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ABSTRACT

"If we can put a man on the moon, why can't we solve the problems of our cities?" The demand for urban services and the manpower needs of local governments were increasing dramatically. Skilled professional personnel were unemployed. The Aerospace Employment Project was set up as a special pilot project to test whether unemployed professional aerospace personnel could be effectively utilized to help solve the urban problems. The premise was that aerospace scientists and engineers, unemployed due to defense budget cutbacks, had background in the managerial skills needed in local government. Orientation to local government problems and jobs, career transition difficulties, and reactions of the local governments are detailed in the report. The project's primary conclusion is that former aerospace professionals can bring needed skills to local governments that are receptive to the opportunity, but a catalyst such as the Aerospace Employment Project is necessary to bring the parties together for their mutual benefit. (MF)

the AEROSPACE EMPLOYMENT PROJECT

FINAL REPORT

National League of Cities/United States Conference of Mayors

AEROSPACE EMPLOYMENT PROJECT
FINAL REPORT

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The National League of Cities and the United States Conference of Mayors

AEROSPACE EMPLOYMENT PROJECT

FINAL REPORT

FINDING NEW CAREERS IN LOCAL GOVERNMENT FOR UNEMPLOYED ENGINEERS AND SCIENTISTS

Submitted to

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The Aerospace Employment Project sought to determine whether unemployed aerospace scientists and engineers would be interested in and capable of transferring to careers in the middle-management level of local governments; whether jurisdictions would readily hire them, and whether they would make unique and significant contributions to solving urban problems because of their backgrounds in innovative industries. A universe of 400 professionals, screened for skill and motivation, were given a 30-day orientation course in problems of local government. A job development network was established to place them in appropriate positions in local government. Research was conducted on their performance on the job.

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AOP - Aerospace Orientation Program (University of California at Berkeley)
Project ADAPT - Aerospace and Defense Adaptation to Public Technology (Massachusetts Institute of Technology)

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TABLE OF CONTENTS

Page

ACKNOWLEDGEMENTS.....iii

LIST OF TABLES.....viii

ABSTRACT.....ix

Section

I. INTRODUCTION.....1

II. MEETING LOCAL GOVERNMENT MANPOWER NEEDS.....16
Placement Results.....17
Receptivity of Local Hiring Authorities.....18
Government Jobs for AEP Participants.....19
Attitudes of Local Hiring Authorities.....22
Barriers to Employment.....25
Analysis of Placement Results
Numbers and Percent Placed.....29
Numbers Placed by Target Area.....33
Rate of Placement.....35
Placements in States, Counties and Cities with Model Cities Programs.....38
Types of Placements in the Public Sector.....40
Multiple Hires in Local Government.....44
Post Placement Job Performance
Local Governments' View of Aerospace Skills.....45
Job Performance Measurements.....48
University of California at Berkeley.....49
Massachusetts Institute of Technology.....50
Characteristics of Engineers and Scientists Placed in the Public Sector.....52

III. ORIENTATION AND ON THE JOB DEVELOPMENT.....54
ORIENTATION
The Mechanics of Orientation.....55
Findings: Massachusetts Institute of Technology.58
Findings: University of California at Berkeley..59
Operational Advantages.....61
Project Staff and the Candidates
Related Project Logistics
Participant Morale
Orientation as a "Reflective Setting"
Employer Reactions
Job Interviews for Participants

Section Page

On the Job Development
Purpose and Procedures for Disbursement.....64
OJD Fund Requests.....65
Examples of OJD Utilization.....66
Conclusion.....72

IV. THE DELIVERY NETWORK.....75
Prime Elements of the Network
State Employment Services.....76
Public Personnel Association.....77
Public Interest Groups.....78
State Municipal Leagues.....80
Self-Help Groups.....83
AEP Promotional Efforts
Selling the Project to Local Governments.....87
Acceptability of NLC/USCM.....87
Types of Promotional Initiatives.....88
Functional Aspects of the Network
Recruitment.....91
Selection.....93
Soft Screening.....93
Hard Screening - Oral Panels.....95
Statistical Candidate Profile.....101
Conclusion.....101

V. ADAPTATION OF AEROSPACE SKILLS AND EXPERIENCE TO URBAN PROBLEMS.....104
Aerospace Skills In Local Government.....106
Examples of Successful Adaptation.....110
University Findings on Adaptation and Performance..115
University of California.....119
Massachusetts Institute of Technology.....119
Conclusion.....119

VI. ANALYSIS OF FURTHER FACTORS AFFECTING PLACEMENT....123
The Relocation Factor.....124
Residency Requirements.....127
The Salary Factor.....130
Public Sector Averages.....132
Private Sector Averages.....132
Total Earnings of Participants.....132
Average Salaries by Target Area.....134
The Age Factor.....136
The Educational Factor.....138
Length of Unemployment.....139
Other Psychological Factors.....143
The Effect of the Emergency Employment Program Upon Placement.....148

Section Page

APPENDICES.....151

Appendix A: Job Matching.....151
Appendix B: Listing of Public Sector Placements.....163
Appendix C: Listing of Private Sector Placements.....177
Appendix D: Profile of Remaining Unemployed AEP Participants.....185
Appendix E: Glossary of Terms.....189

LIST OF TABLES

Table		Page
1.	Placement Information	32
2.	Placement Status by Target Area	34
3.	Rate of Placement for AEP Participants	36
4.	Rate of Placement in the Public Sector by Target Area	37
5.	All State, County and City Jobs in Jurisdictions with Model Cities Programs	39
6.	Types of Public Placements for AEP Participants	43
7.	On the Job Development Funds	65
8.	How Those Selected Learned About AEP	92
9.	Oral Panel Scores	98
10.	Oral Panel Scores by Target Area	100
11.	Statistical Candidate Profile	101
12.	Relocation of AEP Participants	126
13.	Salary Comparisons (Former and Present Jobs)	131
14.	Average Salary by Target Area	135
15.	Age Distribution of AEP Participants	137
16.	Degree of Educational Attainment of AEP Participants	140
17.	Average Number of Months Unemployed (Upon Entry into the Project)	142

ABSTRACT

Scientists and engineers in the aerospace and defense industries have displayed remarkable ability to solve problems and accomplish difficult goals. Many became unemployed in the early '70s as the result of a decline in Federal expenditures.

At the same time these unique talents were lying fallow, enlightened experts in local government were realizing the need for new approaches to alleviate the burgeoning problems of the cities and to meet the urgent demand of citizens for effective services.

The Aerospace Employment Project was launched by the Department of Housing and Urban Development and the Department of Labor as a test of whether the aerospace professionals could help effectively to meet the needs of local government.

The project was conducted by the National League of Cities and the United States Conference of Mayors under a $1.3 million contract with the Federal departments announced in March 1971.

More than 6,500 aerospace and defense professionals who learned of the project through professional journals and State and private employment agencies expressed interest in participating. The most promising 1,000 applicants from the 10 target

areas of high unemployment were interviewed by employment and engineering specialists, and a universe of 400 was selected.

After slight attrition, 376 attended 30-day orientation courses at Massachusetts Institute of Technology (for about half the universe who lived on the East Coast) and the University of California at Berkeley (for the West Coast). The courses were designed to introduce participants to the terminology and problems of local government and to acquaint them with the types of jobs available.

The universities were charged with conducting post-employment interviews with participants and their employers to determine whether the orientation course was practical and effective, as well as to assess the validity of the project's premise that former aerospace/defense professionals would be an asset to local government.

The project also established methods of identifying and generating job opportunities in local government for the participants and matching job openings with participants' skills. Several organizations were enlisted to form a job delivery network, whose effectiveness the project sought to determine.

Of the final universe of 371 participants, 77 percent (288) were placed as of April 30, 1972. Of those placed, 65 percent (186) were in local governmental jobs; 35 percent (102) were in private sector jobs.

The project found that, generally, local governments could indeed make use of the skills of former aerospace and defense professionals. Interviewed by staff of the two universities that ran the orientation, 90 percent of the public employers of AEP participants said they were performing to expectations or better.

However, local governments did not draw upon this pool of skilled manpower as soon as they learned it existed. This was partly due to employment regulations and job specifications. Often these are narrowly and rigidly applied. Other functions included limited budgets, residency requirements, civil service specifications, job descriptions that are often restrictive or outdated--and above all, a cumbersome mechanism for making decisions about hiring that was often discouraging to AEP participants.

Some hiring authorities had preconceptions about aerospace workers that made them skeptical about whether they would fit in.

The extent to which AEP participants have brought innovative approaches to government jobs is indicated in some of the examples contained in this report. The final verdict on how great their contribution may be will not be in until they have been on their jobs longer, of course.

The project operated on the premise that aerospace and defense scientists and engineers have demonstrated broad talents in their former positions--not just in "hard engineering" but in management analysis, budgeting, research and development, marketing, and other skills that are needed to build the capacity of local governments. Some governments were receptive to the concept; a few created special jobs for AEP participants geared to their talents. Other public employers have been less imaginative, hiring participants for existing positions, largely on the basis of their technical backgrounds and education, and remaining cautious in testing the extent of the participants' capabilities.

The project sought to learn how difficult the career transition from aerospace/defense to public service would be. About 24 percent of the participants hired in the public sector felt that substantially different skills were required in their new jobs than they had exhibited formerly. Eighteen percent found their new jobs very similar to their former jobs (usually these were the so-called "hard" engineering positions). The rest found some similarities and some differences: for example, they might be still working with computers, but programming them with a different "language," or applying evaluation techniques used in aerospace to meet very different objectives.

AEP participants seem to perform best when employers allow them to use initiative and set challenging tasks for them. As one manpower expert put it: "the better prepared the agencies were, the more effectively were the men utilized."

In addition to the orientation courses, the project supplemented participants' training opportunities by offering public employers $1,000 for on-the-job development of each participant hired. How effective were these devices?

Participants reported that orientation had generally increased their enthusiasm for pursuing careers in the public sector, had prepared them for problems they would face, and had familiarized them with the terminology of local government. Some employers expressed satisfaction with the amount participants had learned of local government during the short course.

About half the local governments hiring AEP participants did not request the $1,000 development fund. Often, it seems, such funds would go into a general treasury and the department hiring the participant would have difficulty getting access to them. In other cases, it appeared the hiring authority believed the participant could grasp the job with no training beyond orientation and his past experience. Of the half that did, no official claimed the amount was inadequate. There is some indication that those governments utilizing the on-the-job

development funds did have a need for them to make it feasible to hire a professional without experience in local government.

During the project, a number of techniques were established to identify job openings in local government and to place professionals who could fill the openings effectively. The report describes those governmental and private agencies that helped accomplish this objective. The most effective groups were formed by the participants themselves with project guidance and support. They were highly motivated and remained loyal to their colleagues after finding employment, continuing to seek job openings for those still unemployed. The self-help groups maintained a continuous communications linkage between the participants and those running the project.

The project found that participants were willing to accept lower salaries than they had been making in private industry to work in local government, but they were reluctant, on the whole, to relocate. Governments appeared more willing than private industry to hire older men considering their greater experience a countervailing factor. Jurisdictions on the West Coast appeared more amenable to hiring participants than those on the East Coast--and were more likely to create a position tailored to a participant's talents.

The project's primary conclusion is that former aerospace and defense professionals can bring needed skills to local

governments receptive to the opportunity. But it requires a catalyst to bring the parties together for their mutual benefit. The Aerospace Employment Project developed into such a catalyst. It was found that local governments which had been pleased with participants they hired generate enthusiasm for the project that encourages other governments. Thus, it is hoped that the project has laid a foundation upon which others will build in the future.

CHAPTER I

INTRODUCTION

INTRODUCTION

During the decade of the 1960s, the United States made a dramatic thrust toward the moon and the planets. A new industry flourished: aerospace.

To take this giant step for mankind, thousands of engineers, scientists and technicians applied their skills to problems that had never been solved before.

Many thousands of others were engaged in the modern technology of defense.

By 1971 there was a shift in national priorities. The Apollo program was nearing completion; defense production needs had diminished.

As a result, many of the scientists and engineers in these industries--through no fault of their own--found themselves unemployed. Months passed and new contracts in aerospace and defense did not materialize. Some professionals took part-time or low-paying jobs--when they could find them.

At the same time, the public complaint, "If we can put a man on the moon, why can't we solve the problems of our cities?" was being heard increasingly. For more than a decade the need and demand for urban services had been increasing dramatically. Manpower needs of local government rose 42 percent over two years.

Clearly, there was a need for new approaches to old problems in local government--problems that had not been solved. In many cities and even in suburbs, pollution was becoming a health hazard; traffic control was so poorly planned in places that mass tangles of vehicles brought the city to a standstill; how to allocate the monetary resources of a community to best serve its residents was a major dilemma.

One answer might be to take the proven talent for problem-solving of unemployed scientists and engineers--talent lying fallow--and put it to work on the complex problems of local government.

In March, 1971, the U. S. Department of Housing and Urban Development and the Department of Labor announced a job pilot project, "Employment of Aerospace Scientists and Engineers in Local Government," to test this theory.

The National League of Cities and the United States Conference of Mayors was chosen to conduct this project--to be identified as the Aerospace Employment Project (AEP). The organizations, which have broad national membership among leaders of local government: The National League of Cities, representing 14,883 municipalities in all 50 states, serves a network of 147 Model Cities programs, various inter-governmental coordinators and manpower planners; the

U. S. Conference of Mayors having membership of the chief executives of some 750 major cities across the country.

The project's budget was established at $1.3 million -- $800,000 from HUD; $500,000 from Labor.

OVERALL GOALS

The main purpose of the Aerospace Employment Project was to learn how receptive local government would be to the concept of drawing on a pool of skilled manpower that it had not previously tapped. How difficult would the transfer of management skills from the aerospace industry to local government be for the participants? How long would it take to find employment for them? Could a method of placement be developed that would be applicable to other industries employing specialized talents? Would the participants find their new careers challenging and rewarding--and would the cities be helped in solving their problems by the introduction of creative personnel in their governments?

