), CIE coordinators and apprentice coordinators from the schools. SCORE personnel also have participated in this design activity. Most of the project apprentices are registered in traditional occupational areas for which standards have been prepared. Thus, the chore of relating and/or modifying work processes in an apprenticeship program for a new employer is not particularly difficult or complex. Evaluations of the worksites are done by the local ATRs, county apprentice coordinators, and/or the project staff. As indicated previously, CIE coordinators are required to visit each student's worksite at a minimum of once every two weeks.

The traditional BAT/State Department of Education relationship exists for this project and project staff relations with BAT are excellent. Either BAT or the appropriate personnel in the educational network may generate the paperwork needed for approval and registration of an apprenticeship program. For the most part, the paperwork is developed by the CIE coordinators or the apprentice coordinators and--until recently--was transmitted to the appropriate local BAT ATR for review and approval. If approved by the ATR and the BAT offices in Newark, the paperwork was started through the BAT line to New York and Washington. However, if data submitted to the BAT ATR in the original package were found to

be incomplete, e.g., an incomplete wage schedule or a missing Dictionary of Occupational Titles (DOT) number, the application package could and did sit for months.

In August of 1979, a joint BAT/Youth Apprenticeship Project decision was made that all completed packages would be submitted to BAT through the Office of the Youth Apprenticeship Project. Also, it was decided that the project coordinator would assume the responsibility for securing fill-ins for any incomplete data and for modifying any inaccurate data in the application package. BAT-Newark responded that it would take 5-6 weeks to register a new program from the time of submission of the package to the filing of the data with the State and National Apprenticeship Reporting System (SNAPS) in Washington, D.C. The project, however, suggests a longer time frame in the registration process.

BAT ATRs have provided technical assistance to the project through participation in meetings with CIE coordinators. The technical assistance provided to the CIE coordinator has involved explaining apprenticeship registration procedures, form requirements, and so forth. Apprentice coordinators in the counties have their Apprenticeship Program Coordinator's Manual which was mentioned previously. Both apprentice coordinators and CIE coordinators strive for quality in the development of new worksites. Consequently, the quality of the placements and the OJT opportunities provided for the students are excellent. Student-learner apprentices (the term used by project and BAT staff to differentiate the student apprentices from other apprentices) are enthusiastic about the program. It is likely, therefore, that the apprentices who have been registered through the project will turn out to be real promoters of the school linkage approach to apprenticeship.

DEVELOPMENTAL STRATEGIES

The project proposal for the New Jersey Youth Apprenticeship Project was developed by Mr. Van Gulick. As a joint development activity through a committee of the Bureau of Occupational Programs, CIE, apprenticeship, and cooperative education staff were involved in the preparation of the proposal. Because of personnel and civil service procurement requirements in New Jersey, the present project staff was not appointed until four months after project funding.

Initial activities in the project focused on knowledge development sessions with CIE coordinator groups, school administrators, school counselors, etc. There has been little problem in targeting occupations and industries, although contract language specified that priority would be given to health and energy-related occupations. Beyond that, CIE coordinators have been responsible for identifying apprenticeable occupations in their area establishments and for placing CIE students in these areas--an extension of the usual activity of the CIE coordinators.

Coordinators and counselors have been apprised of the need to expand the placement of women in non-traditional jobs for women and to involve disadvantaged students in the project. No quotas have been set. However, it appears that minority enrollment efforts have been rebuffed partly because of the relatively low initial wage in the graduated wage scales for student-learner apprentices. Because of this factor, some targeted students are reported to have opted for jobs that pay higher initial wages, even though there is little future in these jobs. Project personnel are striving to develop a workable strategy to expand

the project's female, minority, and disadvantaged enrollments for the 1979-80 school year.

Promotional strategies have included the preparation of informational brochures for distribution in the high schools and for use as handouts on speaking engagements before trade association or educational association groups. However, outreach efforts for students have been minimal. Instead, CIE coordinators mostly deal with students who apply to participate in the CIE programs. This area will need beefing up if more females, minorities, and disadvantaged students are to be recruited. In this regard also, the relationship with school counseling personnel appears to be quite low key, resulting in minimal referral of other students who might be interested in apprenticeship.

Since the project proposal was built upon the linkage with the CIE coordinators, the scope of the project has been restricted to those secondary schools with CIE programs. However, schools meeting this CIE program criterion are available in all of the counties of the state. Currently, 77 schools out of a total of 275 eligible schools are participating in the project. To stimulate involvement of CIE coordinators and school administrators, certificates of apprenticeship registration for the students have been channeled through the school administrators. Also, certificates of appreciation have been provided to the school superintendents and principals.

Employer contacts began by CIE coordinators calling those employers who already were participating in a CIE co-op and had apprenticeable occupations at their firms. Thus, the first students to participate in the project were those already involved in a CIE co-op. Establishing apprenticeship programs with these employers merely involved beefing up the work process schedule, developing a

progressive wage schedule, and convincing the employer of the advantage of the formal apprenticeship system. Many CIE coordinators have considered the apprenticeship linkage as "frosting on the cake" for their co-op activities.

Because of a New Jersey Department of Education policy relating to advisory groups and the criteria and procedures for their selection, the development of an advisory committee for the project was slow. The first meeting of the project's advisory committee was held in July of 1979 (the project was approved in September 1978). The committee now is active and functional (good participation in the August meeting) and its membership soon will develop an agenda to attack problems and give direction to the project. Personal visits with advisory committee members indicated that well-qualified individuals (male, female, and minority) have been selected, the knowledge of and interest in the project is high, and the members are supportive of the project effort, whether they represent labor, management, or education.

OPERATIONAL EXPERIENCES

Start-up was slow in the New Jersey Youth Apprenticeship Project. For example, although the project was approved and funded in September 1978, the project's coordinator was not on board until January of 1979. Also, project activity did not really begin until the middle of the school year when students had already begun their second semester classes. Consequently, only existing CIE co-op students in apprenticeable occupation slots were potential student-learner apprentices because their school schedules provided for the necessary work release time. This scheduling factor limited initial progress in the

project, but--for the 1979-80 school year--the problem has been eliminated. Class of 1980 students are now being placed for their senior year. The processing load in September of 1979, however, will be heavy.

Another serious start-up problem was the time lapse to initiate the CIE coordinators into the apprenticeship circle and to involve them with the heretofore unknown BAT paperwork and procedures. The necessary training for such an activity had not been thoroughly pre-planned, hence the need for reruns and correction of incomplete forms. Future projects should include early BAT involvement in training programs for individuals recruited to participate in the BAT style activity. Further, the problem was exacerbated by the fact that the CIE coordinators were taking on this additional assignment on a noncompensated basis.

The project coordinator is well versed in details of apprenticeship and has the respect of the New Jersey BAT personnel. As an observer at a joint meeting of the ten-person BAT staff with the project coordinator, this field investigator was impressed by the mutual respect exhibited by the participants for the role that each plays in the project. It was a problem solving session that ended on a positive note.

Linkages between the schools and industry are excellent. The overall CIE program is well accepted throughout the state. However, the competence of the CIE coordinators in working with the add-on element of the Youth Apprenticeship Project activity varies considerably depending upon how the different CIE coordinators view their roles in the project. Most CIE coordinators, however, view the apprenticeship-school linkage effort as another opportunity to provide meaningful co-op jobs to students in their ongoing program. Their excellent

rapport with industry in their districts makes possible the entree needed to sell the apprenticeship-school linkage concept. The apprentice coordinators, however, tend to maintain a better relationship with labor than do the CIE coordinators.

Whether initiated by apprentice coordinators or CIE coordinators, once a youth apprenticeship slot has been established, there appears to be universal appreciation of the concept by the student-learner apprentice, the employer-supervisor, the school personnel, and the coordinator who firmed up the linkage. For example, contacts with all elements of such a linkage in the City of Cinnaminson produced responses of extreme satisfaction with the results of the process and the expression of the hope that the concept can be expanded in the future. In this instance, the CIE coordinator truly knows his role in the Youth Apprenticeship Project activity, has mastered the BAT paperwork process, and has placed a number of students in top-flight apprenticeships at establishments within the CIE fold, but not previously involved in apprenticeship.

Most of the student apprentice placements have been made in establishments that are not organized. However, representatives of organized labor participating on the project advisory committee are supportive of the effort. Organized labor members on the committee have not publicly endorsed the program, nor have they publicly opposed it.

Program registration has suffered from the time frame problem. Students, coordinators, and employers are confused by the months of delay between "the sale" and "the delivery of the product." Analysis of the delay suggests that the "fault" lies equally between project staff and BAT staff. However, as both sides improve their understanding of their joint roles, and as field personnel sharpen their competence in providing precise data, the time lapse in the registration process should be shortened considerably.

Project strength can be identified as the availability of a large number of apprentice coordinators and CIE coordinators in the schools. Thus, a workforce is available to promote and consummate the school-apprenticeship linkage in an arena of business-industry attuned to cooperative education. Also, given the historical relationship between BAT and the New Jersey Department of Education as equal partners in the approval and registration process, it appears that all of the elements of the project are in place for a rapidly expanding program. However, one of these strengths, i.e., the CIE coordinator linkage, is a potential weakness unless it is efficiently and effectively utilized. The CIE coordinator group must continue to improve its interest and competence in the process of registering apprenticeship programs and apprentices. To do so requires some form of motivation and recognition for their contributions coupled with an organized training program. Another apparent weakness in the project seems to be the minimal staff commitment to the overall promotion and development of the CIE coordinator-apprenticeship linkage concept. Additional project field staff to work directly with the CIE coordinators might overcome some of the problems that have hampered the project.