AEP proposed to select some 400 aerospace and defense professionals who were interested in making a career change and whose skills would be valuable to local governments. They were to be given an orientation course that would sensitize

them to the problems of the cities and familiarize them with the terminology and objectives of local government. (Initially, the project was also to place some 200 aerospace professionals directly in government without such training, but this plan was abandoned because the primary task was so difficult and time-consuming).

The Project contracted with Massachusetts Institute of Technology to provide the orientation course for about half the participants who lived near the East Coast. The MIT program was called Project ADAPT (Aerospace and Defense Adaptation to Public Technology). The University of California at Berkeley conducted the other intensive 30-day orientation course which they called the Aerospace Orientation Program (AOP), for West Coast participants. Both universities also conducted follow-up studies of how participants fared in their new positions and to determine what were their attitudes and those of their employers.

It was recognized at the outset that the candidates selected to participate in AEP would not be a cross-section of unemployed aerospace professionals, but rather a carefully selected sample of those who appeared most suitable for employment in local government and seemed likely to make a contribution to solving urban problems. The Project embarked on relatively uncharted seas in conducting this pilot effort. In addition to the

important task of finding good positions for the unemployed professionals, AEP sought to develop techniques that could be applied to other programs involving placement of highly skilled manpower.

PROJECT OBJECTIVES

Four primary objectives were established for the project:

> *Objective I: To determine whether the professional manpower needs of State and local governments related to Model City capacity-building objectives can be met effectively, in part, from the ranks of unemployed aerospace and defense engineers and scientists.*

Would unemployed aerospace and defense professionals want to change their careers and enter local government?

Would local governments, known to have a stortage of skilled manpower, be receptive to hiring persons without experience in government?

Are jobs offered by local government sufficiently attractive that professionals would relocate and consider taking salaries lower than they had been making?

Objective II: To determine whether a brief orientation and financial assistance for on-the-job development is necessary and adequate to aid the transfer of such personnel.

Would the intensive courses offered by MIT and the University of California increase participants' interest in entering the public sector?

Would a 30-day course be adequate to acquaint participants with the needs and problems of local government?

What curricula should be offered in such a course to achieve the objective?

Is further training needed beyond the orientation course and would on-the-job training provided by the employer and partially reimbursed by the project satisfy that need?

What aspects of the orientation and training would participants hired by local government find most useful?

Objective III: To determine whether a central organization of representatives of State and local governments can develop an effective inter-area network in cooperation with State Employment

Service agencies and professional associations, for selection, development, and placement of special staff to fill primarily the Model City capacity-building needs of State and local governments.

What would be the most effective network to identify jobs in local government suited to the background of AEP participants and select the most likely candidates to fill those jobs?

What organizational network would be most effective in informing local governments of the project, learning what jobs are available, and providing qualified personnel for the positions?

What is the best approach to generate job opportunities in local government? Implicit in this question is: What is the best technique for encouraging local governments to hire unemployed aerospace and defense professionals?

Objective IV: To determine whether professional skills available from unemployed aerospace and defense engineers and scientists can assist State and local governments in the development and utilization of new techniques in the solution of regional, State, and local problems

related to Model City capacity-building needs and objectives including governmental operation and management.

Since passage and federal funding of the Demonstration Cities and Metropolitan Development Act of 1966, (Model Cities Act) it has been the Federal government's policy to encourage cities to build their capacities to serve the public through comprehensive planning, programming and management. The eligibility requirements for such funds not only place greater responsibilities on city officials but also necessitate a variety of skilled public employees to accomplish the expanded mission of Model Cities which seeks to discover innovative means of dealing with common urban problems. AEP set out to answer the questions:

- Could the unique management systems and analytical approach to project management, and the specific technological breakthroughs that had been developed in the aerospace and defense industries be brought to bear on the problems of the cities?
- How adaptable would the participants be to a new work environment?
- Were there certain aerospace related skills which were more adaptable than others in filling the needs of local government?

Are local governments sufficiently flexible to permit new employees to try innovative approaches?

Would AEP participants employed in local government feel that their talents were being properly utilized?

Had the performance of participants employed in local government met the initial expectations of public employers?

What led to successful adaptation?

HOW THE PROJECT PROCEEDED

The National League of Cities and the U.S. Conference of Mayors engaged Michael A. DiNunzio, Director of Urban Resources and Model City Director for the City and County of Denver (formerly Colorado Civil Service Commissioner), as project director. The initial staff, some of whom were temporary, included a deputy with experience in two Model Cities Programs, a public relations consultant, a job development adviser, a recruitment specialist, and a fiscal manager.

A massive communications effort was begun to inform public officials of the project. Letters were sent to all Mayors, City Managers, County Commissioners and Governors announcing the project and its objectives.

Media coverage was generated, supplemented by articles in urban professional journals.

The project selected a universe of 400 unemployed aerospace and defense scientists and engineers. Participants were drawn from over 6,500 who expressed interest in joining the project. They learned of AEP through a broad publicity campaign in professional journals, newspapers and through professional and State employment agencies.

As indicated by the number who responded, and the rapidity with which they responded, it was obvious that an opportunity for a mid-career transfer, as provided by this project, was extremely well received by this unemployed segment of the population.

The professionals were chosen from 10 of 14 geographical areas that had been initially identified by the Department of Labor for its Technological Mobilization and Re-Employment Program (TMRP). Those 10 areas were Seattle, San Jose, San Diego, Los Angeles, Orange County, Wichita, Boston, Long Island, Huntsville, and Cape Kennedy. The project sought professionals whose skills would contribute to building the capacity of local governments; who were interested in working in the public sector; willing to relocate and accept prevailing government wages for

middle-management jobs, and who were eligible for TMRP funds made available for travel to job interviews and for relocation expenses.

Participants attended intensive orientation courses at MIT and the University of California. The professionals were introduced to the problems of local government through a variety of teaching techniques, including simulation gaming, panel discussions and lectures by prominent civic authorities, field trips, and rap sessions. The universities measured their attitudes toward government and began compiling statistics that would be used in follow-up evaluations after participants were placed.

The project, working with public interest groups including five State Municipal Leagues, identified job opportunities in local government and waged a promotional campaign to inform jurisdictions of the availability of this pool of skilled manpower.

As job orders were received, the project staff matched the specifications of the job with those participants who seemed best suited to the opening, arranged interviews and provided reference checks for applicants.

The project staff organized a network to bring together employers and participants. One of the most effective linkages

in this network was the self-help groups of participants organized by AEP which maintained close communications between headquarters and the 10 target areas, sustained morale among participants and whose further objective was to find jobs in the area for its members.

The project learned, however, that although local governments have an indisputable need for skilled manpower, they will not hire members of a specific group automatically. A carefully planned and executed campaign is a necessary component of any such project. There are barriers to employment that must be recognized so they may be overcome where possible.

HOW THIS REPORT IS ORGANIZED

The remainder of this report has been built essentially around the four objectives of the project.

Chapter II discusses what was learned about the potential for finding jobs in local government for unemployed aerospace and defense professionals. The degree to which the objective was achieved is measured by placement of participants and an evaluation of the performance of participants in the public sector.

Chapter III considers the usefulness of the orientation courses followed by on-the-job training subsidized in part by government funds. The substance of the orientation courses is

discussed; benefits derived from it, both to the individuals and to the overall objectives of the project, are considered.

The delivery netowrk established by NLC/USCM for the Aerospace Employment Project is described in Chapter IV. Elements of the network are evaluated in terms of their usefulness in selecting participants, developing job opportunities and actually placing participants in public service jobs.

Chapter V reports the findings of AEP and the two universities on the success of participants in transferring their skills to the area of local government. An analysis of how evaluation of the degree to which aerospace and defense-related skills can help solve urban problems is presented through examples of participants' performance on the job. It should be recognized that many participants have not been employed long enough for a definitive judgment of the extent of their contribution to be made nor can it be predicted with certainty whether they will perform to their employers' expectations.

Chapter VI examines a variety of factors that had substantial bearing on the outcome of the objectives--age of the participants, length of time unemployed, the difference in salary between local government and the aerospace industry, educational variances, and the psychological attitudes of the employed professionals. The effect of the Emergency Employment Program on AEP placements,

a program begun after the project was launched, is considered in terms of its potential benefits for similar projects.

The reports of the universities on the structure of the orientation courses and follow-up interviews with participants that were placed (and their employers) are contained in separate volumes but should be considered an integral part of this report. In some cases, findings in this report are based on the universities' research. Reference is here made to MIT's Project ADAPT (Report #2) "Review and Assessment of Post-Orientation Careers of Project Participants," and to the University of California at Berkeley's Aerospace Orientation Program Report, "Adapting Professional Manpower From Aerospace to Urban Government".

The Aerospace Employment Project supplements its final report with an Attachment (under separate cover) containing project forms, informational and promotional materials and communications generated by the AEP during its existence. The purpose of the attachments is to illustrate the type of procedural materials utilized by the project in conducting its main tasks.

POSSIBLE USES OF THIS REPORT

The Aerospace Employment Project was conducted during a particular brief period of history whose circumstances are unlikely

to be replicated. However, the problems addressed by the AEP will probably remain problems. Cities will unquestionably need innovative, highly skilled personnel to help them solve those problems that will have abated slightly if at all. Many former aerospace and defense professionals still may have to turn to new careers.

Findings in this report about the characteristics of public employers and unemployed scientists and engineers may be helpful to the Technological Mobilization and Reemployment Project (TMRP). Some findings will apply broadly to manpower pools with specialized talent. Local Government officials should re-examine their personnel policies in view of the findings in order to utilize the optimum talent available to assist in Model Cities capacity building. The techniques of job matching developed by AEP could have broad application for employment projects operating under time constraints and drawing on pools of specialized personnel of somewhat similar skills.

CHAPTER II

"MEETING LOCAL GOVERNMENT MANPOWER NEEDS"

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MEETING LOCAL GOVERNMENT MANPOWER NEEDS

Four basic objectives were established for the Aerospace Employment Project. These objectives attempted to determine the project's effectiveness in meeting local government manpower needs.

The first objective, concerned with present State and local government professional manpower needs, was:

> *To determine whether the professional manpower needs of State and local government can be met effectively, in part, from the ranks of unemployed aerospace and defense engineers and scientists.*

The project sought to answer several questions under this objective. Essentially, how did local governments perceive their professional manpower needs? What factors were considered in hiring professional personnel in middle-management positions? How extensive was the demand for administrative, professional and technical personnel in local government? Were there certain barriers which worked to undermine the hiring of quality personnel? How were these employment barriers eliminated or partially reduced? Was control over the vital personnel function centralized or dispersed in local government?

Obviously, the characteristics of the labor supply available to State and local government bear close relationship to adequate "matching" of manpower resources to needs. How adaptable were former aerospace and defense engineers and scientists to a new work environment? Did these unemployed professionals meet, in part, the manpower needs of local government? What skills, characteristics or attributes were more readily acceptable in local government? What types of professional jobs did engineers and scientists fill in local government?

AEP's contribution to meeting local government professional manpower needs can be measured in part by:

(1) *the percentage of those selected and trained through AEP who have obtained employment in the public sector, and,*

(2) *the proportion of those placed who perform effectively on the job.*

This chapter explores certain issues which relate to the above measurements for Objective One by examining the degree of local governments' receptivity to the project's manpower pool.

PLACEMENT RESULTS

- As of April 30th, there were 371 project participants.

- ○○○ Of these 288 (or 77 percent) were employed through the project.
- ○○○ There were 186 in governmental jobs (about 65 percent of total placements).
- ○○○ Private employment had been found by 102 participants (or 35 percent).

RECEPTIVITY OF LOCAL HIRING AUTHORITIES

Through job development efforts, the project was exposed to more than 1,000 local governmental units. More than 300 jurisdictions actively participated in the project by submitting job orders, reviewing applications and interviewing project participants.

- ○○○ As of April 30th, a total of 101 State and local governments hired AEP participants.
  - ○○○ 11 States and The District of Columbia hired a total of 32 participants (or 17 percent of public placements).
  - ○○○ 13 Counties hired a total of 35 participants (or 19 percent of public placements).
  - ○○○ 76 Cities hired 106 participants (or 57 percent of public placements).
  - ○○○ 17 State, county and city governments hired more than one AEP participant.

Participating State and local hiring authorities have expressed approval of the professionals they have hired and of the method by which this type of personnel was made available to them.

Often the project would receive comments such as:

> *"It is, of course, obvious already that certain of the project graduates are destined for greater success than others."*
>
> *"I feel the project is highly successful - we have obtained some intelligent original thinkers to assist us in our service to the public - while the new employees are qualifying themselves for advancement in a new field. We can hardly expect more than that."*
>
> *"To us this was an unusual experience in that every candidate (interviewed) was supremely qualified to meet our needs. In fact, we had to seek the assistance of an old friend from the National Academy of Engineering to help with the final decision."*

GOVERNMENT JOBS FOR AEP PARTICIPANTS

Local government positions cover a wide range of responsibilities and functions. In a broad sense, all public jobs are part of an effort to improve urban services whether within separate agencies, through joint and cooperative ventures or through general responsiveness to its citizens. In its job development efforts, AEP sought significant jobs for its participants. Middle-management positions in local government were the primary targets in the identification of jobs. At this level of government employment, persons begin to have a voice in decision-making processes that affect broader policies and strategies.

Participants placed by AEP in public sector jobs are now located on many levels of government -- from a personnel specialist trainee to a director of projects with considerable responsibility. Some new jobs have been created for participants that were especially designed to utilize their talents. For example, four participants were placed in a Public Works Department of a large metropolitan city. The Department was under reorganization when the AEP applicants were introduced to the Commissioner for possible employment. Because of the participants' enthusiasm and interest, the Department hired them as Chief of Communications & Information, Chief of Research and Development, Physical and Social Scientist and Analytical Scientist. The Department tried a new approach by generalizing assignment of tasks and responsibilities. These participants have created a new communications and information center, a revised and upgraded quantitative analysis section, and a reorganized administrative branch for the Department.

Other participants have shown enterprise in presenting their credentials to local government. For example, one individual so impressed a mayor with his grasp of the issues that he was asked to return that afternoon with a detailed presentation of his assessment and recommendations for the reorganization

of the administrative branch. He returned for a two-hour meeting, armed with appropriate charts and graphs. He was hired.

Most participants placed in the public sector filled existing vacancies rather than specially created positions. Many AEP engineers and scientists were placed in jobs which were administrative and closely aligned with the management, planning and supervisory aspect of public programs. Some other jobs were created recently because of public concern and interest, for example, air pollution engineer, environmental scientists, researcher in solid waste materials, ecological scientist, and water quality specialist. Other jobs obtained by the participants were oriented to systems for achieving set objectives; these included management systems analysts, training coordinators, Federal/State fund coordinator, criminal justice systems specialist, grant coordinator, city demonstration coordinator, and research coordinator and planner. Many other participants obtained positions requiring skills in engineering such as utility systems engineer, city/town engineer, industrial engineer, mass transit engineer, civil engineer, and building construction engineer. Chapter V of this report discusses the roles, functions and responsibilities associated with AEP placements in the public sector in more detail.

ATTITUDES OF LOCAL HIRING AUTHORITIES

Some local government officials were enthusiastic about the prospect of drawing on the resources of the AEP manpower pool. Others were skeptical about how well personnel with backgrounds in aerospace and defense would fit into local government. Some hiring authorities were willing to try AEP participants while maintaining reservations.

Hiring authorities with a generally positive attitude toward AEP participants chose to employ them for one or more of the following reasons:

---because they would require little or no additional training for the job;

---because they had "maturity of experience" - they brought to the job a wealth of program management experience and "problem-solving" techniques;

---because their backgrounds indicated their work would be "meticulous and detailed," "pragmatic in approach," "creative" or they would be "self-starters;"

---because they possessed the ability to study complex problems and make decisions, and were experienced in developing alternative solutions to problems or consideration of management.

Some of the negative reactions of local government hiring authorities are discussed below.

Three major negative attitudes of government hiring authorities toward aerospace engineers and scientists were discovered by the project through extensive interviews and telephone conversations:

a. The engineers and scientists were thought to be using local government simply as stop-gap employment until the employment crisis in aerospace and defense had passed.

b. Participants were seen as a *stereotype*, characterized as technicians with no interest in people or ability to deal with them; or viewed either as narrow-gauge persons, interested only in one small part of a broad scheme, or as individuals accustomed to thinking in cosmic terms who would be disinterested in such mundane urban problems as sanitation or public works.

c. Potential employers greatly overestimated participants' former salaries and assumed that they would be dissatisfied working for the salaries local government could afford to offer. (The actual difference, as AEP staff pointed out, was not substantial at all.)

The project responded by explaining to the hiring officials how the participants had been carefully selected and that

motivation to change careers, specifically to work for local governments, had been a major factor in selection:

- that participants were chosen because of their administrative and management capabilities;
  that efforts were made to weed out those interested only in narrow aspects of engineering;
- that participants realized that salary cuts and relocation might result but had maintained interest in the project;
- that project staff was prepared to select from the universe of participants those persons whose qualifications most closely matched the jurisdiction's job requirements and that the hiring authority would be presented with resumes of likely candidates, rather than flooded with applications that might be unsuitable;
- that project participants had demonstrated skill in highly complex fields and were accustomed to tackling difficult problems in innovative and sophisticated ways;
- that the project was geared to eliminating much of the red tape characteristic of some employment programs.

BARRIERS TO EMPLOYMENT

Although State and local governments have a well-documented need for skilled personnel at the middle-management level, they also in many cases have restrictive criteria for employment.

In *"A Survey of Current Personnel Systems in State and Local Governments,"* published in the Spring, 1971, volume of Good Government, a number of the problems encountered by AEP were cited:

> "Most State and local jurisdictions organize their personnel systems according to a Civil Service Commission model. Some 80 percent employ the merit system - they attempt to insulate the employment and promotion processes from political consideration. About 25 percent of these systems have a residency requirement for hiring entry level administrative, professional and technical persons (as against 28 percent with such requirements for unskilled workers).
>
> State systems rely heavily on college degrees and written tests for their entry level administrative, professional and technical positions; local governments stress experience and education, with less emphasis on written tests. State systems offer more job opportunities both in terms of existing vacancies and annual job openings; county governments offer fewest opportunities.
>
> Experience is required by 77 percent of all governmental systems as a qualifying factor in hiring professionals (as opposed to 62 percent for unskilled workers).
>
> There are more than 750,000 State and local government job opportunities developed each year -- exclusive of positions in educational institutions. At any given time, there are 360,000 such job vacant."

Job development efforts confirmed that a significant number of policy-oriented, middle-management and technical positions are available in State, county and city governments. Identifying local job opportunities was not a major problem. During the first nine months of the project more than 1,000 job opportunities were identified -- approximately 2.5 jobs per participant.

However, the project had set criteria under which one-third of the job openings were not acceptable. These criteria required:

a. that jobs be at the middle-management level of responsibility (whether in policy, planning or analytical technical areas);

b. that the salary and geographical location be sufficiently attractive to give participants an incentive to relocate;

c. that the jobs be permanent and part of a career ladder; and,

d. that the jobs be oriented to improving the capacity of the local government.

Some hiring authorities who were convinced that the aerospace professionals could indeed make a contribution to local government still faced the following constraints:

a. *Budget Problems:* Salary and benefit costs have soared in local government. Existing personnel costs in the face of tight budgets make it difficult

to hire new employees even though they are needed.

b. *Residency Requirements:* Some jurisdictions have firm requirements that residents be given any available jobs. In others, employers follow the political wisdom of "taking care of our own" before seeking new employees out of the city, county or State. For example, in Model Cities, preference must be given to Model Neighborhood residents. *Local governments preferred to hire from within their local area regardless of a non-resident's qualifications and skills.*
Under the Emergency Employment Act, only residents were initially eligible. Some jurisdictions rejected AEP participants from other areas for this reason even though they were qualified for the position. (Later, the Department of Labor granted a waiver of the residency requirement to AEP participants seeking employment in local government outside their residencies).

c. *Inflexible Job Descriptions:* Many local governments were reluctant to modify their job specifications, perhaps fearing that one modification would destroy the integrity of the traditional hiring process and

admit too many "exceptions" to the specifications. If a job description called for a Civil Engineering Degree, for example, the hiring authority might have no discretion to hire someone with other engineering skills that would equip him to do the job. In such cases the applicant must meet stringent educational and experience standards and often must be registered in the State.

d. *Rigid Civil Service Requirements:* Civil Service job descriptions often require minimum training and experience that are narrowly interpreted. Applicants are required to pass standard examinations that bear little relationship to the person's general background or the job for which he is applying.

e. *Complicated Hiring Procedures:* Some jurisdictions had such complex procedures for hiring that the participant they wanted could not afford to stay unemployed waiting during weeks of processing if another job was available to him. On the other hand, few jurisdictions were willing or able to earmark jobs for project participants and hold them vacant until orientation was complete. On the average, it

took six to eight weeks to complete hiring procedures.

The authority to hire varies from locality to locality. For example, in some cities, the mayor must approve all hiring including the clerical level; other cities run under a strict civil service system and hiring authority is vested in a personnel director. Some governmental departments may hire directly, others need approval from the city manager or city council. Qualified applicants seeking jobs in local government can become lost in such hiring mazes and they waste time dealing with the wrong person while the real process of hiring occurs in some other department. A department head may honestly want to hire an AEP applicant, but may have his personnel request denied by another governmental body charged with the responsibility to hire all city personnel through a strict recruitment procedure. Internal political struggles, which only an insider can understand, may also negate placement efforts.

ANALYSIS OF PLACEMENT RESULTS

Numbers and Percent Placed:

- As of April 30th, there were 371 project participants.

- Of these, 288 (or 77 percent) were employed through the project.
- There were 186 in governmental jobs (about 65 percent of total placements).
- Private employment had been found by 102 participants (or 35 percent).

AEP considered the numbers and percentage of participants a significant achievement considering the extensive employment barriers. Some participants decided that a career change in local government was not what they really wanted and returned instead to private industry. A few simply were found unsuitable by several local governments for a number of reasons, and so they sought other employment our of economic necessity.

The 65 percent placement rate in public jobs indicates many public employers considered AEP participants as a unique manpower resource although other public employers did not, for a variety of reasons, avail themselves of individuals from the project to fill their policy-oriented, middle-management and technical positions (or did not create new positions).

Where there was a demand, AEP participants filled the need (in this case, 101 jurisdictions). AEP participants could not be hired in cities where certain employment barriers barred their entry: yet there was a demand for professional technical expertise.

Over half of all placements (public and private) occurred on the West Coast. The rate of public sector placements for the West Coast group was 60 percent, compared to 40 percent for the East Coast.

Conversely, more private jobs were obtained by participants on the East Coast. New employment in private industry ran 78 percent. A small percent of those now in private positions returned to their former occupation in the same industry: aerospace or defense.

Eleven of these private jobs obtained by AEP participants were publicly oriented, such as housing coordinator for a non-profit housing corporation; director of environmental quality for a tuberculosis control center; and consultant on economic development studies (including some for Model Cities Programs). Although placement in the private sector was not part of the project's objectives, quasi-public jobs can be viewed as meeting community needs for social services.

Table 1 provides information on the numbers and percent placed through AEP up to April 30, 1972. (A complete listing of public and private jobs obtained by AEP participants, by locale, can be found in the appendix of this report).

As of April 30th, 83 AEP participants had not obtained employment. The majority of these were from the East Coast,

TABLE 1

PLACEMENT INFORMATION

As of April 30, 1972

I. Total Number of Participants Employed----------288*

Percent Placement to all Participants:	77%
Total Employed from the *East Coast:*	129 (45%)
Total Employed from the *West Coast:*	159 (55%)

II. Total Number of Participants Placed in the *PUBLIC SECTOR*----------186 (65%)

Total from the *East:*	76 (40%)
Total from the *West:*	110 (60%)

III. Total Number of Participants Placed in the *PRIVATE SECTOR*----------102 (35%)

Number returning to Previous Employment:	22 (22%)
Number Placed in New Employ:	80 (78%)
Total from the *East:*	53 (52%)
Total from the *West:*	49 (48%)

*Current placement rates to the month of August, 1972 are: 297 (or 80 percent) participants employed; 194 (or 65 percent) are in public jobs; and 103 (or 35 percent) are privately employed.

primarily the Boston area. Since that date, Public Employment Programs, sponsored through EEA, were able to open up a number of slots for AEP participants through lapsed funds and the removal of tight residency requirements. (Data on participants remaining unemployed is found in Appendix D of this report).

NUMBERS PLACED BY TARGET AREA

An analysis of the placement rate, by each of the 10 target areas, was made to determine differences or similarities among the groups. Rates of placement among these areas were compared with candidate characteristics and overall employment conditions.

All target areas achieved placement rates over 60 percent: Orange County had the highest rate: all participants had obtained jobs; Huntsville with 62 percent employed had the lowest rate. Orange County also had one of the lowest percentages of entry into the private sector. For comparison, Orange County's candidate profile contained the largest number of Ph.D. candidates while Huntsville had more non-degree participants than any other area.

There appears to be a significant correlation between high oral panel scores and eventual placements for AEP candidates. Huntsville, with high scores, was the only area where such a correlation could not be made.

TABLE 2

PLACEMENT STATUS BY TARGET AREA

As of April 30, 1972

TARGET AREA	TOTAL # CANDIDATES	PUBLIC PLACEMENTS	PRIVATE PLACEMENTS	TOTAL
Seattle	61 (16%)	31 (51%)	24 (39%)	55 (90%)
San Jose	24 (7%)	14 (58%)	3 (13%)	17 (71%)
San Diego	20 (5%)	14 (70%)	1 (5%)	15 (75%)
Los Angeles	43 (12%)	26 (60%)	13 (30%)	39 (90%)
Orange County	16 (4%)	15 (94%)	1 (6%)	15 (100%)
Wichita	24 (6%)	10 (42%)	8 (33%)	18 (75%)
Boston	91 (25%)	38 (42%)	25 (27%)	63 (69%)
Long Island	36 (36%)	15 (42%)	12 (33%)	27 (75%)
Huntsville	29 (8%)	9 (31%)	9 (31%)	18 (62%)
Cape Kennedy	27 (7%)	14 (52%)	6 (22%)	20 (74%)
TOTALS:	371 (100%)	186 (50%) (65%)	102 (27%) (35%)	288 (77%) (100%)

Seattle and the California area were hardest hit by aerospace and defense cutbacks. Their unemployment rate was substantially higher than other localities during the life of the project. Placement in these areas, however, was considerably better than, for example, Boston. The proportional regional representation chosen by the project was originally based on unemployment figures during the Spring of 1971 for engineers and scientists. Boston candidates represented one-fourth of the total AEP universe selected during that period. In comparison, Boston's placement rate for public and private jobs ran consistently lower during the seven months of job development than did that of Seattle or the California area.

Table 2 shows the placement rates in the public and private sectors for each of the project's 10 target areas.

RATE OF PLACEMENT

Job development efforts for AEP were measured over a seven month period. As of April 30th, the placement rate was 77 percent. Half the participants secured jobs in the public sector; 27 percent found employment in private industry; 23 percent remained unemployed.

A steady increase from month to month was noted in each placement category. Overall, the highest increase occurred

between the months of March and April.

TABLE 3

RATE OF PLACEMENT FOR AEP PARTICIPANTS

PERIOD	All Placements	Public Placements	Private Placements
October	18.8%	13.7%	5.1%
November	30.3%	20.4%	9.9%
December	41.4%	29.3%	12.1%
January	48.4%	34.2%	14.2%
February	55.2%	37.7%	17.5%
March	61.6%	42.5%	19.1%
April	77.5%	50.1%	27.4%

For public placements, Orange County had the highest rate at the end of the seven month period (93.7 percent). The lowest rates were from Wichita and Huntsville.

Rate of placement for all areas increased steadily over this period. The fastest rate of increase was again in the Orange County area. The slowest rate of increase was in the Wichita area where for a period of four consecutive months the rate remained the same at 37.5 percent for public placements.

Table 4 represents the overall rate of increase for placements in the public sector only for each of the 10 target areas.