OTHER OBSERVATIONS

There exists an undercurrent of "turfsmanship" that never quite reaches the surface in the New Jersey Apprenticeship Project. There have been long-standing relationships between BAT ATRs and the apprentice coordinators of the county schools in dealing with the ongoing apprenticeship program in New Jersey. Now, however, there are new entrants into the field--the CIE coordinators who are just learning how to participate in the process. No problem exists, of course, where one person is both a CIE coordinator and an apprenticeship coordinator but the

comprehensive high school newcomer to the apprenticeship arena does not always get compassionate help from the "old hands." Accordingly, some CIE coordinators must learn it "the hard way" with paper bucked back to "dot the 'i' and cross the 't'." Result--extended time lapse.

Also, while the project is currently short of meeting its goal of 400 registered apprentices, it is picking up speed and making good progress. The potential now exists to meet the goal of 400 registered apprentices within a year from the time that the project staff was installed. However, extra effort will be required to reach a meaningful mix of female, minority, and disadvantaged students in the project. For what has been done to date, the project participants seem to be well satisfied, and the viability of the apprenticeship-school linkage concept has been accepted by the schools and industry.

SITE VISIT REPORT ON THE

RHODE ISLAND YOUTH APPRENTICESHIP PROJECT

INTRODUCTION

The following report presents the findings of a site visit conducted at the statewide Rhode Island Youth Apprenticeship Project in Providence, Rhode Island, on August 13-16, 1979. Discussion areas in this site visit report are covered under separate section headings as follows:

- Local context, e.g., the general operational environment of the apprenticeship-school linkage demonstration;
- Administrative information, e.g., project staffing, BAT/SAC coordination, school system relationships, and staff supervision;
- Program activities, e.g., apprenticeship program registrations, individual apprentice registrations, job development, student recruitment and project performance to date;
- Developmental strategies, e.g., approaches and materials used to promote and continue the project in relation to local schools, employers, and the community as a whole;
- Operational experiences, e.g., areas in which specific problems have been encountered in project activities, including start-up difficulties, school and employer reactions to the project; and,
- Other observations, e.g., evaluations regarding the general achievements and possible issues in relation to project concepts and implementation.

These topic areas are discussed in detail in each of the following sections of this site visit report.

LOCAL CONTEXT

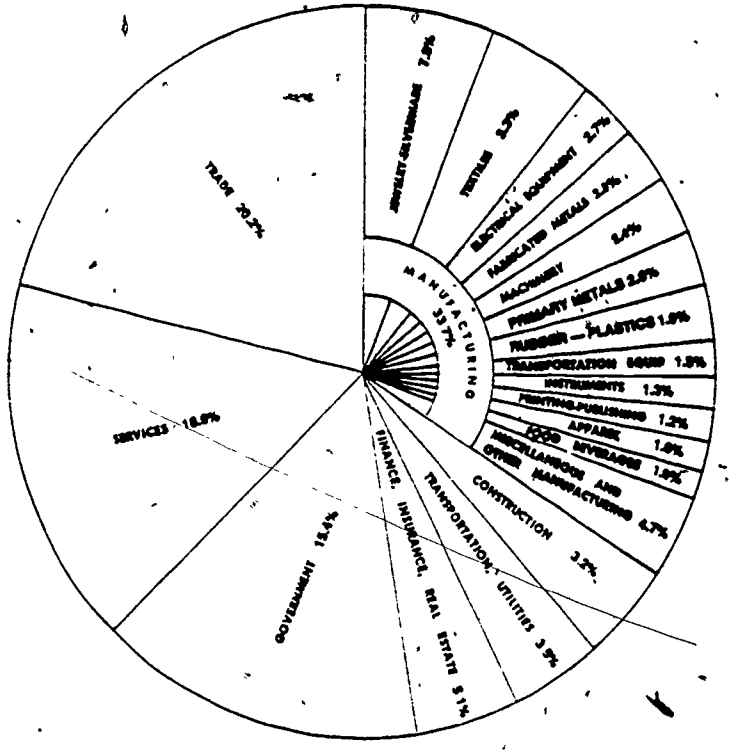
The Rhode Island Youth Apprenticeship Project was designed to promote, develop, and expand apprenticeship-school linkages throughout the State of Rhode Island. With a total land area of 1,058 square miles, the smallest of any state, Rhode Island had a population of 949,723 as recorded in the 1970 census. The current estimate of the population for the state is 946,725. Rhode Island consists of five counties: Bristol, Kent, Newport, Washington and Providence, the largest being Providence County with a population of 580,261. The state capital, Providence, had a population of 179,213 in 1970. The three next largest cities and their populations are: Warwick with 83,694; Pawtucket with 76,984; and Cranston with 73,037. The Providence-Warwick-Pawtucket SMSA had a population of 921,544 in 1970. Census data for 1970 also indicated that 96.6 percent of the population was white, 2.7 percent black, 0.7 percent Spanish surname, and 0.7 percent in the "other" category. Education levels of the population were: 17.3 percent less than 8 years; 46.4 percent high school graduate; and 9.4 percent college graduate.

In 1978 the Rhode Island labor force averaged 433,000 with a total unemployment rate of 6.7 percent. The labor force is estimated to grow to around 450,000 in FY 1980, a gain of 3.9 percent. A review of industry characteristics indicates that manufacturing accounts for 33 percent of wage and salary employment compared to a national rate of 24 percent. A growth rate of 1.8 percent is projected in the manufacturing area from 1978 to 1980. On the other hand, wage and salary employment in the construction area (currently at 3.7 percent) is expected to experience a slight decline.

Chart 1, following, indicates the distribution of wage and salary employment in Rhode Island by employment sectors. Note that the graphline is based on 1977 average data.

Chart 1

DISTRIBUTION OF TOTAL WAGE & SALARY
Employment in Rhode Island . . . 1977*



*BASED ON TOTAL NON-FARM EMPLOYMENT OF 378,700 — 1977 AVERAGE

Table 1, following, provides the number of employees involved in the several employment sectors in 1978. Manufacturing employment as a whole accounted for 397,800 employees and non-manufacturing employment accounted for 262,800 employees.

Table 1

RHODE ISLAND ESTABLISHMENT EMPLOYMENT**
CALENDAR YEAR 1978

(In thousands)

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual Average
NONAGRICULTURAL WAGE & SALARIED EMPLOYMENT	376.8	372.8	382.4	395.0	399.2	403.2	400.7	405.1	409.9	410.0	409.6	408.3	397.8
MANUFACTURING EMPLOYMENT	129.2	127.2	130.1	134.5	135.0	136.0	133.9	137.0	139.0	140.1	139.7	137.8	135.0
Food and Kindred Products	3.7	3.5	3.3	3.5	3.5	3.6	3.5	3.6	3.8	3.8	3.9	4.0	3.6
Textiles	12.4	12.4	12.7	12.7	12.8	12.9	12.8	13.1	13.1	13.1	13.2	13.1	12.9
Apparel	3.8	4.0	4.3	4.3	4.3	4.2	4.0	4.2	4.1	4.0	4.1	3.9	4.1
Rubber & Misc. Plastics Products	7.3	6.5	7.3	7.4	7.1	7.1	7.0	7.0	7.0	7.4	7.5	7.3	7.2
Primary Metal Industry	6.6	6.3	6.5	6.8	6.9	7.0	6.6	7.0	7.0	7.1	7.1	7.1	6.8
Fabricated Metal Products	9.7	9.6	9.9	9.9	9.9	9.9	9.8	9.8	10.0	10.1	10.2	10.2	9.9
Machinery (exc. electrical)	9.1	9.0	9.2	9.2	9.2	9.3	9.1	9.1	9.4	9.6	9.7	9.8	9.3
Electrical Machinery	11.2	11.1	9.7	11.7	11.8	11.3	11.8	12.0	12.2	12.3	12.3	12.3	11.7
Transportation Equipment***	6.5	6.3	6.5	6.4	6.3	6.3	6.0	6.0	6.1	6.1	6.1	6.2	6.2
Instruments	5.3	5.2	5.0	4.9	5.2	5.4	5.2	5.4	5.4	5.5	5.5	5.4	5.3
Jewelry	30.5	30.3	31.7	32.6	33.2	33.5	33.3	33.9	34.4	34.6	34.0	32.8	32.9
Miscellaneous Manufacturing	5.0	4.9	5.4	5.8	5.7	5.6	5.3	5.9	6.3	6.4	6.1	5.8	5.7
All Other Manufacturing	18.1	18.1	18.6	19.3	19.1	19.9	19.5	20.0	20.2	20.1	20.0	19.9	19.4
NON-MANUFACTURING EMPLOYMENT	247.6	245.6	252.3	260.5	264.2	267.2	266.8	268.1	270.9	269.9	269.9	270.5	262.8
Contract Construction	10.4	9.6	10.2	13.3	14.1	14.9	15.4	15.6	15.7	15.8	15.9	15.3	13.9
Trans., Comm. & Public Utilities	12.7	12.7	13.1	13.0	13.2	13.5	13.5	13.5	13.5	13.6	13.6	13.6	13.3
Wholesale & Retail Trade	75.7	74.3	76.5	78.4	79.5	80.6	80.7	81.3	82.2	81.2	82.5	84.1	79.7
Finance, Insurance & Real Estate	19.2	19.2	19.4	19.6	19.8	20.0	20.1	20.0	20.1	20.1	20.1	20.2	19.8
Service, except domestic	70.4	70.6	72.6	75.4	76.1	76.2	76.8	76.7	78.2	78.1	77.2	76.4	75.4
Government	59.2	59.2	60.5	60.8	61.5	62.0	60.3	61.0	61.2	61.1	60.6	60.9	60.7
NOT INCLUDED IN ABOVE:													
Self-employed, Farm & Other	27.9	27.7	29.3	30.2	31.1	30.9	31.5	30.9	30.0	29.5	29.5	29.6	29.8
Labor Disputes	0.0	0.0	2.0	0.4	0.4	0.6	0.0	0.1	0.0	0.0	0.0	0.0	0.3

* Labor Dispute.
** A count of jobs by place of work.
*** Prior to 1972, Transportation Equipment included in All Other Manufacturing.