TABLE 4

RATE OF PLACEMENT IN THE PUBLIC SECTOR

BY TARGET AREA

As of April 30, 1972	Seven Month Period									
TARGET AREAS:	Seattle	San Jose	San Diego	Los Angeles	Orange County	Wichita	Boston	Long Island	Hunts-ville	Cape Kennedy
MONTHS:										
October	18.0%	12.5%	20.0%	20.9%	25.0%	16.6%	7.6%	8.3%	10.3%	11.1%
November	26.2%	12.5%	35.0%	27.9%	37.5%	33.3%	12.0%	8.3%	17.2%	18.5%
December	39.3%	20.8%	35.0%	41.8%	68.7%	37.5%	20.8%	13.8%	17.2%	22.2%
January	42.6%	37.5%	45.0%	41.8%	81.2%	37.5%	23.0%	25.0%	24.1%	22.2%
February	44.2%	41.6%	50.0%	46.5%	87.5%	37.5%	26.3%	27.7%	27.7%	29.6%
March	45.9%	50.0%	60.0%	43.4%	87.5%	37.5%	32.9%	33.3%	27.5%	37.0%
April	50.8%	58.3%	70.0%	60.4%	93.7%	41.6%	41.7%	41.6%	31.0%	51.8%

PLACEMENTS IN STATES, COUNTIES AND CITIES WITH MODEL CITIES PROGRAMS

One of the initial placement objectives for AEP was the identification of middle-management positions as potential job opportunities in jurisdictions utilizing the Model Cities concept of comprehensive planning and development.

The intent was to place AEP participants in public jobs of which two-thirds or better were to be city-capacity building positions. Of course, all public jobs are part of an effort to improve urban services whether or not they are within Model Cities jurisdictions.

Of all AEP candidates placed in the public sector, 50 percent (or 93 placements) obtained jobs in jurisdictions with Model Cities Programs. Five candidates secured jobs in Model Cities Programs as management analysts and Model Cities coordinators. The average salary for a position in a Model Cities Program was $12,808.

Most of the Model Cities capacity-building jobs were located in city governments (48 positions); Model Cities counties accepted 21 candidates; and States with one or more Model Cities Programs chose 13 candidates.

Table 5 provides information on those public jobs obtained by AEP participants which are located in States, counties and cities with Model Cities Programs.

TABLE 5

ALL STATE, COUNTY AND CITY JOBS IN JURISDICTIONS

WITH MODEL CITIES PROGRAMS

	In States	In Counties	In Cities	In Model Cities Programs
Number of Jobs:	13	21	48	5
Percent Jobs to Total Placements:	15.2%	23.8%	54.4%	1.7%

Total Number of Jobs in States, Counties and Cities with Model Cities Programs----------93

Percent Model Cities Capacity-building Jobs to Total Placement---------50.0%

Total Wages Earned in Model Cities Positions-----$64,044

Average Model Cities Salary----------$12,808

TYPES OF PLACEMENTS IN THE PUBLIC SECTOR

The managerial and technical personnel from aerospace and defense found various ways of adapting their skills and experience to the needs of local government. Some have been able to transfer their organizational skills to the purely administrative tasks of public agencies. Others have sought to improve coordination of activities both within and among municipal agencies. Still other AEP participants have directly applied their basic technical competence in public service engineering positions.

Initial Assumptions:

a. An underlying assumption of the AEP was that the transfer from aerospace to urban government could be most easily accomplished by personnel from the "soft side of aerospace". While their original training might have been technical, these engineers and scientists had recent experience in management, budgeting, program analysis, technical writing or marketing.

b. Another initial assumption was that the need in local government for administrative, professional technical personnel would be in administration, management analysis, planning and program development. The

jobs would be in the policy-development (middle-management) level. Second, it was thought that this type of professional would be viewed as a "problem-solver" for urban programs and management.

Original job development efforts produced the following response from local governments: public employers sought to hire AEP participants in purely engineering positions, for example, civil engineers for civil engineering jobs. Approximately one-fourth of all jobs obtained in the public sector were of an engineering type in public works departments, sanitation divisions, data processing centers, city planning, and transportation.

Promotional efforts and continued discussions with interested public employers began to "open up" other job opportunities unrelated to purely technical skills. Cities that hired engineers or scientists in administrative or other management related jobs set an example by utilizing aerospace skills in the "soft-side" of local government. They provided AEP job developers with a model for other communities.

Twenty-three participants were hired as administrative analysts; others were hired as personnel technicians; some as environmentalists; a few as fiscal or budget officers; and others as planners in a variety of urban fields -- these were jobs where

engineers had to deal with *people* and the *process*, not with slide rules and hydroxybutyric acid. (See Table 6, "Types of Public Placements for AEP Participants")

General groupings of public placements in job categories were made to compare "soft" placements (more administrative than technical) to "hard" placements. Approximately 53 percent of those placed in public jobs functioned in an administrative capacity; 41 percent were more technically oriented; the remaining 7 percent fell marginally between both job categories.

It would appear that local governments gave more weight to the engineer's most recent experience than to his initial training in purely technical disciplines.

Analysis of these positions indicated that in about 18 percent of the cases listed, the positions required skills and/or education that had little or no relation to the professional's past experience. Some 24 percent of the jobs were very similar to the type of work the participant had done formerly or were closely related to his specialized education. The remaining 58 percent of the jobs bore some relation to the participant's experience and education but demanded varying degrees of adaptability.

TABLE 6

TYPES OF PUBLIC PLACEMENTS FOR AEP PARTICIPANTS

Job Category	Number AEP Placements	Percent to total Public Placement
Administrative Analysts and/or Assistants	23	13%
Town, Civil Engineers/ Public Works Engineers	19	10%
Personnel (Technicians and Analysts)	18	10%
Planners	16	9%
Other Engineers	15	8%
Environmentalists	14	8%
Management Analysts	9	5%
Fiscal/Budget Officers	9	5%
Research & Development	8	4%
Traffic & Transportation	7	4%
Systems Analysts	7	4%
Mechanical Engineers	5	3%
Criminal Justice/Law Enforcement	4	2%
Programmers	4	2%
Education (Institutional Teaching)	3	2%
Grant Coordinators	3	2%
Civil Defense (Communications)	3	2%
Other	15	8%

MULTIPLE HIRES IN LOCAL GOVERNMENT

Superior performance by participants encouraged local governments to hire other engineers and scientists. Seventeen cities have hired more than one AEP participant.

One California city hired an AEP participant as an administrative assistant. Because of his initiative and enthusiasm, he was promoted to the position of EEA program administrator for the county. The vacancy created by the promotion was filled by another AEP participant. Eventually a succession of participants were hired in the city. The initial hire "opened the door" for other qualified applicants from AEP.

A city in the Southeast hired a participant in the early stages of the AEP and was so impressed with him that it investigated openings for participants in other city departments. Two other project participants were chosen for positions in the finance department for the city.

POST PLACEMENT JOB PERFORMANCE

The most visible measurement of AEP's contribution to meeting the manpower needs of local government is the performance of those who obtained employment in the public sector. One aspect of this measurement is how local governments utilized personnel from the aerospace industry.

Unfortunately, any assessment of job performance must be considered tentative at this time. When this report was written most of the AEP participants in public sector jobs had not been employed long enough to weigh their performance properly. However, some initial subjective judgments can be made which reflect the views of AEP participants and their supervisors.

LOCAL GOVERNMENT'S VIEW OF AEROSPACE SKILLS

Although each participant was selected for the project with a view to his having skills that would meet the needs of local government, it was soon apparent that certain participants were more in demand than others. Participants with such specialities as metallurgy, geology, and botany were difficult to place.

As could be expected, local governments wanted to interview those participants whose resumes indicated they could transfer into public careers with the least retraining.

The project received a few job orders that would have required a skills conversion that participants just could not accomplish, such as city attorney or chief accountant. However, it was more common to receive orders for straight technical jobs. Project staff felt that there were many positions participants *could* fill -- such as budget officer, management analyst, law enforcement coordinator or grantsman -- that did not require a highly technical background. Repeated contacts with potential

employers were required to convince them of the versatility and adaptability of project participants.

Effects of Project Momentum: This task of convincing local officials was made considerably easier as participants were hired in non-technical positions and the jurisdictions hiring them could be cited as references. In other words, placements suggested to jurisdictions the kinds of jobs the project could fill; many hiring authorities did not understand the scope of the project and initially tended to seek only civil or mechanical engineers from the roster.

AEP project staff aided public employers through a process of "job matching". The process worked on two principal levels: matching candidate skills to job orders submitted by public employers or matching an array of skills to a perceived need. A detailed description of the job-matching process is presented in the Appendix of this report.

Engineering and Other Skills: The main reason aerospace professionals' skills are adaptable to local government is because industries operate in much the same manner as public agencies do.

Aerospace Industries:

1. Must seek available Federal dollars; they employ grantsmen and contract negotiators familiar with the

Federal system of grants and funding who can write proposals.

2. Must plan and develop massive programs to service aerospace and defense contracts using professional planners to shape and coordinate all levels of the industry.
3. Must implement programs to meet contract obligations: administrators and managers and supervisors are employed to supervise staff work on the projects.
4. Must manage programs financially to meet contract specifications through budget analysts, cost control experts, finance directors, accountants, auditors and the like.
5. Require such personnel as management and information specialists, evaluation teams, and statisticians to monitor and control the programs' operations and to assess progress according to defined goals and objectives.
6. Require personnel to market their hardware and services: public relations people, marketability study teams, and promotional staff.

Therefore, aerospace and defense engineers and scientists are more than just civil or mechanical engineers or researchers. They are program managers, personnel technicians, administrators, purchasing specialists, coordinators, statisticians, writers,

teachers, trouble-shooters, editors, marketing experts, health and safety specialists, negotiators, and generalists. These and other skills were the real attributes engineers and scientists brought to local government. These were the skills which local governments have acquired in hiring participants in the AEP.

JOB PERFORMANCE MEASUREMENTS

The University of California at Berkeley and the Massachusetts Institute of Technology were charged with the responsibility of evaluating post-placement performance of participants who were placed in the public sector.

Each was to conduct interviews with the employed AEP candidates and their immediate supervisors after three and six month intervals. Low placement rates during the early monitoring phase of the project lead to a modification of the follow-up evaluation schedule. Project ADAPT staff at MIT conducted their interviews during March and April, 1972; the AOP staff at Berkeley were to conduct their investigations during July and August. (A preliminary follow-up was made by the Berkeley group during the month of April after questionnaires had been sent to all AEP candidates on the West Coast.)

Both universities reported extensively on interviews with participants placed in public jobs. Letters from employers

to the project provided another indication. Project staff at headquarters also visited selected job sites (predominately on the West Coast) to interview key local officials such as mayors, city managers, and department heads. All three sources are subject to the caveat that most participants have not been in these jobs long enough to produce conclusive findings.

UNIVERSITY OF CALIFORNIA AT BERKELEY

In its preliminary survey the University of California found that the majority of jobs "were mostly advisory in nature, and carried little administrative responsibility". Most participants said they liked their jobs. Some felt that they were enlarging their jobs by applying techniques they had used in the aerospace industry. As to degree of skills transferral required, most respondents claimed that they had the "same worries about time, people, and resources". Some said "techniques are the same, but content is different".

According to UC, a large group of employed participants found job content meeting their expectations, but desired more responsibility and higher pay. They felt AEP had been helpful in giving them a "big picture" of what makes government tick and had exposed them to terminology and procedures which they use in their present jobs.

UC, in their preliminary interviews, talked only to participants, not to employers, because they felt it was too soon for employers to make an evaluation.

MASSACHUSETTS INSTITUTE OF TECHNOLOGY

MIT interviewed both public employers and participants placed in local government. MIT found that nearly nine out of ten candidates "were performing up to or better than the employer's anticipation". Some 75 percent exhibit a rate of improvement in their performance that meets or exceeds employer expectations.

MIT found one reason that some appeared to be performing below expectations was a mismatch between the participants' training and experience and the nature of the tasks assigned. Although job descriptions often sounded well-suited to an individual's skills, the actual assignments greatly underutilized such skills.

MIT listed the following as the main performance problems of participants now in local government:

(1) difficulty in breaking away from the need to specialize in a technical area;

(2) difficulty in transferring engineering skills specifically needed in aerospace to a more general context;

(3) inaccurate assessments of political ramifications of particular initiatives; and

(4) attitudinal problems stemming from feeling aerospace engineering work was elite -- or that career civil servants are incompetent or municipal government inefficient.

These problems are being ameliorated, MIT said, as participants become familiar with their new career environment, particularly the actors involved, the type of work to be performed, and the roles which candidates are expected to play in the general scheme of agency operations.

Another problem was the anxiety of participants to "make good" or show what they can do -- which made them ignore the political structure of their job and the sensitivities of those with whom they work. (MIT described it nicely as "bureaucratic indiscretion.")

So, initial findings indicate that former aerospace professionals can help cities with the capacity-building tasks. But it takes work and there are problems on the part of each partner in the enterprise. (For more detailed analysis on post-placement job performance, refer to MIT, Project ADAPT (Report #2), Review and Assessment of Post-Orientation Careers of Project Participants; and UC, AOP Program, Interim Review of the Orientation Project).

CHARACTERISTICS OF ENGINEERS AND SCIENTISTS PLACED IN THE PUBLIC SECTOR

MIT found aggressiveness and motivation key characteristics of engineers and scientists placed in the public sector. This can be manifested on three distinct levels.

The *first* is that of a highly aggressive individual who is determined to prove his "worth" to his immediate supervisors. For example, one participant placed in a New England town wished to show the chairman of the board of town selectmen that he was amply qualified to be executive secretary of the town government. Originally, he was hired in an EEA position of minor significance. He attempted to broaden his responsibilities by demonstrating administrative capability. The selectman now feels that he is distinctly qualified to assume such roles as planner/engineer, executive secretary, comptroller, or grantsman. Other participants have also, through exhibiting aggressiveness, been promoted to more responsible positions.

The *second* is a manifestation of aggressiveness that has negative consequences for engineers because it hampers advancement and places them in disfavor with fellow workers. The aggressiveness to "get the job done" can backfire through an inaccurate assessment of political ramifications, through unfamiliarity of relationships between major actors within a political

environment, and through ignorance of certain standard procedures of the system. One such case of a "hard charging engineer" resulted in unusual upheavals during his first month on the job. His supervisor would ask him to do something and he behaved tactlessly in attempting to get the job done quickly. His supervisor had to spend considerable time mending wounds and reassuring other employees.

Finally, in the *third* case, some participants subdue their aggressiveness and adopt a cautious approach. Here the participant spends most of his time finding out why things are done the way they are. He studies roles and relationships and generally tries to become as informed as possible. One participant expressed it this way: *"I haven't come out real strong yet. You come in like a lamb, get your ducks all in a row..."*

CHAPTER III

"ORIENTATION AND ON THE JOB DEVELOPMENT"

CHAPTER III

ORIENTATION AND ON THE JOB DEVELOPMENT

Assistance to both the employee and the employer was provided by the AEP in the form of an orientation program for the candidates and financial assistance to the employer for training AEP participants hired, if needed. The project's objective was:

> *To determine whether a brief orientation and financial assistance for on-the-job development are necessary and adequate to aid in the transfer of such personnel.*

Would aerospace professionals need extensive retraining to move into local government? If a basic introductory orientation course would be sufficient, what topics should be covered to provide the candidates with enough knowledge of government to function effectively on the job? In what ways did the orientation arouse participant interest in working for local government? Did orientation provide participants with sufficient special background to encourage hiring authorities to look carefully at their potential for career change? And, finally, how did orientation ease the adjustment to a new environment for those who obtained jobs in the public sector?

AEP sought to determine whether training funds for local governments facilitated the hiring of aerospace personnel. Would cities need to provide in-house training for AEP employees and, if so, were the funds sufficient to cover such costs? How were on-the-job funds utilized by local governments in transferring skills from one work environment to another? Or was no additional training required because of the unique background of engineers and scientists?

The following is a discussion on the two methods developed for AEP to aid in the career transfer of aerospace personnel. Findings from the two participating universities are presented under orientation. Their views are of primary importance since they developed the orientation program and were charged under the contract with evaluating it. The discussion of on-the-job development stems from the AEP staff's direct dealings with local governmental hiring authorities.

THE MECHANICS OF ORIENTATION

Contracts were signed with two universities - Massachusetts Institute of Technology and the University of California at Berkeley - to conduct four-week orientation courses and to conduct studies of the reactions of students and their employers to placement in local government.

East Coast participants went to MIT; West Coast to Berkeley. The groups were almost evenly divided (185 at MIT, 187 at UC). The MIT program was called Project ADAPT. The Berkeley program was called the Aerospace Orientation Program (AOP).

The orientation at Berkeley was begun one week later than that at MIT. This afforded an excellent opportunity for the Project Director to anticipate problems that might arise in the later session from the experience of the earlier one.

Extensive reports by each of the universities on characteristics of the students; curricula; participant reaction to the courses, and recommendations concerning AEP, are contained in separate volumes of this report.

University faculty with experience in mid-career training and members of the Sloan Urban Executives Program, among others, advised the AEP to build the orientation courses on the following premises:

--that engineers by background and experience are capable of functioning as generalists as well as technicians.

--that the students have a capacity for mastering unfamiliar fields of knowledge and have achieved a middle-management level of experience.

--that these professionals had become adapt at learning from experience, applications and cases, rather than from textbooks.

So a curriculum was established with the primary aim of sensitizing students to urban problems they would be likely to encounter working in local government and to familiarize them with all facets of governmental operation: the actors, structure, language dynamics and politics. The month-long course began August 1, 1971, at MIT, a week later at UC.

The course at both universities were built around panel discussions and lectures by faculty and guests, gaming sessions on simulated urban circumstances, field trips to cities, small group discussions (rap sessions) and selected readings.

At UC the senior faculty members had both political experience and academic positions. Four of the six had served as Mayors. The entire faculty had considerable civic experience. Academic Dean was Arthur Naftalin, Former Mayor of Minneapolis.

Among guest lecturers and panelists were Mayor Joseph Alioto of San Francisco; Mayor Carl Stokes of Cleveland; Sociologist Ida Hoos; Urban Planner Marshal Kaplan.

The MIT program was conducted by faculty of the Department of Urban Studies and Planning. Students had the opportunity to hear lectures and discussions by Dr. Jerome Weisner, MIT President and former Presidential Science Adviser; Sociologist Nathan Glazer; Urbanologists Paul Davidoff and Adam Yarmolinsky; and David Grossman, Assistant to the Mayor of New York, among others.

Both participating universities in their attached reports have concluded that an orientation course was a desirable element of the Aerospace Employment Project.

FINDINGS: MASSACHUSETTS INSTITUTE OF TECHNOLOGY

The MIT report said: Persons who completed the ADAPT orientation were five times more likely to enter public service as re-employed aerospace and defense professionals than those who did not participate; moreover, of the participants who found re-employment in the private sector--30% of the total enrollment are working on projects that are related to the urban issues, problems and topics that were the focus of the orientation. Regardless of current employment status--public, private or unemployed--better than one in four have increased their involvement in local civic affairs--from seeking elective office to voluntary work with local governments and action groups.

MIT found that while participants now in public service felt the orientation to be extremely helpful, "*predictably, those now in generalist and executive staff positions would have liked more emphasis on topics such as bureaucracy and organization; those now working in more clearly circumscribed areas would have liked emphasis in the functional specialties for which they now have some responsibility.*"

About half the students favored lectures and panel discussions and the rest preferred such "hands-on" experience as field trips and gaming simulation. *"This justifies continued use of a varied rather than a uniform orientation program."*

From surveys, MIT learned that participants felt one of the most valuable aspects of orientation was getting a feel for politics and becoming familiar with the language of government. The university recommends more role-playing to enhance the participant's sensitivity to the interpersonal relationships "the small "p" politics of agency life that will be encountered in such positions.

MIT commented on the increased activity in civic affairs demonstrated by even those participants who returned to private employment (or even by unemployed). The program also found this a common phenomenon. A typical letter from a participant who found work with an automobile company said:

> *"I still appreciate last summer's training as I am a school board member with the attendant budgeting and political problems. The broad exposure to the political arena and how things happen is particularly useful to me."*

FINDINGS: UNIVERSITY OF CALIFORNIA AT BERKELEY

The following is a summary of findings by the University of California concerning orientation. Data upon which these conclusions are based are included in the university's report.

--Orientation had little influence on participants' perception of the importance of job goals.

--After orientation participants were more favorably inclined toward government employment. However, images of State and local government tended to be more negative.

--The orientation program produced more positive self-images in participants.

--Participants felt the program accomplished its stated goals. They particularly liked rap sessions, panel discussions and other specific information dissemination. They liked gaming least.

--Participants felt that the lecturers and staff were a crucial factor in the success of the project.

--There was consensus that the orientation course had instilled or increased positive interest in government work.

Berkeley students replied that 51 percent had "greatly" increased their sensitivity to problems of local government through the program, 34 percent felt it "largely" had; only 4 percent indicated little benefit. (In line with these percentages, 94 percent indicated they would seek public jobs; 6 percent said they would not).

OPERATIONAL ADVANTAGES

AEP staff also found *operational values* in the orientation that are not covered in the universities' reports.

Project Staff and the Candidates: The immediate advantage was the opportunity for personnel running the project to meet the participants. Through formal lectures by the Project Director, and through informal meetings, participants gained insight into the project's goals and its method of operation. They learned what they should be doing to prepare themselves for employment, what they could expect staff to do in identifying jobs and arranging interviews.

Related Project Logistics: Many logistical problems could be handled expeditiously at the orientation site--such matters as travel money for interviews, unemployment compensation, even family problems. Personal contact at orientation was the staff leaders' first opportunity to learn more about the problems and attitudes of the people with whom they would be interacting in the coming months.

Participant Morale: Participants later indicated that the orientation bolstered their morale, not only by introducing them to (and clarifying) a specific career for which they were qualified but also because they met other professionals with similar backgrounds

who shared many of their current problems. Particularly in California, where all students lived on campus, an esprit de corps developed. This led to the formation of self-help groups (See Chapter IV) and to continuing cooperation among participants. This has produced some placements when participants who were hired recommended others in the project.

Participants have also reported that the orientation was valuable in teaching them the language of government and in correcting misimpressions and preconceptions.

Orientation as a "Reflective Setting": Many participants knew little of the realities of local government when they applied for the project. They had the opportunity to examine the kinds of positions that actually exist and to evaluate their own capacity to fill various positions. It gave them an idea of whether their talents would be transferable. In some cases, the orientation led participants to recognize that they were not truly interested in working in the public sector. These later concentrated on gaining employment in the private sector; in other words, orientation allowed participants to focus on the particular, realistic aspects of local government instead of vague and abstract conceptions they may have had prior to joining the project.

Employer Reactions: Many employers were impressed by the orientation syllabus; others reported favorably on how knowledgeable about urban problems participants seemed when interviewed. When some employers understandably seemed skeptical about how much could be learned about government administration in one month, staff pointed out that these professionals had spent their careers learning rapidly about areas that had been previously unexplored; that they could turn their unusual abilities to absorbing complicated material on the problems of cities. Few middle-management employees in local government had taken such extensive courses in urban problems.

Job Interviews for Participants: Some job interviews were arranged for the final week of the orientation session. At that early point in the project, only a few job openings had been developed by AEP staff. Consequently, this undertaking, although well meant, had many drawbacks. There was a sharp decline in morale for those not receiving job offers - a few even "crashed" interviews to plead their case. Unless a project contemplates some sort of "job fair" where every participant is guaranteed an interview (although not a job necessarily), interview planning must consider the sensitivities of the participants. The orientation provides a setting where a potential employer can interview a broad selection of candidates. But those who are ignored are

likely to be discouraged early on about what the project is going to do for them. And an employer who has come to fill two or three positions does not want to spend time interviewing 30 to 40 applicants for each job.

ON-THE-JOB DEVELOPMENT

AEP sought to determine whether financial assistance for on the job development is necessary to aid in the transfer of aerospace and defense professionals to public jobs.

PURPOSE AND PROCEDURE FOR OJD DISBURSEMENT

Under the terms of the contract establishing AEP, the project was authorized to offer a one-time payment of $1,000 to each public employer for each participant hired. The payment was to be used to reimburse employers for break-in costs inherent in hiring persons for jobs for which they might not be fully qualified on the outset.

AEP established the following procedure for disbursement of these funds: upon appointing an AEP participant to a position, the public employer wrote the Project Director explaining the nature of the job, its title and duties. If funds were needed for on-the-job development, the employer explained such needs. If the Director was satisfied with the need for the funds, the project would pay $500 immediately and $500 more at the end of three months' employment.

OJD FUND REQUESTS

The $1,000 grant was not designed as an incentive for hiring AEP participants. However, interviews with both employers and employees indicate that in some cases, all other factors being equal, the on-the-job development grant tipped the scales in favor of the AEP applicant.

On the other hand, approximately half (52.7%) the jurisdictions hiring AEP participants have not requested the on-the-job development grant. It appears that in many cases where application for funds was made that the additional funds did influence the hiring of the participants.

TABLE 7

ON THE JOB DEVELOPMENT FUNDS

TOTAL ELIGIBLE PUBLIC EMPLOYERS:			186
Total from *East Coast:*	76	or	40.8%
Number Requesting OJD Funds:	40		
Percent of **Total East:**	52.6%		
Total from *West Coast:*	110		59.2%
Number Requesting OJD Funds:	48		
Percent of Total West:	43.6%		
Total Requesting OJD Funds:	88	or	47.3% (Of total eligible)

EXAMPLES OF OJD UTILIZATION

No special pattern emerged about either the type of jurisdiction which requested the money or the type of job it went for. Approximately half of the State job placements requested the funds.

No complaints were received that the funds were not adequate for their intended purpose.

Some who did not request it claimed too much paperwork would be required to get the $1,000 in the proper department applied to its designed purpose (in some jurisdictions, such payment would go into a general fund, necessitating complicated procedures to effect its proper allocation).

Examples of how OJD funds were utilized in some jurisdictions are presented below.

Applied Science Programmer:

One participant had been employed by a State Department of Public Works for six months. He was assigned to the Computer Systems Department within the agency. Most of his experience had been in computers, specifically in programming, which was now being applied to urban planning. His technical skills were more than adequate for the job. Yet some form of on-the-job training was necessary so that his computer background could be adapted to the field

of urban planning, as designed by the Department. His training consisted of weekly seminars conducted by his division head on job control language which is basically different from the computer languages used in his previous aerospace job. The training has aided him in terms of debugging and revising a program analysis of excess land use studies for rights-of-way in the State.

Pollution Environmentalist:

One participant had been hired in a growing Southern California community which had recently incorporated. His position was Environmentalist for the Port Authority controlled by the city. Although he was located within the central administration of the government, his job was basically technical, requiring extensive scientific research. During his first seven months, he conducted several impact studies on the environment and communications. His training for the job consisted of continuous daily sessions on the design and implementation of impact studies with key department heads to learn their requirements for planning and development.

Administrative Assistant:

Another AEP participant had been hired within the central administration of a medium size city to assist the city manager.

His position of administrative assistant covered a broad spectrum of assignments. However, his primary task was to concentrate on the operations of the Personnel Department. The city provided specialized training for him in the form of related reading materials, sessions with key personnel within the Department, review of local and Federal legislation on manpower, and on-the-job training in labor relations.

Administrative Analyst:

One AEP participant was hired as an Administrative Analyst as one member of a team effort for a large Western county. He was assigned to review and analyze the overall management of seventy (70) departments with 77,000 employees. (The Engineering Environmental Service Team is in charge of the management and budget policy analysis for the county). The AEP employee possessed management experience but required formal training geared to the specific operations of this county government. Specific training courses on "Staff Improvement Programs" were initiated by the Departmental Training Officer once a week for a two-month period. The purpose of the courses was to sensitize the study team to current management practices and what was desirable: effective and efficient management at lower costs.