The degree of labor organization in Rhode Island varies considerably among the several different employment sectors. The highest degree of unionization, of course, exists in the construction industry. Also, manufacturing employees are highly organized at the very large firms, but unions are almost nonexistent in the smaller firms.

In the context of public education, the state is divided into forty autonomous school districts that operate 277 elementary schools and 67 secondary schools. There are nine area vocational-technical facilities that serve students on a regional or statewide basis, six of which have co-op coordinators on the staff. Total enrollment in the public schools for FY 1978 was 160,378 with 74,885 of the pupils enrolled in secondary schools. Many of the secondary schools are identified as comprehensive high schools. However, for the most part, students who enroll in vocational trade, industrial, or technical courses attend area vocational-technical facilities for such courses and take their regular academic program at their home high schools.

Statewide there were 25,042 students enrolled in vocational programs in FY 1978. Of this group approximately 3,000 were enrolled in cooperative education (co-op) programs. Co-op programs are operational in the nine vocational centers of Rhode Island as well as in some fifty of the comprehensive high schools. Eight of the area vocational-technical schools operate either on a regional basis or in conjunction with a comprehensive high school. They are heavily supported by state and Federal funds. Accordingly, close coordination and communication exists between the centers, the high schools, and the state agencies. The ninth vocational-technical facility, the Davis Vo-Tech Center, is operated directly by the state and provides the full range of high school vocational education courses.

Faculties of the comprehensive high schools and vocational technical facilities are highly organized into bargaining units. State financing for vocational education for FY 1978 was as follows:

State and Local Funds	-	$19,342,500
Federal Funds	-	2,650,000
Total		$21,992,500

A number of youth employment and career development programs are operational concurrently in the state. Most notable would be the CETA activities under the Youth Employment Demonstration Projects Act of 1977 for both in-school youth and out-of-school youth. Two CETA prime sponsors exist, one for the major Providence metropolitan area and the other for Balance of State. Similarly, an Opportunities Industrialization Center has been established in Providence.

There is a history of industry-labor-education collaboration in the project area which is stimulated by the Rhode Island Department of Education's Bureau of Vocational-Technical Education and exemplified by the Rhode Island Industry-Education-Labor Council established to foster such collaboration. Organized labor has been supportive of both apprenticeship and vocational education in the state and participates fully on vocational advisory councils at state and local levels.

ADMINISTRATIVE INFORMATION

The contractor for the Youth Apprenticeship Project is the Rhode Island Department of Education, Bureau of Vocational-Technical Education, a state agency. To manage the project a subcontract was let to the Industry-Education-Labor (IEL) Council of Rhode Island, a nonprofit corporation established in June of 1977 for the purpose of helping leaders in industrial, labor, governmental,

business, and educational communities deal with the problems of matching resources with needs. The IEL Board of Directors numbers thirty representatives from business, industry, and education.

The IEL Council has established for the Youth Apprenticeship Project an advisory committee of ten which includes the project director, the project coordinator, and the project monitor. In addition, four of the advisory committee members are members of the IEL Board of Directors. A management review committee comprised of the project director, the project monitor, the State Apprenticeship Council (SAC) coordinator, and a member of the IEL Council also has been established.

The contractor, the Bureau of Vocational-Technical Education of the Rhode Island Department of Education, has had extensive experience in education, training and apprenticeship. The project director, the State Director of Vocational Education, himself an experienced practitioner, has a support staff of highly qualified professionals within his organization. A member of the regular bureau staff was granted a leave of absence to assume the post of coordinator of the project for the IEL Council, the project subcontractor.

The IEL Council does not have a staff of operating personnel to manage its several activities. The IEL Board develops policy pertinent to its mission and establishes committees to oversee its functions. Accordingly, in keeping with the negotiated subcontract for management of the Youth Apprenticeship Project, a staff of qualified professionals was employed by the IEL Council to carry out the operating functions of the project. The contractor, the Bureau of Vocational-Technical Education of the Rhode Island Department of Education, reserved the right to appoint the State Director of Vocational Education as the noncompensated

project director. The following list presents the operating staff of the Rhode Island Youth Apprenticeship Project.

- Dr. Frank M. Santoro - Deputy Assistant Commissioner, Bureau of Vocational-Technical Education, Project Director
- Mr. William J. Nixon, Jr. - Project Coordinator
- Mr. John Kossak - Project Specialist
- Ms. Elgerine "Cookie" Roberts - Project Specialist
- Mr. Rogelio Yearwood - Project Specialist
- Ms. Mary Kerr - Project Bookkeeper/Secretary
- Ms. Lynn Roberts - Project Secretary

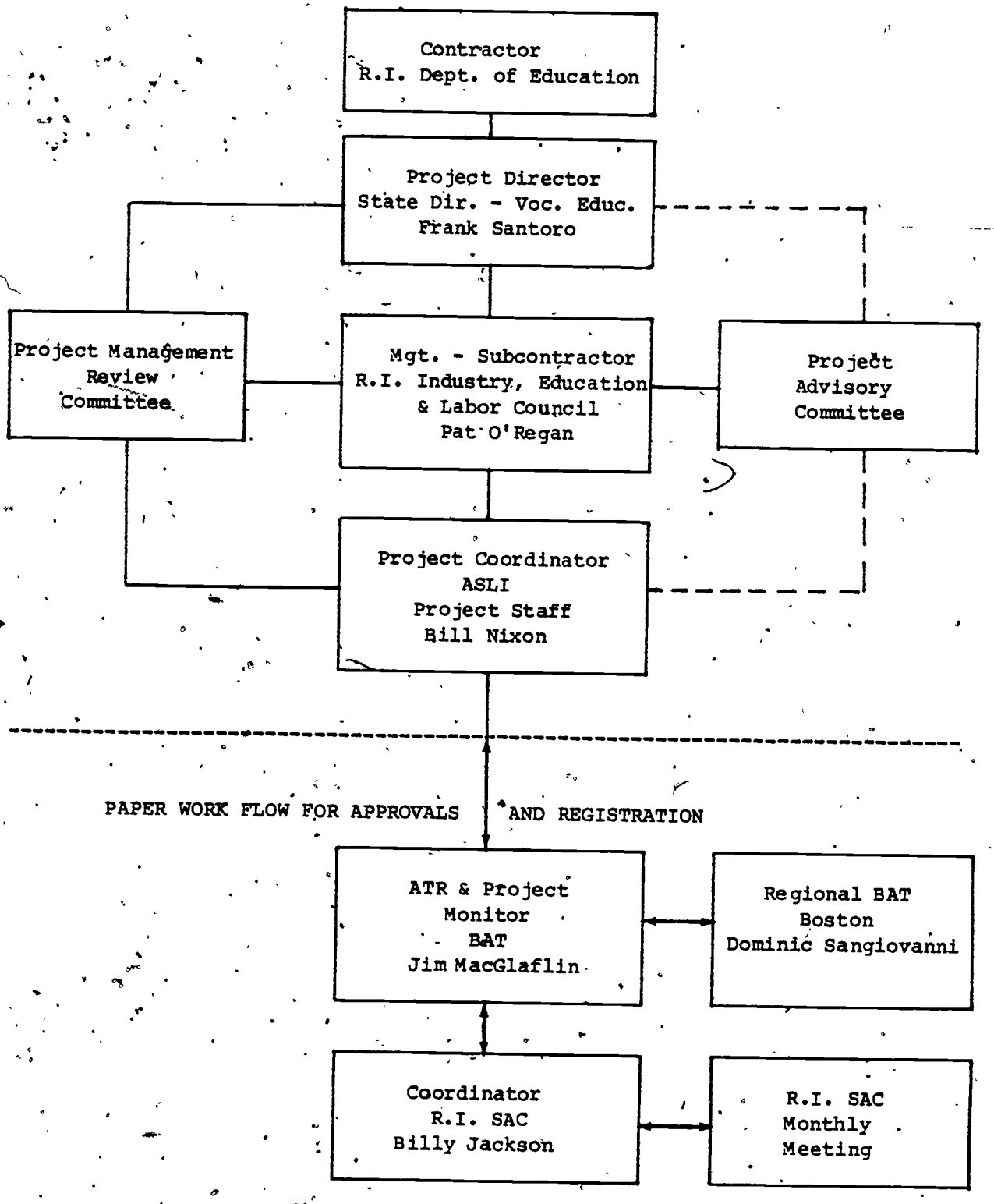
This is a competent, creative staff dedicated to achieving the multifaceted goals of the project as well as fulfilling the numerical goal of generating 250 registered apprentices. The staff is well qualified to fulfill its functions and possesses full understanding of the objectives and processes of apprenticeship and of the field of vocational education. The coordinator, a person who served an apprenticeship and worked in industry as a machinist, previously held the position of consultant for Business-Industry Relations in the Bureau of Vocational-Technical Education.