Intermediate Planner:

A medium size city hired an AEP participant as a planner for the city planning department. His assignments centered on research and development tasks. Eventually his role will be environmental analyst. Continuous training was provided by the city at the University of California at San Diego. The AEP employee was enrolled in a program on environmental design. The employer chose this form of OJD rather than in-house training. His training through the AEP orientation and environmental courses taken at UC has enabled him to conduct studies on noise standards, research zoning practices, and to review various housing, fire, and sanitation codes for the county. This person had many years experience in research design, but had to focus on specific local level problems; noise control and environmental analysis.

Planner:

One city hired an AEP participant as a planner within its general planning department. He was assigned for seven months to provide information (through research and investigation) for the city manager on an updated basis. His industrial engineering background proved helpful in applying

his skills to municipal standards. The AEP employee spent several hours a day with key municipal employees. The city scheduled his training periods to allow him to continue his work in developing appropriate measurements for various research projects.

Environmental Specialist:

One AEP participant, hired in a county flood control district, was assigned to flood control and water conservation for the county with special emphasis on the coordination of laws pertaining to the environment. Orientation focused on trends in environmental control techniques. Special seminars were conducted which concentrated on approaches to coordinating all departmental levels of government.

Assistant Administrative Analyst:

One county loaned its key planning personnel to a non-profit economic development corporation. One AEP participant had been hired to work with the research division of the corporation to improve the general economic health of the county. The candidate was skilled in report writing and analysis of project operations. His training centered on real estate and industrial development to enable him to analyze local economic conditions. The entire project

was new to this government. The AEP candidate prepared a 'state of the art' digest which furthered the project's innovative potential.

Coordinating Assistant Manager, Public Employment Program (PEP):

Because of his planning and management background, one AEP participant was hired to work in the PEP division of a city's Department of Human Resources. His duties were to manage the operational programs and generate future programs, from planning stages to implementation. His responsibilities included supervising and training senior clerks and trainees on administrative control of PEP, devising techniques for program control, preparing Department of Labor reports and reporting to the city manager on a regular basis. He also coordinated all activities with the budget and audit departments. His on-the-job training focused on the operations of all city departments and their interrelationships. Training sessions were also conducted on civil service requirements and related personnel examinations. He also received orientation about federally funded manpower programs.

CONCLUSION

ORIENTATION

(1) From the universities' reports and the Project Director's experience, it appears that the orientation was a useful and desirable element of the AEP.

(2) The orientation stimulated participants' interest in working in local government (even to the extent that some held off taking private sector jobs, even though they were unemployed while waiting for public jobs to open).

(3) It provided participants with a special educational background that other applicants for public jobs often did not have--and therefore made them more attractive to hiring authorities.

(4) Orientation eased the adjustment to a new environment for those who obtained employment in the public service.

(5) As an alternative to regular on-going manpower training programs, AEP orientation programs proved a satisfactory approach for technical professionals committed to mid-career adjustments.

(6) The curriculum designed to 'sensitize' and 'familiarize' the candidates was appropriate since the majority now

claim they have a 'feel for politics' and are knowledgeable of the 'language of government'.

(7) The orientation provided a "reflective" setting for evaluating one's own capacity and ability to fill various local governmental positions - to learn where one might fit in.

ON THE JOB DEVELOPMENT

(1) Any financial assistance to local government facilitates hiring of non-residents.

(2) The OJD fund allotment provided by AEP is an advantageous method of supplying financial assistance to local governments because: a) cities are free to determine whether there is a need for this type of training fund, and b) these funds can be obtained with little or no "red tape".

(3) OJD funds work to increase consideration of candidates by employers because it 'sets them apart' from other applicants.

(4) More than half the eligible public employers (52.7%) determined that on-the-job development (a form of job training) was not essential to the hiring of AEP participants. This indicates the availability of OJD funds did not influence the hiring of the participant: these jurisdictions were obviously satisfied

with the applicant's qualifications and felt that the one-month orientation would be sufficient.

CHAPTER IV

THE DELIVERY NETWORK

EAST COAST PLACEMENTS

EEA Jobs*	JOB TITLE	LOCALE	Model Cities**
	Assistant Traffic Engineer	Richmond County, Georgia	
	Draftsman	Northeast City Gas Astoria, Oregon	
X	Project Director Solid Waste Disposal Study	Holyoke, Massachusetts	X
	Research Associate	Holyoke, Massachusetts	X

*EEA Jobs: An "X" to the left of placements reflects those jobs which are classified under the Emergency Employment Program.

**Model Cities: An "X" to the right of placements reflects those jobs which are located in jurisdictions with Model Cities Programs.

LISTING OF PUBLIC SECTOR PLACEMENTS

For West Coast AEP Participants
Placements as of April 30, 1972

EEA Jobs*	JOB TITLE	LOCALE	Model Cities**
X	Administrative Analyst II	Santa Clara County California	X
	Civil Engineer	Everett, Washington	
X	Administrative Assistant	Mayor's Office Fountain Valley, California	
X	Civil Engineer	Rock Island, Illinois	X
X	Administrative Assistant	Orange County, California	
X	Public Works Engineer	Bothell, Washington	
	Urban Scientist	Bellevue, Washington	
X	Administrative Assistant to the City Manager	Orange City, California	
	Budget Analyst	Hayward, California	
	Civil Engineer II	Wichita, Kansas	X
X	Administrative Assistant and Personnel Director	Mercer Island, Washington	
X	Pollution Environmentalist	Port Authority Simi Valley, California	X
	City Engineer	Prineville, Oregon	
	Staff Engineer	Communications Division County of San Diego California	X
	City Traffic Engineer	Wichita, Kansas	X

WEST COAST PLACEMENTS

EEA Jobs*	JOB TITLE	LOCALE	Model Cities**
X	Associate Civil Engineer	City of Simi Valley California	X
	President of Technical Institute	State of Kansas	
X	Planner	City of Simi Valley California	X
	Grant Coordinator	San Bernardino, California	
X	Federal Programs Coordinator	Snoqualmi School District Snoqualmi, Washington	
X	Assistant Analyst	Alcohol Safety Action Project Los Angeles County, California	
X	Administrative Assistant to Superintendent of Schools	School Department Auburn, Washington	
	Mechanical Engineer	Federal Civil Service San Diego, California	X
	Project Engineer	Department of Defense Federal Civil Service China Lake, California	
	Unknown	Federal Civil Service Veteran's Administration Wichita, Kansas	X
X	Water Quality Specialist	Idaho Water Administration Boise, Idaho	X
X	Assistant Administrative Analyst	Los Angeles County California	X
X	Transportation Planner	Mt. Lake Terrace, Washington	
	Civil Engineer	Juneau, Alaska	X

WEST COAST PLACEMENTS

EEA Jobs*	JOB TITLE	LOCALE	Model Cities**
	Civil Engineer I	State Highway Commission Topeka, Kansas (State)	
X	Fiscal Control Officer	San Diego County, California	X
X	Research Investigator	Oceanographic Council Seattle, Washington	X
X	Legislative Research Analyst	Seattle, Washington	X
	Planning Analyst	City of Wichita, Kansas	X
	Planning Analyst	City of Wichita, Kansas	X
	City Engineer	La Habra, California	
	Assistant Air Pollution Engineer	Sacramento State of California	
X	Project Coordinator for EEA	Personnel Department Santa Clara County	X
X	Research Coordinator and Planner	Enumclaw, Washington Enumclaw School District #216	
	City Demonstration Coordinator	Model Cities Program Wichita, Kansas	X
X	Administrative Assistant	Manpower Administration Seattle, Washington	X
X	Planning Aide	City of Anaheim Planning Division	
X	Planner	Planning Division City of Anaheim, California	
X	Statistician	Orange City, California	
	Electrical Engineer	Department of the Navy Corona, California Federal Civil Service	

WEST COAST PLACEMENTS

EEA Jobs*	JOB TITLE	LOCALE	Model Cities**
X	Program Coordinator II	City of Seattle, Washington	X
X	Contract Technician	San Diego County, California	X
	Environmental Specialist	Orange County Flood Control Division Santa Ana, California	
X	Assistant Air Pollution Engineer	City of Ventura, California	
	General Engineer in Management Analysis	Management Analysis Department U.S. Navy Construction Battalion Port Hueneme, California	
	Management Specialist	Tacoma Police Department Tacoma, Washington	X
	Chief of Management Analysis	Pay Board Washington, D. C.	
X	Associate Planner	Skagit County Planning Department Mt. Vernon, Washington	
	Project Engineer in Transportation	Golden Gate Bridge, Highway and Transportation District San Francisco, California	X
X	Planner II	King County Planning Department Seattle, Washington	X
X	Budget Analyst	King County Seattle, Washington	X
	Senior EDP Programmer	Muskegon County, Michigan Economic Development Program	
	Management Analyst	Mercer Island, Washington	
	Director of Physical and Social Sciences	Department of Public Works Chicago, Illinois	X

WEST COAST PLACEMENTS

EEA Jobs*	JOB TITLE	LOCALE	Model Cities**
	City Superintendent	City of Lakin, Kansas	
X	Senior Administrative Manager	Chief Administrator's Office Los Angeles County	X
	Program Manager	California Resources Development Center Sacramento (State)	
X	Analyst	Los Angeles County, California	X
X	Analyst	Los Angeles County, California	X
	Physical Scientist	Environmental Protection Agency, Federal Civil Service Edison, New Jersey	
X	Design Engineer	Wichita State University Kansas	X
	Broadcast Engineer	Steilacoom School District Steilacoom, Washington	
	Administrative Assistant	Orange County, California	
X	Research Investigator	Oceanographic Council Seattle, Washington	X
	EDP Programmer	Tacoma, Washington	X
X	Training Specialist	King County, Washington	X
X	Administrative Systems Analyst	Los Angeles, California Personnel Department	X
	Chief, Communications and Information Center	Department of Public Works Chicago, Illinois	X
X	Airport Accoustical Engineer	Port of Oakland Oakland, California	X
X	Utilities Coordinator	Bellevue, Washington	

WEST COAST PLACEMENTS

EEA Jobs*	JOB TITLE	LOCALE	Model Cities**
X	Administrative Assistant	City of Simi Valley California	X
	Criminalist	City of West Covina California	
X	Engineer Aide I	Renton, Washington	
	Facilities Planner	Kent School District Kent, Washington	
X	Assistant Administrative Analyst	San Diego, California	X
X	Assistant Mechanical Engineering Specialist	Department of Lighting Mechanical Engineering Division Seattle, Washington	
X	Assistant Administrative Analyst	San Diego Personnel Department San Diego, California	X
	Special Consultant	Department of Human Resources San Jose, California (State)	X
	Special Consultant	Department of Human Resources San Jose, California (State)	X
X	Administrative Analyst	Department of Community Development Pasadena, California	
X	Coordinator II	Office of Human Resources Seattle, Washington	X
	Consultant/Public Health Chemist	Orange County Health Department Santa Ana, California	
X	Administrative Analyst II	Santa Clara County California	X
	Construction Inspector Trainee	Los Angeles, California	X

WEST COAST PLACEMENTS

EEA Jobs*	JOB TITLE	LOCALE	Model Cities**
X	Personnel Analyst	Santa Clara County California	X
X	Senior Planner	Chula Vista, California	
X	Project Coordinator for EEA	Personnel Department Santa Clara County California	X
X	Mechanical Engineer Assistant	City Planning Department Los Angeles, California	X
	Systems Analyst	Harrisburg, Pennsylvania	
	Assistant City Auditor	City of Norwalk, Ohio	
X	Navigation Investigator	Department of Natural Resources Olympia, Washington (State)	
X	Administrative Aide	Department of Parks and Recreation Carson, California	
	Applied Science Programmer	Department of Public Works Sacramento, California (State)	
X	Junior Programmer	Department of Finance Santa Monica, California	
	Wage Analyst	State of Washington Seattle, Washington	X
X	Administrative Analyst	Valley Medical Center Santa Clara County, California	X
	Welfare Program Executive	Department of Public Welfare Harrisburg, Pennsylvania (State)	
X	Study Committee on Economic Development	King County, Washington	X
X	Study Committee on Economic Development	King County, Washington	X

WEST COAST PLACEMENTS

EEA Jobs*	JOB TITLE	LOCALE	Model Cities**
	Management Analyst	Federal Civil Service Fort Ord, California	
X	Job Developer	Department of Human Resources San Diego, California (State)	X
	Flood Control Specialist	Flood Control Division Los Angeles County, California	X
X	Proposal Writer	State Highway Department Los Angeles, California (State)	X
X	Job Developer	Department of Human Resources Department of Employment Los Angeles, California (State)	X
X	Administrative Analyst III	Santa Clara County	
	Draftsman	Northwest Natural Gas Astoria, Oregon	
	Special Consultant	Human Resources Division Department of Employment San Jose, California (State)	X
X	Unknown	County of San Diego	X
	Budget Analyst III	City and County of Denver Colorado	X

*EEA Jobs: An "X" to the left of placements reflects those jobs which are classified under the Emergency Employment Program.

**Model Cities: An "X" to the right of placements reflects those jobs which are located in jurisdictions with Model Cities Programs.

LISTING OF PRIVATE SECTOR PLACEMENTS

For East Coast Participants
As of April 30, 1972

JOB TITLE	LOCALE
Manager, Radar Systems	KMS Industries Newport Beach, California
Senior Staff Chemist	Sperry Rand Corporation Huntsville, Alabama
Director of Advertising and Corporate Planning	Levitt Multihousing Corporation Great Neck, New York
Chief of Unit Coordination	Boston University Medical Center Boston, Massachusetts
Product Engineer	Simplex Wire and Cable Hydrospace Systems Division Newington, New Hampshire
Manufacturing Engineer	Parker-Harrison Company Huntsville, Alabama
Unknown	Sperry Rand Corporation Huntsville, Alabama
Senior Engineer	AVCO(Research Laboratory) Everett, Massachusetts
Project Engineer	Northrop Corporation Norwood, Massachusetts
Systems Manager	Cardion Electronics Woodbury, New York
Engineer	Bell and Howell Pasadena, California
Engineer Spacecraft Integration	General Electric Company Kennedy Space Center
Plant Manager	Knitronics Corporation Lincolnton, North Carolina

EAST COAST PRIVATE SECTOR
As of April 30, 1972

JOB TITLE	LOCALE
Microwave Engineer	Ikor Corporation Burlington, Massachusetts
Marketing Manager	Blanchard Stebbins Manchester, New Hampshire
Senior Engineer/Software	Raytheon Company, Equipment Division Sudbury, Massachusetts
Mechanical Engineer	Alpha Industries, Inc. Woburn, Massachusetts
Junior Engineer	Seaboard Coastline RR Company Jacksonville, Florida
Senior Engineer	Vitro Laboratories Silver Spring, Maryland
Engineer	Cocoa Beach, Florida
Consultant	Cornell University
Unknown	Methuen, Massachusetts
Mechanical Engineer	Notronics Norwood, Massachusetts
Researcher	MIT Lincoln Lab Boston, Massachusetts
Unknown	Blue Cross-Blue Shield Concord, Massachusetts
Metrology Engineer	Litton Ship Systems Pascagola, Mississippi
Textile Production Engineer	Knitronics Knitting, Inc. Cherryville, North Carolina
Research Engineer	United Aircraft Research Laboratory Hartford, Connecticut
Marketing Representative	New York, New York

EAST COAST PRIVATE SECTOR
as of April 30, 1972

JOB TITLE	LOCALE
Teacher (General Science)	Jersey City, New Jersey
Unknown	Melville, New York
Salesman	Plumbing and Electrical Supply Salem, Massachusetts
Senior Digital Engineer	Total Computer Systems Waltham, Massachusetts
Development Engineer	Honeywell Radiation Lexington, Massachusetts
Operations Manager	Orlando, Florida
Manager	Ling-Temco Vought Langley Air Force Base
Management Consultant	Self-Employed Action, Massachusetts
Unknown	Hingham, Massachusetts
Maritime Investigator	Liberian Maritime Services New York, New York
Senior Engineer	PRD Electronics Calverton, New York
Engineer	Federal Electric Corporation Huntsville, Alabama
Television Technician Representative	A and S Department Stores Long Island, New York
Engineer	PRD Electronics Syosset, New York
Electrical Engineer	Bethpage, New York
Utility Metal Products Production Control Engineer	Utility Metal Products Company Beverly, Massachusetts

EAST COAST PRIVATE SECTOR
As of April 30, 1972

JOB TITLE	LOCALE
Supervisor	Computer Department Aerodine Burlington, Massachusetts
Industrial Engineer	Huntsville, Alabama
Assistant Manager	Birmingham, Alabama
Salesman	Nashua, New Hampshire
Technical Representative	Fraser Laundry Equipment Company Memphis, Tennessee
Distributor	Self-Employed Huntsville, Alabama

LISTING OF PRIVATE

PLACEMENTS

WEST COAST PLACEMENTS
As of April 30, 1972

JOB TITLE	LOCALE
Engineering Supervisor	Boeing Company Seattle, Washington
Systems Manager	Boeing Company Seattle, Washington
Engineer Supervisor	Western Gear Seattle, Washington
Senior Specialist in Systems	Boeing Company Seattle, Washington
Technical Engineer	Datsun Car Company Gardena, California
Product Assurance Requirements Coordinator	Lockheed Sunnyvale, California
Design Engineer	Bede Aircraft, Inc. Newton, Kansas
Tool Designer	Detroit Tool and Engineering Lebanon, Missouri
Real Estate Salesman	Upland, California
Associate Engineer	Boeing Company Wichita, Kansas
Chief Facilities Engineer	Computer Science Corporation Leavenworth, Kansas
Research and Development Engineer	Macotech Corporation Seattle, Washington
Air Pollution Control Engineer	Minnesota Mining and Manufacturing
Unknown	Bellevue, Washington
Systems Analyst/Programmer	Washington College Chestertown, Maryland

WEST COAST PRIVATE PLACEMENTS
As of April 30, 1972

JOB TITLE	LOCALE
Unknown	Boeing Company Pasadena, California
Engineer	Aeronca, Inc. Torrance, California
Engineer	Boeing Company Kent, Washington
Unknown	Mercer Island, Washington
Industrial Engineer	Beech-Nut, Inc. San Jose, California
Senior Engineer	Boeing Company Seattle, Washington
Associate Engineer	Boeing Company Wichita, Kansas
Plant Superintendent	Automation International, Inc. Charlotte, North Carolina
Design Engineer	Dubuque, Iowa
Engineering Librarian	Global Engineering Documentation Services Newport Beach, California
Unknown	North American Rockwell California
Senior Engineer	Boeing Company Seattle, Washington
Self-employed	Mercer Island, Washington
Member Technical Staff	California Institute of Technology Jet Propulsion Lab Pasadena, California
Engineer	Boeing Company Seattle, Washington

WEST COAST PRIVATE PLACEMENTS
As of April 30, 1972

JOB TITLE	LOCALE
Project Engineer	Litton Industries Culver City, California
Engineer	Boeing Company Seattle, Washington
Engineer	Unknown
Consultant	Bellevue, Washington
Dental Supply Salesman	Bellevue, Washington
Engineer	Boeing Company Seattle, Washington
Engineer	Boeing Company Wichita, Kansas
Consultant	George S. May Consultants Bellevue, Washington
Salesman	Southern Machine Tools Company Wichita, Kansas
Public Relations	Solitron Devices San Diego, California
Project Manager	Litton Industries Culver City, California
Technical Staff Member	North American Rockwell Los Angeles, California
Consultant	Self-employed Long Beach, California
Contractor	Spokane, Washington
Associate Scientist in Materials	Thiokol Chemical Corporation Brigham City, Utah
Senior Program Analyst	Sunnyvale, California

WEST COAST PRIVATE PLACEMENTS
As of April 30, 1972

JOB TITLE	LOCALE
Consultant	Self employed Wichita, Kansas
Shop Owner	Seattle, Washington

Appendix D

PERCENT DISTRIBUTION OF REMAINING UNEMPLOYED PARTICIPANTS BY TARGET AREA

As of April 30, 1972

WEST COAST UNEMPLOYED:

TARGET AREA	Number of Remaining Unemployed in AEP	Percent Distribution to Total Unemployed on West Coast
Seattle	6	21.4%
San Jose	7	25.0%
San Diego	5	17.8%
Los Angeles	4	14.4%
Orange County	0	-
Wichita	6	21.4%
SUBTOTAL:	28	100.0%

EAST COAST UNEMPLOYED:

TARGET AREA	Number of Remaining Unemployed in AEP	Percent Distribution to Total Unemployed on East Coast
Boston	28	50.9%
Long Island	9	16.3%
Huntsville	11	20.0%
Cape Kennedy	7	12.8%
SUBTOTAL:	55	100.0%

PERCENT DISTRIBUTION OF REMAINING UNEMPLOYED

As of April 30, 1972

TARGET GROUPS	Number of Remaining Unemployed in AEP	Percent Distribution to Total Unemployed
WEST Coast Participants	28	33.7%
EAST Coast Participants	55	66.3%
TOTAL UNEMPLOYED:	83	100.0%

Universe: 371

TOTAL NUMBER OF PLACEMENTS: 288

Percent Placements to Total Universe: 77.6%

TOTAL NUMBER OF REMAINING UNEMPLOYED PARTICIPANTS 83

Percent Unemployed to Total Universe: 22.4%

EDUCATIONAL ATTAINMENT OF REMAINING UNEMPLOYED

No Degree	13	15.6%
BS/BA Degree	50	60.2%
MS/MA Degree	16	19.2%
Ph.D	4	5.0%
	83	100.0%

PROFILE OF REMAINING UNEMPLOYED

PARTICIPANTS IN THE AEP

As of April 30, 1972

TARGET AREA And Number Unemployed	Years in Aerospace (Average)	AGE Average Years	At Entry Into AEP: Number of Months Unemployed (Average)
Seattle NO: 6	18 years	47	7 months
San Diego NO: 5	15 years	49	9 months
San Jose NO: 7	17 years	51	9 months
Los Angeles NO: 4	12 years	43	12 months
Orange County NO: 0	-	-	-
Wichita NO: 6	19 years	45	10 months
Boston NO: 28	15 years	43	7 months
Long Island NO: 9	18 years	47	9 months
Huntsville NO: 11	17 years	49	11 months
Cape Kennedy NO: 7	17 years	50	8 months
AVERAGE:	16.5 years	47.1 years	9.1 months

EDUCATIONAL LEVEL AND ORAL PANEL SCORES OF THE REMAINING UNEMPLOYED

As of April 30, 1972

TARGET AREA and Number Unemployed	Oral Panel Scores (Average)	EDUCATIONAL LEVEL: No Degree	BS	BA	MS	MA	Ph.D
Seattle NO: 6	84.2	-	2	1	2	-	-
San Jose NO: 7	79.1	1	1	2	-	2	1
San Diego NO: 5	79.1	-	2	3	-	-	-
Los Angeles NO: 4	84.8	-	2	1	1	-	-
Orange County NO: 0	-	-	-	-	-	-	-
Wichita NO: 6	57.5	2	2	2	-	-	-
Boston NO: 28	73.1	5	10	5	3	4	1
Long Island NO: 9	68.9	1	4	2	1	1	-
Huntsville NO: 11	91.0	4	5	1	-	-	1
Cape Kennedy NO: 7	81.3	-	2	2	1	1	1
TOTALS:	77.6 Average Score	13	31	19	8	8	4

Appendix E

GLOSSARY OF TERMS

ADAPT - Aerospace and Defense Adaptation to Public Technology; the title given to the Orientation program conducted by the Department of Urban Studies and Planning of the Massachusetts Institute of Technology.

AEP - The Aerospace Employment Project; The official title of the project funded by the Departments of Labor and Housing and Urban Development. "Project" for short.

AOP - Aerospace Orientation Program; the title given to the Orientation program conducted by the College of Environmental Design of the University of California at Berkeley.

LEAGUE OF CITIES - CONFERENCE OF MAYORS,INC. - Refers to the organization implementing the contract with the Departments of Labor and Housing and Urban Development.

NEWSLETTER - Monthly publication of the AEP which was sent to all candidates keeping them informed of current developments.

ORIENTATION - One month course of study at the University of California, Berkeley, and the Massachusetts Institute of Technology familiarizing participants with the officials, institutions and problems of local government.

PARTICIPANTS - Refers to those ex-aerospace scientists and engineers accepted by the AEP who completed the Orientation.

PLACEMENTS IN THE PRIVATE SECTOR - Refers to participants who found jobs in private industry - in either "New" positions or with their "Previous" employer.

PLACEMENTS IN THE PUBLIC SECTOR - Refers to participants who obtained jobs at the city, county, or State government level.

RECRUITMENT PHASE - That phase of the AEP in which ex-aerospace scientists and engineers were urged to apply to the Project.

SELECTION PHASE - That phase of the AEP in which ex-aerospace scientists and engineers were interviewed and selected to participate in the Project and attended the Orientation.

SELF-HELP ORGANIZATIONS - Refers to groups of AEP participants who were organized by target area to investigate local job opportunities and serve as a communications link with the AEP office.

SUB-CONTRACTORS - Refers to the Department of Urban Studies and Planning at the Massachusetts Institute of Technology and the College of Environmental Design at the University of California, Berkeley.

TARGET AREAS - Refers to those areas of the country with exceptionally high rates of unemployment from which AEP participants were chosen: Boston, Massachusetts; Long Island, New York; Cape Kennedy, Florida; Huntsville, Alabama; Wichita, Kansas; Seattle, Washington; San Jose, San Diego, Los Angeles, and Orange County, California.

UNIVERSE - Refers to the number of participants in the Project. The current number is 371.

DOCUMENT RESUME

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IDENTIFIERS	Career Awareness; *Career Exploration

ABSTRACT

This description of the curriculum development and design for an introductory two-semester Grade 10 curriculum for marketing and distributive occupations includes program objectives, a course outline, and a program rationale. Occupational orientation in the first semester precedes individualized exploration of careers in distributive occupations during the second semester. This curriculum is intended to provide for earlier and greater career awareness by students in distributive vocational education and to develop job entry skills. Preliminary project procedures include: (1) surveys of the business community and high school student body to identify job competencies and vocational needs, (2) a comparative analysis of this information, (3) collection of pertinent data from the Connecticut Department of Labor, and (4) the gathering of information concerning student job preferences for occupational guidance purposes. This state and locally funded goal-oriented curriculum design is recommended for adoption as a pilot project in 1973 at Wolcott High School in Connecticut, with successful implementation leading to state-wide adoption by local school systems. (AG)

A [illegible] FOR A
CAREER EXPLORATION PROGRAM IN
THE [illegible]
FOR THE TENTH GRADE [illegible]
STUDENT.

A CURRICULUM DESIGNED FOR A CAREER EXPLORATION PROGRAM IN THE DISTRIBUTIVE OCCUPATIONS FOR THE TENTH GRADE SECONDARY STUDENT.

FINAL REPORT

Thomas C. Herman
Wolcott High School
457 Bound Line Rd.
Wolcott, CT 06716

June 30, 1972

CONNECTICUT STATE DEPARTMENT OF EDUCATION
DIVISION OF VOCATIONAL EDUCATION
RESEARCH AND PLANNING UNIT
HARTFORD, CONNECTICUT

A CURRICULUM DESIGNED FOR A CAREER EXPLORATION PROGRAM IN THE DISTRIBUTIVE OCCUPATIONS FOR THE TENTH GRADE SECONDARY STUDENT

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HARTFORD, CONNECTICUT

TABLE OF CONTENTS

Section	Page
Preface	1
Summary	3
Background	4
Methods	6
A Distributive Education Curriculum for The Tenth Grade Secondary Student	8
Part I -- Introduction to Distributive Careers	10
Part II - Individualized Exploratory Career Instruction in The Distributive Occupations	17
Conclusions	24
Recommendations	25
Bibliography	26

PREFACE

With funds provided by the State of Connecticut and local municipalities, high school distributive programs have been offered for students in grades eleven and twelve, including classroom instruction and cooperative training station experience.

This curriculum has been developed for the tenth grade student and with the philosophy that distributive education is a program of studies that includes specific areas of subject matter. The content of the instructional program is derived from the functions of marketing as they relate to the distributive occupations and the occupational objectives of the student.