The positions of the staff in the administrative network are presented in Chart 2, following. Also shown on the chart is the paper flow for apprenticeship program and individual apprenticeship registrations in the project-BAT-SAC network.

The staff, under the direction of the project coordinator, functions as an autonomous group in carrying out its day-to-day activities. The coordinator provides regular reports to the project director and meets regularly with the BAT monitor who also is the BAT Apprenticeship and Training Representative (ATR) to whom all project documents for registration flow.

Chart 2

RHODE ISLAND PROJECT ADMINISTRATIVE AND COMMUNICATIONS NETWORK



Project specialists have been assigned to geographic areas in Rhode Island, but do cross area lines based on their specialized competencies in certain occupational fields. The project specialists meet regularly with the project coordinator for planning and strategy sessions on their work activities. Regular logs are maintained for project field activities in generating new worksites and developing apprenticeships. Staff activities are monitored regularly, a fact reflected in reports to the project director and to BAT.

PROGRAM ACTIVITIES

Because of the compact size of the State of Rhode Island, student apprentices can move from school sites to worksites with considerable ease. Accordingly, some apprentices attend school in one town while they are employed in another town. Many of the apprentices are employed in the greater Providence area even though they attend schools in adjacent towns or cities. Short travel distances, similarly, have promoted excellent communication among the co-op coordinators who often share job site information when they are unable to provide a trainee for a job opening.

An intensive information and orientation program has been, and continues to be, conducted by the project staff. Particular emphasis has been placed on developing understanding of the project among the co-op coordinators in the high schools and vocational-technical centers. High school counselors also have been involved in orientation sessions. However, the co-op coordinators tend to be the most productive group in generating apprenticeship recruits for they also

serve a companion role as vocational counselors. It is well known among students that co-op coordinators hold the key to part-time employment. Accordingly, the major focus of the project staff in recruiting students has been on the co-op coordinators. In schools without co-op coordinators, the project staff has had to work with guidance counselors. In many such instances the project staff member assumed the job placement role usually performed by the Coordinator.

Apprenticeship information has been provided to the co-op coordinators by the project staff, and brochures prepared by the staff have been disseminated through the coordinators as well as by direct mail. In addition, project staff have addressed entire junior class groups in the high schools to describe the program potential. In each school a key counselor has been identified as a focal point for student notification of interest in the activity. Students, having expressed an interest in apprenticeship, are matched to apprenticeship opportunities based on their aptitudes and interests. Most of the students recruited for the program have had prior vocational education in their high schools or have developed basic skills through industrial arts classes.

Teaching staffs in the high schools and in the vocational-technical facilities are certified in accordance with the provisions of the State Plan for Vocational Education. Academic subject personnel are credentialed by the state. The majority of apprentices have had one or two full years of institutionalized vocational education prior to enrollment in the Youth Apprenticeship Project. Accordingly, during the period when they are at the high school for the academic portions of their senior year, the student apprentices tend to confer with previous

vocational instructors to discuss aspects of their work activity and to seek counsel from the co-op coordinators.

Curriculum development for related instruction has been limited. Previously prepared instructional materials developed for the regular vocational programs are being used. In most instances a regular coordination period is scheduled only one day a week with the remainder of the time assigned to courses required for graduation.

On the job work experiences are being well designed cooperatively by employers and project staff. In fields where existing standards are available, work processes are applied with the usual flexibility for modifications to fit specific needs. However, the project staff has shown great flair and creativity in generating new apprenticeable occupations that require the complete development of work processes and schedules in order to meet requirements for approval and registration. Project staff, aided by the BAT ATR and the SAC coordinator, has developed competence in the generation of the necesary paper work. The staff already has been successful in having the following occupations approved and registered by BAT/SAC:

- Animal Health Technician;
- Carbide Toolmaker;
- Carpenter-Marine Joiner;
- Chain Machine Mechanic;
- Commercial Art Technician;
- Commercial Fisher;

- Legal Secretary;
- Lobster Fisher; and,
- Yacht Technician.

In addition, the project staff has developed a new series of apprenticeship occupations that currently is before BAT/SAC for review. Apprentices have been registered in programs for 31 occupations and more than a dozen new ones are in process. Project field staff continue to pursue new apprenticeable areas as one of their project objectives.

Table 2, following, presents the number of students registered and the prevalent areas of employment in the project up to August 18, 1979.

Table 2

AREAS OF STUDENT EMPLOYMENT*

Occupations	Number of Students	Percent of Students
Auto Mechanic	21	20
Printer	11	10
Machinist	10	9
Auto Body Repairer	9	8
Small Engine Mechanic	9	8
Commercial Art Technician	5	5
Electronic Technician	5	5
Yacht Technician	4	4
Carbide Toolmaker	3	3
Counter Clerk, Electronics	3	3
Offset Plate Maker	3	3
Other	24	22
Total	107	100%

*As of August 18, 1979

Worksites are evaluated by project staff. In areas of question, the BAT ATR reviews their determinations through a job site visit. Once a job site is approved and an apprentice placed, the project staff supervise the worksite along with the co-op coordinator of the base school. Site supervision is scheduled regularly by the staff.

Relationships with representatives of the BAT and the Rhode Island SAC are well stabilized and ongoing. The project coordinator and the BAT project monitor meet regularly with the SAC at the SAC monthly meetings and, as necessary, in the interim. Both the SAC coordinator and the BAT monitor serve on the management review committee for the project.

At earlier stages in the life of the project there was some strain in the relationship between project staff and BAT/SAC staff as pressures were being placed on all sides to achieve "numbers," i.e., meet the apprenticeship registration goals. However, it is to be noted that BAT and SAC, both with minimum staff support, were required to take on an additional workload and responsibility without any additions to their office staff.

One action taken by BAT/SAC that ruffled the interrelationships was the disapproval of the registration of seven programs involving eleven student apprentices. However, the rationale for disapproval was sound. The project staff was in error for pushing occupations related to the building trades, an action contrary to the contract language.

Much of the earlier interface concerned turn-around time in registration activities that appeared to be unfavorably protracted. However, it was necessary for the new project staff to learn how to meet the other agencies' requirements and time schedules. For example, SAC meets monthly (except during the summer

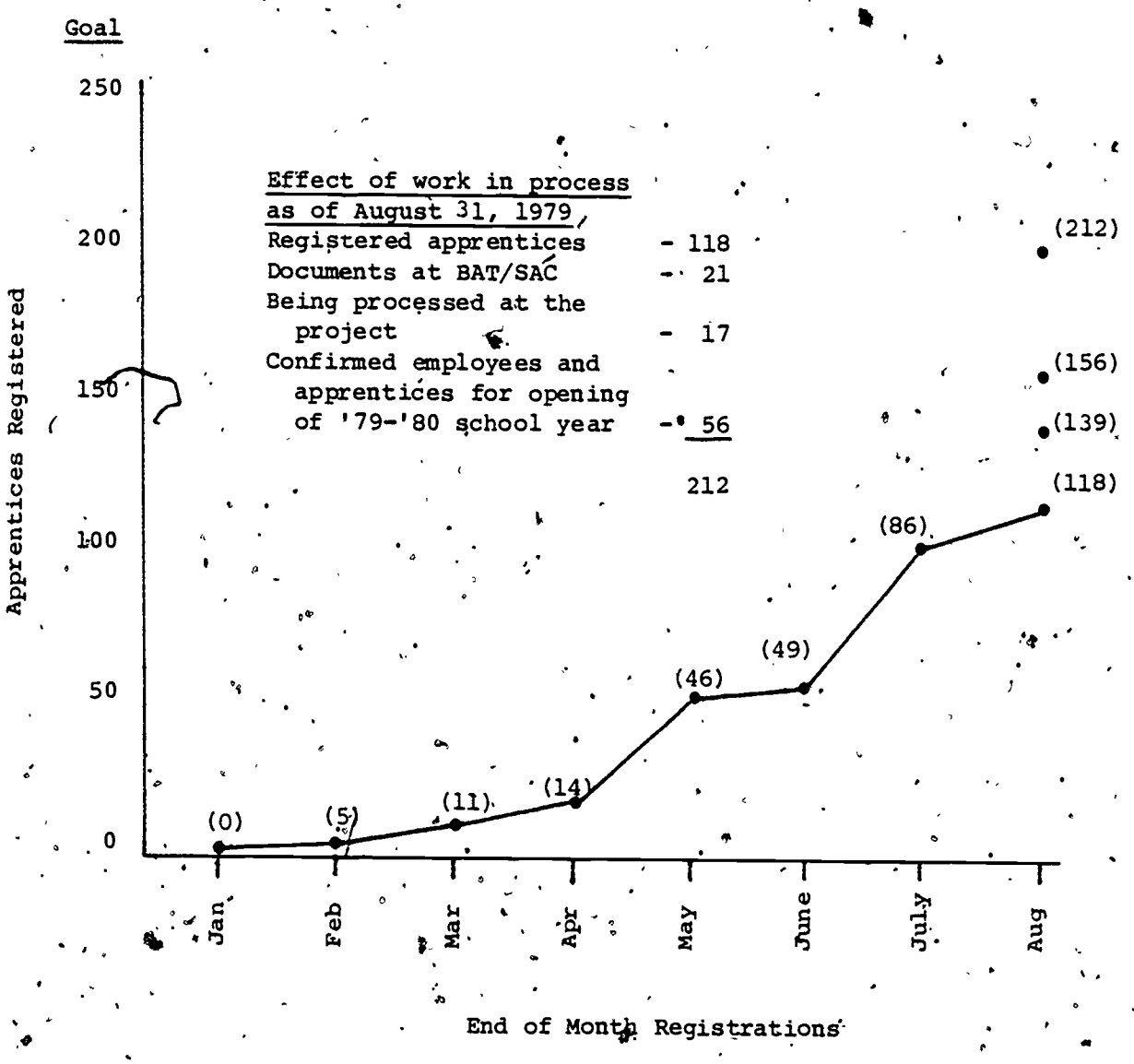
months) and all paperwork, properly completed, had to be in the SAC office ten days prior to the meeting date. That same paperwork had to be cleared through the BAT office prior to its submission to SAC. If there were any errors of omission or commission, the paperwork was rejected and returned via the same route prior to resubmission. At the same time the SAC ccordinator had to take on the preparation for and the management of the 1979 Eastern Seaboard Apprenticeship Conference (ESAC) to be held in Rhode Island--a tough assignment for a one-man operation. The various interrelationships in the system, therefore, were somewhat strained.

On top of this, SAC meetings in Rhode Island are not regularly scheduled during the summer. But, to the credit of the SAC coordinator, it was arranged for the project director to address the SAC meeting in May to make a plan for a revised procedure that would ensure registration approvals during the summer months. The SAC agreed that the SAC coordinator could approve programs subject to ratification by the SAC at a subsequent meeting. In effect the SAC modified its own long-standing procedures to accommodate the project. Chart 4, following, indicates the registration progress which was made as a result of the SAC modification. In effect, from the end of June to the end of August, 1979, the project more than doubled its number of apprentice registrations. Also, it is projected in Chart 1 that apprenticeship registrations early in the 1979-80 school year will reach 85 percent of the project's goal of 250.

In the registration process, the BAT ATR serving as project monitor, must process each piece of Youth Apprenticeship Project paper prior to transmittal to SAC and make a recommendation for action. The project monitor handles this

Chart 4

PROJECT REGISTRATIONS PROGRESS
BASED UPON BAT AND SAC ACTION



load in addition to his regular mission as an ATR. In short, the project staff of four professionals is pushing an expanding workload to two approval and review agencies each staffed with a sole individual to act (only the BAT representative is supported by a competent administrative aide/secretary). It is this field investigator's studied opinion that BAT and SAC are very understanding and supportive of the project. Further, they are responding competently within the limits of their staff resources.

For example, BAT and SAC have provided the project staff with technical assistance in reviewing standards and procedures for developing work processes and schedules, in completing the necessary forms for submission, and in developing promotional materials. Both BAT and SAC have been helpful also in their roles on the management review committee.

The project staff has developed an in-house standard for the selection and approval of job sites and for the supervision of potential apprentices. They work to maintain quality in the placement of apprentices and to assure quality in the on-the-job training. Indeed, they have somewhat sacrificed numbers in terms of apprenticeship registrations in order to assure quality and meaningful training for the students.

Three apprentices who had participated in the project were high in their praise of the program concept. For example, apprentices in three distinctly different occupational categories were impressed by their organized work-training program; they were delighted to have graduated with both a high school diploma and a certified apprenticeship; and they were proponents of the project with their still in-school friends. Also, the reactions of five employers were much the same. All five were new in the apprenticeship arena even though they

previously had been involved in cooperative education programs. For them, participation in apprenticeship was different: there was an organized schedule of work processes to cover and there was accountability on both sides, the employer and the employed. All five of the employers, therefore, planned to continue to participate in the project.

DEVELOPMENTAL STRATEGIES

The proposal for the Youth Apprenticeship Project was developed by the current project coordinator, Bill Nixon, while serving in a previous position as Consultant for Business-Industry (Labor-Management) Relations in the Rhode Island Department of Education. Nixon worked closely with Tom McDermott (deceased), Director of the Rhode Island BAT, who was a strong proponent for the project. All other project staff were selected through advertisement of the position openings.

The contract was awarded on September 28, 1978. However, it was determined that a subcontract be awarded to the IEL Council for the management of the project. At that time staff positions were advertised and interviews begun. Meanwhile, the search for space to house the project was initiated. The designated project coordinator, appointed December 4, 1978, became the procurement officer and spent considerable time locating, furnishing, equipping, and supplying a facility, plus organizing a compensation and benefit package for the staff being recruited.

The three project specialists and the bookkeeper/secretary assumed their posts on December 11, 1978, and were immediately involved in the Office of Youth Programs' in-service conference in Nashville through December 15. The remainder of the month was used for staff orientation and organization. Consequently, the work of the project was not really implemented until January of 1979.

Initial school contacts were made through the area vocational-technical facilities of the state. Meetings were scheduled at each vocational-technical school to provide the opportunity for the entire project staff to meet with co-op coordinators, counselors, and vocational staff to discuss the project's goals, objectives, and procedural activities. Co-op coordinators were recruited to serve as noncompensated auxiliary staff and were coached regarding the sequence of procedures, the preparation of paperwork, and the process of program and apprentice registration. Apparently, the effort at the vocational-technical schools was successful. The three coordinators that this field investigator interviewed were enthusiastic project supporters and promoters.

Strategies developed to recruit employers and students have included the following:

- Assignment of geographic areas to field staff;
- Organization of a schedule of speaking assignments at service clubs, trade associations, educational associations, and group meetings;
- Development of a flier to employers in the state to solicit leads for visitation by co-op coordinators and project field staff; and,
- Development of a flyer for high school seniors and juniors in order to develop student recruiting leads for the high school counselors and co-op coordinators.

All high schools and vocational centers were determined to be eligible to participate in the statewide program. Similarly, all industries and occupations, except the building trades, have been included within the sphere of the program concept. Emphasis has been placed on health and energy-related occupations and great emphasis has been directed toward the promotion and development of

apprenticeships in nontraditional occupational areas. Emphasis has been placed on minority and female recruitment, but the low enrollment of females and minorites in high school vocational education programs has created a problem in achieving this recruitment objective through the cooperative program.

The selection and utilization of the project advisory committee has been a problem in the project. Initially, the IEL Board, as a whole, planned to serve as the advisory committee. However, this arrangement was not satisfactory given project guides for diverse representation on the committee. It also created a situation that tended to alienate the organized labor representatives. Resistance to the formation of the advisory committee persisted for a period of time, but, finally, the advisory committee was selected. However, the current committee is still not fully representative and is made up of a majority of project related people and IEL Board members. Participation of those named to the advisory committee has not been very impressive. For example, one meeting was held with few of the principals attending. In essence, therefore, a problem still exists in implementing a truly functional and representative advisory committee.

Employer contact strategies have been effective and a number of new employers are committed to project participation as the new school year gets underway. The apprentice placement success to date has been the result of recruiting employers who have previously participated in co-op programs. This type of strategy will continue to be pursued in the project.

OPERATIONAL EXPERIENCES

A number of problems were encountered in the start-up activities of the Rhode Island Youth Apprenticeship Project:

- The inability to move rapidly within the state education bureaucracy in order to establish a new organizational entity, e.g., the long time frame in hiring staff given existing civil service procedures.
- The selection of a subcontractor that lacked the internal staff to move rapidly in organizing a project team.
- The lack of an organized orientation for all active elements of the tri-partite arrangement (IEL project staff, the BAT system, and the SAC system).

In regard to the latter start-up problem, the project staff could have had better grounding in how to work within the BAT/SAC sytem prior to generating a few early interfaces that ruffled feathers. The irony of the situation was that all agencies were supportive of the activity, but a few compromises were necessary before activities could progress smoothly. Now that the bugs have been worked out in the interagency interfaces, the project pace is improving rapidly.

The successes in the project to date can be attributed to:

- The involvement of the co-op coordinators in taking advantage of the existing structure and procedures to inject an added element in the school programs, i.e., apprenticeship. Careful orientation in this arena spelled success.
- The selection of dynamic, capable project staff members who were able to show initiative and penetrate the domain of the employer to "sell" apprenticeship as a vehicle for employee development.

The most successful promotional strategies used by the project have been:

- The involvement of trade association groups such as the Rhode Island Auto Body Association, the Rhode Island Auto Dealers Association, and the Electronic Industry Association. These groups have provided access to membership, project information, and project support as reflected in the number of student apprenticeships in these fields.

- The mailings to employers to inform them of the linkage concept and to provide an initial contact for any later visits.
- The participation of project staff at meetings of school boards, school administrator groups, the guidance counselors' association, the co-op coordinators' association, etc.

Reactions of school personnel to the apprenticeship-school linkage concept run the narrow range from good to excellent. School people tend to view the transition of their students from school to apprenticeship as a "big plus" and a stimulator to promote better student interest and participation in the academic portions of the school programs. The following quotes from interviews with school staff members illustrate this point. "The part-time apprentice learner can see the need for the academics to help himself achieve success in his chosen occupation," and "Men on the job are telling the kids what they would do in school if they had it to do over again--and why."

In the project, linkages have been established successfully between schools and industry. The labor linkage, however, is much more subtle, since most apprenticeships have been generated with employers whose workers are nonunion. Labor has neither endorsed nor opposed the project. There is a "let's wait and see what happens" attitude. Labor representatives on the Rhode Island SAC vote approval of the new registrations on a regular basis, but they have taken no official stand about the project within their locals (nor do they intend to do so at this time).

OTHER OBSERVATIONS

In general, although the pace of the project has been slow in its initial stages, it becomes obvious that the overall plan and concept is sound. The goal

was to register 250 apprentices in one year. Taken from the initiation of staff effort in January of 1979, that goal seems achievable.

There has been knowledge developed in the Rhode Island Youth Apprenticeship Project that can assure an improved transition of students from school-to-work through apprenticeship. In addition, it appears that, given time and professional commitment, widely disparate bureaucracies can achieve compatibility in achieving a commonly supported goal and that positive "change" in relatively traditional systems can be accomplished. As always, the key seems to be the commitment of individuals to embrace a concept and to pursue a new worthwhile initiative rather than to take the position of protecting one's bureaucratic "turf."

SITE VISIT REPORT ON THE

ROCKFORD YOUTH APPRENTICESHIP PROJECT

INTRODUCTION

The following report presents the findings of a site visit conducted at the Rockford Youth Apprenticeship Project in Rockford, Illinois, on September 10-11, 1979. Discussion areas in this site visit report are covered under separate section headings as follows:

- Local context, e.g., the general operational environment of the apprenticeship-school linkage demonstration;
- Administrative information, e.g., project staffing, BAT coordination, school system relationships, and staff supervision;
- Program activities, e.g., apprenticeship program registrations, individual apprentice registrations, job development, student recruitment and project performance to date;
- Developmental strategies, e.g., approaches and materials used to promote and continue the project in relation to local schools, employers, and the community as a whole;
- Operational experiences, e.g., areas in which specific problems have been encountered in project activities, including start-up difficulties, school and employer reactions to the project; and,
- Other observations, e.g., evaluations regarding the general achievements and possible issues in relation to project concepts and implementation.

These topic areas are discussed in detail in each of the following sections of this site visit report.

LOCAL CONTEXT

The Rockford Youth Apprenticeship Project is centered in Rockford, Illinois. The 1974 special census shows that Rockford has a population of 149,424. The Rockford-Loves Park area has a population of 162,592. The City of Rockford is located in Winnebago County, Illinois, which has a population of 246,623 while the overall Rockford metropolitan area has a population of 272,063.

Although the project is located in Rockford, neither Rockford nor Winnebago County provides the area boundary of the project. The contractor of the school-to-work linkage project is the Rockford Area Vocational Corporation, a nonprofit corporation. The only contractual tie between the corporation and the Rockford Public School District involves a subcontract for the purchase of half-time employment of two of the instructors who are full-time employees with the Rockford Area Vocational (RAV) Center. These two instructors at the RAV Center, therefore, serve as project coordinators on a half-time basis.

In the initial negotiations for the Rockford Youth Apprenticeship Project, an agreement was reached (more verbal than in writing) that recruiting for the demonstration would take place only in the RAV Center. The RAV Center is chartered to provide structured vocational education to high school juniors and seniors in the Illinois counties of Winnebago, Boone, DeKalb, Ogle, and McHenry. Students coming from schools outside of the Rockford Public School District must be supported through student tuition at the rate of $700 per year. Also, the home high schools must provide student transportation, but in practice, most students who attend the RAV Center arrive in their own cars. Currently, most of the students come from three high schools in Rockford. A recent survey, however, showed some registration from twelve of the twenty high schools in the Rockford area.

The RAV Center is the only vocational-technical high school in the five counties surrounding Rockford. It is located at the south end of Rockford City. Hence, the commuting distance and the travel time for students to get to the RAV Center can involve thirty to sixty minutes each way. Classes at the RAV Center are two and one-half hours in length so that students must arrange a schedule which permits them to complete the required academic courses at their home high schools, allow for travel time, and provide for the required class time at the RAV Center. For many of the students from the area high schools, this kind of scheduling presents a very complicated set of class and commuting requirements. With this background, it is now fair to say that the project area is, technically, a five-county area in and around Rockford, Illinois. Practically, and since most students are recruited from the RAV Center, most apprenticeship recruits reside in Rockford. Most job development activities take place in the Rockford SMSA.

The City of Rockford is highly industrialized. As a manufacturing city, major industries fall into such categories as tool and die, fastening, equipment manufacturing, electrical equipment manufacturing, and automobile manufacturing, among others. Twenty-four major industries in the Rockford area have employment in the 500-1,000 category and the over 1,000 employees bracket. Illinois law permits union shop bargaining agreements. In the traditional union areas involving the crafts, union bargaining agreements prevail in the Rockford area. However, Rockford is not regarded as a "union town," and manufacturing firms show wide variation regarding whether a union is or is not involved.

At the moment, the relevant school system for the Rockford Youth Apprenticeship Project is the Rockford Public School District 205. The administrative organization of the school district is typical and consists of a hired

superintendent and an elected school board. The school board and the superintendent have responsibilities for all of the Rockford public schools, including the RAV Center. The RAV Center, which is not a comprehensive high school, provides vocational and technical education in support of programs in the five comprehensive high schools of Rockford.

Preliminary data for the 1979-80 school year showed the five Rockford comprehensive high schools having an enrollment of 10,300 in grades nine through twelve. These same data showed enrollments in vocational education at 2,117. The enrollment figures cover all trade and industrial occupations, office occupations, business occupations and home economics education. Initial vocational enrollments at the RAV Center for fifteen different vocational programs were 996. Data on the total and vocational education enrollments in schools outside of the Rockford Public School District 205 were not readily available at the time of the site visit. Table 1, following, presents the initial September 1979 class enrollments at the RAV Center.

District 205 high schools operate five cooperative education programs (co-op), including Cooperative Work Training, Distributive Education, Diversified Occupations, Home Economic-Related Occupations, and Office Education. The Cooperative Work Training Program is oriented toward all maturing students interested in on-the-job work experience. The other co-op programs are occupationally specific. The co-op program in diversified occupations includes health and the trade and industrial occupations. Each high school's cooperative work experience program has a coordinator whose job it is to inform students of the program, act as a liaison with the community, secure training stations, make placements, perform follow-up interviews, and maintain a progress file.

Table 1

CLASS ENROLLMENTS AT THE RAV CENTER*

Class	Number of Students	Percent of Students
Business Education and Accounting	129	13
Auto Mechanics I and II	172	17
Auto Body I and II	109	11
Food Service	52	5
Child Care	70	7
Machine Trades I and II and Tool and Die	87	9
Health Occupations	68	7
Graphic Arts	28	3
Welding I and II	59	6
Lawn and Turf	42	4
Electronics I and II	38	4
Construction Trades	70	7
Law Enforcement	28	3
Drafting I and II	27	3
Commercial Art	17	2
Total	996	101%**

*Not counting Cosmetology or Special Education
**Total not equal to 100 percent because of rounding.

Since the RAV Center is within the jurisdiction of Rockford Public School District 205, it also comes under the broad responsibility of the State Superintendent of Public Instruction in Illinois. Vocational Education Act monies which are reimbursed to the school districts for earned vocational education credits vary between the comprehensive high schools and the RAV Center. All of the Trades and Industrial (T&I) curricula in the comprehensive high schools and the vocational programs under the broad diversified occupations group are reimbursed at the rate of $12.50 per credit hour. By comparison, credit hours at the RAV Center are reimbursed at the rate of $51 per credit hour.

There are no apparent issues within the community, labor organizations, or industries which mitigate against the acceptability of the project. Rockford is an industrial town with a crying need for trained and skilled labor. The Rockford project appears to fit exactly into the need structure of many of the local industries. If there is a problem, it is vis-a-vis the schools and the school district and, to some degree, particular personalities in this milieu.

As indicated earlier, the contractor is the Rockford Area Vocational Corporation. This is a nonprofit, private corporation under an independent Board of Directors. The project contract was set up this way on the basis of:

- Perceptions about the environment by relevant BAT officials;
- Concern that the school district could not (for unknown reasons) serve as contractor;
- Anticipation that if the school district served as contractor and the contract was placed under the Office of Adult and Occupational Services, there would be no certainty about the administration of the funds; and,
- A certain lack of confidence in the vocational-technical education orientation of the school district, plus the concern that school district administration would not fully appreciate the apprenticeship concept.

In the absence of a primary contract with the school district, a less formal agreement was made between the Rockford Area Vocational Corporation and the RAV Center stipulating that the recruitment of students for apprenticeship positions would take place from the RAV Center student body. This was agreeable initially since (1) the RAV Center did have a sizable group of students with the apparent qualifications for apprenticeship, and (2) the apprenticeship program would provide additional incentives for new students to enroll at the RAV Center.

While the Rockford project has existed formally for one year, funding notification did not occur until October 1978; project staffing was not completed until the end of November; a series of meetings sponsored by DOL postponed field operations until the end of December; and actual project work did not begin until January 1979. The initial goal was to register one hundred apprentices in the first year. As of September 12, 1979, actual apprenticeship registrations through the project are about seventy. Given the start-up difficulties, this is an exemplary track record. However, there are a few problems from the point of view of the contractor, the Rockford Area Vocational Corporation.

First, the RAV Center has only a limited number of seniors from which to choose. Equally important, there is a very low representation of minority and low-income students. Of the seventy apprenticeship placements to date, the number of minority, low-income, and female placements do not meet the hopes of the principals in the Rockford Area Vocational Corporation. Also, the achievements in terms of minority group and economically disadvantaged representation do not meet the established project requirements within CETA regulations. Hence, there is an administrative view that student recruitment efforts should extend directly into the high schools, working through the co-op coordinators. This tactic would permit broader access to students, give new students the opportunity to experience apprenticeship, and expand the opportunities to meet the goals for the registration of minority, low-income and female apprentices. Although the expanded recruitment efforts make eminent sense, there is a problem.

The current administrator of the RAV Center (soon to be called principal) is adamant that project recruitment will continue to focus exclusively on RAV Center students. The two half-time coordinators who work for both the RAV Center

and for the contractor share this view. The two coordinators are dedicated to the project and have been successful at developing apprenticeship interest and in placing students in apprenticeship positions. Both coordinators have indicated that, if the recruitment focus departs from the RAV Center, they will discontinue their association with the project. The RAV Center administrator has indicated that, should any departures be made from the current recruitment arrangement, there will be no recruitment from the RAV Center.

The director of the Rockford Youth Apprenticeship Project has established informal communication with the Diversified Occupations (DO) coordinators at the five Rockford high schools. Those DO coordinators contacted have expressed interest in apprenticeship and a willingness to cooperate with the project. However, it is the informality of this linkage with the other schools that poses a substantial problem. If a stalemate occurs between the project director and the RAV Center administrator (and if an effort is made to recruit students in the comprehensive high schools), it is unlikely to be successful without establishing the interest of school district administrators and utilizing appropriate administrative officers. As of September 12, 1979 no such arrangements had been made. However, some other things were occurring.

The Director of Adult and Occupational Services recently turned in his retirement notice. This person has had supervisory responsibility over the administrator of the RAV Center and all the cooperative education coordinators in the high schools. Currently, the plan is not to fill the director's position with a single person when the current director retires. The intention is to divide the area of responsibility by designating one person responsible for vocational and technical education, one person responsible for adult education,

and one person for coordinating activities of the co-op coordinators. The present administrator of the RAV Center will be designated principal of the RAV Center and probably will be assigned responsibility for vocational and technical education. This suggests the potential for conflict if the director of the Youth Apprenticeship Project attempts to divert recruiting efforts away from the RAV Center.

The Office of Adult and Occupational Services has been under the supervision of an assistant superintendent of schools, Dr. George Aschenbrenner. Under the reorganization plan described above, the three individuals assigned with the different areas of responsibility would also report to the assistant superintendent, Dr. Aschenbrenner. The concept of the school-to-work linkage project is viewed positively by school officials. It is the judgment of the field investigator that there is room for some flexibility in specifying both the apprenticeship recruitment procedures and the audience (if the assistant superintendent is involved in an appropriate manner and if any proposal protects the established school district organizational and jurisdictional requirements). On September 12, 1979 the philosophical and/or the personality conflict between the project director and the RAV Center administrator was recognized by the assistant superintendent. Equally important, it was asserted that a view existed within the school district offices that the director of the Youth Apprenticeship Project has been a long-time and vocal critic of the school district's management of vocational education curricula. Thus, a question about the capacity of the project director to work with the school district was implied. In short, if meaningful communications are not established with school district officials in the very near term (and if an arrangement is not developed which utilizes established school district lines of communication) the acceptability of the

project within the school district over the next year will be in jeopardy. Over the longer haul, it is likely that the integrity of the project will be eroded.

ADMINISTRATIVE INFORMATION

The Rockford Area Vocational Corporation is responsible for the administration of project funds and activities. The corporation was created solely for the purpose of administering the apprenticeship-school linkage project, and the Board of Directors of the corporation reflects substantial experience both in personnel management and training. A single subcontract exists between the corporation and the school board of the Rockford Public School District 205 for the services of the two RAV Center instructors who serve as half-time coordinators, recruiters, and placement experts on the project.

Organizationally, the staff of the Rockford Apprenticeship Project consists of a project director, a full-time assistant director, the two half-time coordinators and one secretary. The project director is the overall project supervisor who monitors and/or keeps all of the project records. The director also coordinates student recruitment and placement activities in the project. Recently, the position of assistant director was vacated. The former assistant director had extensive responsibilities in making industry contacts and in promoting apprenticeship slots. The two half-time coordinators on the project wear two hats: one hat as instructors at the RAV Center where they teach courses, and one hat for the project where they recruit students at the RAV Center and work directly with prospective employers in developing apprenticeship programs and job slots.

Weekly staff meetings have focused on project problems, recruitment opportunities, placement opportunities, etc., but the resignation of the assistant director may alter the regularity of these meetings. The project director works with the local BAT office regarding any proposals to register new occupations or to facilitate modifications of work processes in approved apprenticeable occupations. The half-time coordinators operate with considerable self-motivation to communicate with instructors at the RAV Center and, through those instructors, with the students about apprenticeship opportunities. Also, the coordinators have divided the occupational areas in ways that permit each one to focus on a different group of employers in the Rockford area.

The project director has extensive experience in both training and apprenticeship. His most recent work assignment was with the Woodward Governor Company, for whom he established and directed the Ira C. Martin Academy, a two-year post-high school training program of work study. The two half-time coordinators are certified by the State of Illinois as vocational teachers and instructors. One coordinator instructs in the automotive area while the other coordinator works in the machine-tool area. Both of the coordinators are dedicated to high quality vocational education.

The director keeps excellent records and monitors all recruitment, placement, and financial data. The half-time coordinators view such monitoring as a significant portion of the director's job. Also, the BAT monitor works very closely with the project director. Recently, attention has focused on project performance in identifying and placing minority, low-income, and female apprentices. The coordinators were not aware of any systematic planning relevant to the project. The director is involved in planning related to project continuation (pending

renewal of funding) and the establishment of an agreement about the project's recruitment focus. Such planning is being handled expressly by the director of the project.

PROGRAM ACTIVITIES

All training for this project is conducted on the job and in the work apprenticeship programs at the worksites. While students from the RAV Center can, in principle, come from a five-county area, all worksites in the project are located with employers in the Rockford metropolitan area. For high school students in the Rockford area, all apprenticeship information is disseminated through the instructors at the RAV Center. The comprehensive high schools have no programs in traditionally apprenticeable areas, but the high schools do have a number of so-called career programs. The career programs include health occupations, business occupations, industrial-oriented occupations, personal and public service occupations and applied biological and agricultural occupations. Each of these career programs provides a basic curriculum and in-class career counseling. The co-op programs, of course, provide another, somewhat different, approach to career counseling.

In the Rockford project, student recruitment takes a direct approach at the RAV Center and a less direct approach which involves the comprehensive high schools. In the direct recruiting, the two half-time coordinators visit appropriate RAV Center classes to talk with juniors and seniors. All juniors are asked to fill out a card which asks basic questions about age, sex, courses taken, etc. Also, the card asks if the student might be interested in apprenticeship. All students who check an interest in apprenticeship are considered as

"potential" apprenticeship candidates, and their cards are sorted by areas of occupational interest. In addition to filling out the information cards, all juniors are asked to take the tests from Educational Testing Service. When an apprenticeship slot is developed, the cards in that occupational area are screened and, where possible, a number of students are asked to schedule an interview with the potential employer.

The indirect student recruitment involves the situation where DO coordinators in the high schools make inquiries about apprenticeship positions for students who would be interested in, and appropriate for, an apprenticeship opportunity. Also, there have been cases where employers have identified students who would make good apprenticeship candidates. There is, then, an informal recruiting system operating even though it violates the understanding about recruiting only at the RAV Center. How to handle the situation with other students who are interested in apprenticeship positions remains a problem in the Rockford Youth Apprenticeship Project.

As of June 30, 1979, fourteen apprenticeship programs were registered and fifty-four individual apprentices were registered. As of September 12, 1979, the registered programs had expanded to seventeen and the number of registered apprentices was up to seventy. Table 2, following, presents the number of student apprentices and employment areas as of June 30, 1979.

Table 2

AREAS OF STUDENT EMPLOYMENT*

Occupations	Number of Students	Percent of Students
Machinist	10	19
Tool and Die Maker	10	19
Offset Press Operator	7	13
Diesel Mechanic	6	11
Auto Mechanic	4	7
Fastener Technician	4	7
Auto Body Repairer	3	5
Other	10	19
Total	54	100%

*As of June 30, 1979.

Currently, there are about fifty-eight different employers who have made commitments to apprenticeship openings. About six of these slots have not been filled due to a lack of students. Thus, there are fifty-two nonduplicated employers with apprentices on board. Most of the employing firms would all be referred to as small businesses with a total workforce in the range of 10 to 50 employees. Of the seventy apprentices currently identifiable, twenty-four graduated from high school in 1979. Of these twenty-four 1979 high school graduates, all but seven have continued in their apprenticeship positions after graduation. Although the reasons for the seven apprenticeship terminations have varied, poor attitudes and poor work habits were cited in a couple of cases.

Given the current recruitment emphasis on RAV Center students, the question of curriculum development focuses on RAV Center and its programs. The educational areas of the RAV Center (see Table 1) provide the bounds of apprenticeable occupations given the limited focus of the student recruitment. The project director of

the apprenticeship-school linkage project has no currently identifiable role in impacting on any RAV Center curricula. Student apprentices are not subject to any related training which is independent from their classroom courses.

On-the-job training (OJT) experiences for apprentices are structured through negotiations with prospective employers and are outlined in each apprenticeship contract. In all cases, thus far, the work processes in approved apprenticeable occupations are the starting point for negotiations. The employer reviews the work processes and proposes any changes deemed appropriate in considering the structure of local work arrangements. Any modifications in the approved work processes are submitted to BAT as part of the registration activity. The OJT experience of the apprentices is supervised with the character and the extent of supervision varying among worksites. Student apprentices keep their own record of hours worked in each of the different work processes. The student records then are reviewed by the employer/supervisor who signs approval or disapproval.

The BAT monitor works very closely with the project director and is regarded as having done well in expediting registration activities, providing feedback on program operations, and providing counseling. The working relationship between the project and BAT is close. Also, the BAT monitor provides continuing technical assistance on procedures for registration and for program operations. Technical assistance comes both in the form of close monitoring and registration assistance.

Inquiries about the character of in-school counseling did not lead to a clear picture of any student counseling arrangements related to the project. The school counselors are charged with facilitating the registration of students in classes and assisting students in completing class schedules. There was no indication of a linkage between the school counselors per se and the RAV Center personnel or the

project personnel. At the five comprehensive high schools, there are the co-op coordinators, who, in principle, act as vocational counselors.

Interviews with five apprentices indicated that students had a high regard for the project. Several of these students were in the diesel-mechanic group, and they had rejected the option of going into intense training at a private diesel-mechanic school. Instead, they opted for the opportunity of working as an apprentice on the job in an apprenticeship program. They indicated that they were very happy with the decision to become registered apprentices. Employers interviewed also were very happy with the apprenticeship project and with the students placed. There appears to be a high demand for skilled labor in the Rockford area and--for the smaller firms--the apprenticeship opportunity is viewed as a viable means of training a skilled labor force.

DEVELOPMENTAL STRATEGIES

In the pre-project stage, two BAT officials (Jack Hughes and John Gavin) had preliminary conversations with the administrator of the RAV Center and with the chairman of the RAV Center lay board (Jim Moorehead). Both the RAV Center administrator and the lay board chairman expressed an interest in and a willingness to cooperate in the project. Largely on the advice of the RAV Center administrator, consensus was reached not to attempt a contract through the Rockford Public School District. Such a contract would have been administered through the Office of the Director, Adult and Occupational Education. Hence, a decision was made to propose a nonprofit, private corporation as grantee for the project. At this stage of planning for the project, none of the present project staff was involved, but the RAV Center administrator did identify two people who could serve as half-time coordinators on the project.

Initial agreements (a gentlemen's agreement) committed the recruiting effort to be focused on the RAV Center. This agreement substantially structured any planning requirements for student recruitment. Also, given that the two half-time coordinators would have major responsibilities in both student recruitment and placement, their contacts in the community would be relied upon in the project job development efforts. Hence, the selection of the project personnel and the agreement on recruiting structured both the student recruitment and the placement planning. Occupations and industries to be targeted were structured by the curricula of the RAV Center. Since the experience of all of the project staff was in the manufacturing or mechanics areas, initial efforts in developing apprenticeship programs with employers focused on that comparative advantage. Recently, however, the coordinators have expanded their efforts to include apprenticeships in the food service area.

Project staff were aware of regulatory guidelines in CETA programs to serve minority, female, and low-income students. However, the commitment to recruit from the RAV Center limited the extent to which racial, sex and income levels could be considered in the student recruiting. The RAV Center enrollments are substantially white, mostly male, and are limited in the number of low-income students. These facts have structured the complexion of placements. As indicated above, there have been very modest accomplishments in these areas. As the project approaches its second year, emphasis is being placed upon minority, low-income and female recruiting, but this fact is posing conflict vis-a-vis the RAV Center.

The initial agreement to recruit from the RAV Center focused project attention on that single school. However, the RAV Center serves five other comprehensive high schools from Rockford and, potentially, fifteen other high

schools from the five adjacent counties. Practically, only limited numbers of out-of-county students attend the RAV Center due to travel time and tuition costs to out-of-district students.

The strategy for contacting employers follows an established pattern. First, all project staff members have substantial personal relationships with private sector employers. The coordinators from the Center have always had responsibilities for placing students; hence, they have working relationships with employers. Similarly, the assistant director, during his tenure in that position, had a substantial number of personal contacts with industrial firms. These personal relationships have been capitalized upon through employer contacts on a one-to-one basis.

A rather novel method of contacting employers was also adopted. The Want Ads in the local newspaper are perused daily. When Help Wanted ads are identified that seem actually or potentially apprenticeable, a form letter is sent to the employer on which a copy of their Help Wanted ad is attached. The letter describes the apprenticeship program, explains the potential usefulness of the program to the employer, and offers to make a staff visit to the job site if the employer would be interested. This has proven to be a very effective procedure.

The advisory committee for the project has just been formed and had not met officially as of September 12, 1979. The initial intention was to utilize the Board of Directors of the Rockford Area Vocational Gorporation as the advisory committee on the argument that the Board was already representative of the community and familiar with the program. This plan proved to be inconsistent with Federal guidelines for project operations. A five-person advisory committee has now been established and a chairperson designated.

The promotional strategies used to develop this project have been largely one-to-one and personal. All staff are highly enthusiastic about apprenticeship, their program, and training. This is reflected in their contacts with employers. They emphasize quality and reliability. A slide tape presentation is in the developmental stage to augment the promotional dimensions of the project.

OPERATIONAL EXPERIENCES

As with several other apprenticeship-school linkage projects, the Rockford project got a late start-up. Funding notification did not occur until October 1978 and a project director was not on board until November. Remaining staff were not appointed until late November-December. Operational project work did not begin until January 1979. In addition to a late start-up, office facilities had to be identified. There was an initial understanding that facilities would be available at the RAV Center, but this proved not to be the case. An office complex located in downtown Rockford was identified--a 25 minute drive from the RAV Center. Following official start-up in January, the project gained momentum quickly. Recruitment was initiated at the RAV Center and the staff was enthusiastic. There were initial successes in getting apprenticeship slots identified, and, between January and June 30, 1979 fifty-four placements had been made. This should be viewed as an outstanding accomplishment. Registration by BAT usually takes three to four weeks, a tolerable turn around time.

With respect to job development, no significant problems can be cited since there are more job slots at the moment than there are apprenticeship candidates. Operational problems identified at this time relate to the schools and the school districts. There are no identifiable relationships with the school district

counseling staff, if counseling staff is defined as not including the co-op coordinators. A certain air of condescension was noted with respect to the role of the school counselor.

The project director has outstanding credentials in the training area. He comes from a background with private industry and has good contact with industries. These same strong relationships, however, do not exist vis-a-vis the significant leadership in the Rockford school district. The assistant superintendent revealed that there was a lack of warm cooperation between "several in the district" and the project director. The project's director is viewed (rightly or wrongly) as a critic of the school district and its handling of vocational education and training. This problem is further complicated by a stalemate in discussions concerning recruitment policy between the project director and the administrator/ principal of the RAV Center. However, on the other side of the coin, the project director has facilitated a substantial accomplishment in recruitment and placement of apprentices over what, effectively, has been a nine-month work period.

No significant linkages and/or problems were cited with respect to organized labor. So long as the apprenticeship arrangements do not violate wage scales for in-line union apprentices, business agents usually are willing to accommodate the apprenticeship program. Equally important, industry in the area is clammering for a more highly skilled and reliable workforce. Employers, therefore, are enthusiastic about the apprenticeship opportunity.

If there is a problem at this moment, it has to do with the linkages (or lack thereof) with the school district and the relevant administrative officers in the school district. The assistant superintendent revealed little knowledge

about project progress or about apprenticeship. There is no revealed plan for utilizing the apprenticeship project as a vehicle to education improvement.

OTHER OBSERVATIONS

The Rockford project has reached a crucial time in its evolution. As of September 12, 1979, unofficial notification of funding continuation had been received. A plan for recruiting a new assistant director has been devised. Considerable carry-over monies were available from the first year--particularly with respect to wage subsidy monies. Given that the official operational start-up of the program was not until January 1979, first year accomplishments are considerable. The enthusiasm of the director and of the two half-time coordinators remains very high with respect to the apprenticeship concept and the principles of the school-to-work linkage project.

On the other hand, there are some problems in the offing. The notice of funding continuation will require that a new contract be developed between the Rockford Area Vocational Corporation and the school district concerning the services of the two half-time coordinators. Such contract approval will require the endorsements of the RAV Center administrator/principal and the willing cooperation of the two half-time coordinators. From the school district side, the contract renewal will be tied to the establishment of an amicable understanding about the focus of recruiting efforts and the establishment of acceptable liaison with the school district. This problem is significant and the solution will determine whether the second year of the project starts positively.

The connections that the staff have with industry have generated the success of the project to date. The job development efforts are aggressive

and systematic. Conversations with employers emphasize the quality of apprentices and the productivity of this arrangement. Living up to those standards has created success for the project.

One situational factor which does hamper the project revolves around the position of Director, Adult and Career Programs. As indicated previously, this director has submitted a resignation and will retire. However, the person who has filled this position for twenty or more years has had an administrative style which is close to the vest. Hence, subordinates, or those working through the office were not always confident of the manner in which a problem might be handled or how any funds might be used. It was this type of anxiety which led to the encouragement of a nonprofit private corporation as a sponsor for the Rockford project. Had the office been staffed differently, and had there been a person filling the position who had the confidence of all involved, there might have been more reasons to integrate the project with the school district office.