This curriculum was developed only after the untiring efforts, direction and guidance of many in the teaching profession. Appreciation and acknowledgment is expressed to the following individuals:

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Harrisburg, PA

John S. Monagan
Member of Congress
Fifth District
State of Connecticut

SUMMARY

This report is the result of a multiplicity of effort to help Distributive Education achieve its primary objective, to provide well qualified and well trained personnel for distribution. This curriculum report considered student need, the competencies required by the distributive occupations, the business community as well as State and local labor needs. This direction was required in order that the distributive occupational career oriented students would be provided with the opportunity to explore those functions of marketing for which they were best suited.

The results of the project provide for these students. It provides for a two part tenth year curriculum as necessitated by the exploratory nature of the program. Part I would be conducted during the first half of the school year and would introduce the student to the variety of careers in distribution. Part II would follow to the conclusion of the school year and would allow the students to individually explore, within a predetermined framework, those distributive occupations which are best for them.

When this curriculum is instituted as written and recommended, it will provide for earlier awareness by students of the distributive occupations and provide for greater success in mastering the competences of the marketing functions which is required for job entry.

BACKGROUND

The purpose of this report is to develop a curriculum for a third year course offering in Distributive Education starting with Grade 10 since students need the opportunity to make a decision for careers in management, marketing and merchandising at the sophomore level of their high school educational experience.

Some basic objectives of the project are:

a. To allow students to experience Vocational Distributive Education at an earlier time in their high school career.

b. To encourage young people to decide earlier in their high school studies on a vocational career.

c. To add to the students successful vocational educational experiences and thereby enhance their prospects of a successful vocational career in the distributive occupations.

d. To allow earlier recruitment of students for Distributive Education which will help students in their decision making process of a career objective while still in high school.

e. To afford students greater experience in Distributive Education resulting in more conscientious, competent students who are better prepared for the competative fields of manage-

ment, marketing and merchandising.

f. To implement an academic program of instruction for training in career objectives relative to management, marketing and merchandising.

This report justifies a tenth grade program of distributive education to be made available to students desiring adequate preparation for the fields of marketing and distribution. The new plan will allow the student an earlier familiarization with the distributive occupations. There has been a noticeable trend in this direction in the State of Connecticut and in the nation.

METHODS

The methods and procedures used in carrying out this project are herein described. Included are the various services used in making this report available.

a. A survey of the business community was made in order to identify specific additional competences which could only be achieved by a three year Distributive Education Program.

b. A survey of the high school student body was made to gather information which identified their needs and could best be achieved by the competences identified in our survey of the business community.

c. A comparative analysis was conducted based on the information provided by the business community and the high school student body which would help in the development of a curriculum that would best serve the high school students and the business community.

d. The Connecticut State Department of Labor provided information indicating specific areas of marketing specialization which were utilized in the preparation of a Tenth Grade Distributive Education Curriculum.

e. The Guidance Department of Wolcott High School

provided information concerning student job preferences as indicated by the Kuder Preference Test.

The methods used in the preparation of this report were selected in order that the career oriented student would be served. The exploratory method can provide this student with the best possible training and experience prior to vocational job entry.

A DISTRIBUTIVE EDUCATION CURRICULUM

FOR THE TENTH GRADE SECONDARY STUDENT

FINDINGS

There are abundant vocational opportunities available for men and women in distributive occupations to carry out the functions of distribution. After considering the objectives of this report and analyzing the findings gathered within the scope of the methods and procedures previously described, it is the belief of this writer that only through an earlier awareness during a students formal educational experience of the distributive occupations available to him will distributive education meet its educational responsibilities. That is, to prepare each student-trainee for the distributive occupation which he has selected as his job goal.

The Tenth Grade D. E. Curriculum provides for early awareness of distributive occupations and an exploratory career opportunity study of specific occupational opportunities according to the competancies needed in the occupation.

The Tenth Grade D. E. Curriculum, as proposed, would be offered for students with no previous D. E. background. Since no D. E. is offered the students previous to Grade 11 at Wolcott High School and presumably in school systems throughout the State this curriculum would in essence be offered to all tenth

grade secondary students.

Since this would be an exploratory curriculum of the careers offered in the distributive occupations, it would necessarily be designed and offered in two parts, Part I to offer for one-half of the school year formal classroom instruction within the job opportunities which await the students in distribution followed by one-half of the school year involved in individualized exploratory career investigation of those careers or related careers which were studied and discussed during the formal classroom instruction conducted earlier in the year.

DISTRIBUTIVE EDUCATION CURRICULUM

TENTH GRADE DISTRIBUTIVE EDUCATION CURRICULUM

Part I. Introduction to Distributive Careers

To be offered during the first half of the school year for tenth grade secondary school students.

I. Career Decision and Influencing Factors

A. The students self-evaluation affects his educational and career success.
1. Personal inventory
2. Updating information on available programs

B. Planning a Career
1. Future plans and what affects them
a. What are your goals and career objectives
b. Worthwhile job experiences
c. Career Education
d. Knowing ones preferences, strengths and weaknesses.
e. Identifying to what you are best suited.
2. Job success has requirements
a. Preference for the job
b. Ability to do the job well
3. Evaluating a job
a. Good working conditions
b. Education and job experience should be useful in the work
c. What type of job security is apparent?
d. Promotional possibilities.
4. Competencies required for employment
a. Aptitudes
b. Determination
c. Intelligence
d. Physical make-up
e. Temperament
f. Personality
g. Loyalty
h. Cooperation
5. What can be expected from a job in distribution
a. Work for which prepared
b. Need for trained personnel
c. Good salaries available
d. Initiative and results determine success
e. Advancement available

II. Retailing Jobs

A. Positions available to the career minded

1. Sales Promotion
    a. Advertising
        1a. manager
        2b. media specialist
        3c. copy writer
        4d. artist
    b. Display
        1a. manager
        2b. window display
        3c. interior display
    c. Press Publicity
    d. Mail Order
2. Merchandising
    a. Salesperson
    b. Stock controllers
    c. Merchandise buyers
    d. Assistant merchandise buyers
    e. Department manager
    f. Manager
3. Operation of story
    a. Clerk - shipping, receiving and stock
    b. Maintenance department
    c. Supervisor of clerks
    d. Director of maintenance
    e. Store operations supervisor
4. Finance Control
    a. Cashier
    b. Bookkeeper
    c. Credit clerk
    d. Payroll clerk
    e. Credit manager
    f. Data processing coordinator
    g. Controller
5. Personnel
    a. Personnel clerk
    b. Training director
    c. Safety director
    d. Personnel director

B. Characteristics of Retailing Employment

1. Stable employment
2. Good position
3. Variety of jobs available
4. Income appealing
5. Advancement
6. Progressive fringe benefits
7. Reasonable hours

C. Personal Qualifications

1. Job experience
2. Age

3. Career training requirements
4. General education requirements

D. Retail Business as listed by kinds of merchandise sold
1. Men's and boy's apparel
2. Appliance
3. Pharmacies
4. Groceries
5. Furnishings for the home
6. Furniture
7. Stationery
8. Sporting goods
9. Hardware
10. Prepared foods
11. Magazines and books
12. Jewelry and gifts

E. Retailing stores as listed by type of organization
1. Department Stores
2. Chain stores
3. Specialty stores
4. Variety stores
5. Discount stores
6. Direct selling establishment
   a. Mail Order
   b. Vending
   c. Door-to-door

III. Personal Selling Jobs

A. The advantages of selling
1. Good income
2. Meet various types of people
3. Work interesing
4. Secure position
5. Opportunity to help others
6. Unlimited advancement available

B. Types of Personal Selling
1. Consumer Salesmen
   a. Retail salesman
   b. Specialty salesman
   c. Door-to-door salesman
   d. Route salesman
2. Merchant Salesmen
   a. Pioneer salesman
   b. Dealer-service salesman
   c. Wholesale or jobber salesman
   d. Detail salesman

3. Industrial Salesmen
    a. General industrial salesman
    b. Sales engineer
    c. Service salesman

C. Desirable Qualifications
    1. Knowledge of mechanics of selling
    2. Pleasant appearance
    3. Attracted to people
    4. Desire to sell
    5. Healthy
    6. Friendly

IV. Wholesaling Jobs

A. Positions available
    1. Sales
        a. Service wholesaler
        b. Franchising wholesaler
        c. Rack jobber
        d. Limited function wholesaler
    2. Stock work
        a. Receiving clerk
        b. Shipping clerk
        c. Packer
        d. Truck driver
        e. Stockman
    3. Office work
        a. Secretary
        b. Telephone sales clerk
        c. Typists
        d. File clerk
        e. Accountant
        f. Bookkeeper

B. Qualifications Desired
    1. Career education
    2. Job experience
    3. Career training
    4. High school education

C. Characteristics of Wholesaling Employment
    1. Income
    2. Advancement available
    3. Stimulating
    4. Salesman is his own boss
    5. Opportunities within the industry.

V. Service Industry Jobs

A. Positions available
1. Business Services
a. Advertising Agency
1a. copy writer
2b. artist
3c. art director
4d. account executive-salesman
5e. manager
b. Private employment agencies
1a. office clerk
2b. testing interviewer
3c. manager
c. Telephone answering services
1a. telephone operator
2b. service salesman
d. Window display service
1a. designer
2b. arranger
2. Personal services
a. Barber and beauty shops
1a. attendants
2b. owner-operators
b. Dry cleaning and laundry
1a. office clerk
2b. delivery man
3c. route supervisor
4d. manager
c. Photographic Studio
1a. clerk
2b. secretary
3c. assistant
4d. photographer
3. Repair Services
a. Technician
b. Tradesman
c. Salesman
d. Clerk
e. Supervisor
f. Manager
4. Financial Services
a. Banks
1a. window teller
2b. cashier
3c. head cashier
4d. messengers - runners
b. Insurance Companies
1a. clerk
2b. salesman
3c. adjuster
4d. sales manager
5e. office manager

5. Leisure Time and Recreational Services
    a. Health Salons
    b. Bathing beaches
    c. Golf clubs
    d. Amusement parks
    e. Theatre operations
6. Food Services - Restaurants
    a. Kitchen work
    b. Cashier
    c. Waiters and waitresses
    d. Manager

VI. Characteristics Required for Success

A. Employee Promotion Necessities
    1. Personality qualifications
        a. Strong desire to succeed
        b. Ability to follow instructions
        c. Willingness to learn
        d. Loyalty
        e. Adjustable
        f. Can inspire confidence
        g. Cooperative
        h. Creative ability
        j. Drive
        k. Leadership
    2. Experience
        a. Amount and variety of experience
        b. Personal success background
    3. Education
        a. Needed for future advancement
        b. Executive positions require higher education

VII. Searching and Researching for that First Full Time Job.

A. What to look for when selecting a prospective employer
    1. Opportunity
    2. Educational programs
    3. Type of work required
    4. Present employees
    5. Salary
    6. Economic future of the company
    7. Industry in which the company is involved.

The first half of the Tenth Year D. E. Curriculum which has just been outlined, will give the student sufficient background in distribution in order to increase

student interest and desire to begin to search out for a career in distribution.

With the information provided in class the tenth grade student can now engage in more detailed and rewarding exploratory individualized instruction on those distributive occupations which he most desires and needs for a successful future in Distributive Education and job entry preparation within the distributive occupations.

DISTRIBUTIVE EDUCATION CURRICULUM

TENTH GRADE DISTRIBUTIVE EDUCATION CURRICULUM

Part II. Individualized Exploratory Career Instruction in the Distributive Occupations

To be offered during the second half of the school year for those tenth grade secondary students who have been enrolled in the Tenth Grade Distributive Education program since the beginning of the school year.

This part of the curriculum program will offer the Distributive Education student the opportunity to become completely familiar with a majority of the distributive occupations and more importantly with those occupations which best meet his vocational needs.

I. Product Buying and Pricing

A. Subject Matter to be Included
1. The careers in buying
2. The buyers decision to choose a product.
3. The vendors to be considered by the buyer.
4. Buying and its negotiable aspects
5. The variety of merchandise to be offered.
6. The budget within which the buyer must function.
7. The turnover of stock
8. The strategy behind successful pricing.

B. Achieveable Goals in Performance
1. Determine the key characteristics of a given new product and its worth as a possible stock item.
2. Identify the most useful, from a list of suppliers and their services, to a particular buyer in a career-interest business.
3. Construct a merchandise plan for a women's apparel shop for a six-month period from planned sales figures and other supporting information supplied. Justification for each item's figures will be required.
4. From a list of perpetual inventory systems and specific merchandise, select the one that is the most economical to operate, and explain why.
5. For each article given, identify the pricing technique that would result in the largest volume of sales.

6. Suggest a specific course of action for improvement in a situation where a department is experiencing a poor rate of turnover.
7. Given a series of advertisements and a list of pricing factors, identify two ads that best exemplify a particular pricing strategy.

II. Transportation and Product Distribution

A. Subject Matter to be Included
1. Careers in transportation, traffic and product handling.
2. Documents used in product distribution
3. Receiving procedures
4. Transportation documents
5. Motor carriers, rail carriers, freight forwarders, and other carriers.
6. Specialized transportation services
7. Containers, boxes and cartons
8. Shipping procedures
9. Merchandise handling
10. Warehouse operations

B. Achieveable Goals in Performance
1. Prepare an invoice and all related merchandise handling documents from a given purchase order and a certain inventory of merchandise.
2. Prepare a bill of lading with perfect accuracy from a previously determined shipment of merchandise and routing information.
3. Given an incoming shipment, prepare a perfect receiving report.
4. Identify and describe the uses of the more common kinds of price tickets.
5. Determine the appropriateness of using motor freight as measured by the four transportation factors from a list of given commodities to be shipped.
6. Given a list of commodities to be shipped, select those that could most appropriately be shipped by rail, by freight forwarder and by other carriers (specify) as measured by the four transportation factors.
7. Determine the most appropriate package for a list of given items to be shipped and indicate how the item should be packed using the most effecient and economical method.
8. From a list of items supplied, identify a suitable method of storage and the most appropriate methods of moving the merchandise from one location to another.

III. Advertising

A. Subject Matter to be Included.
1. The meaning of advertising to each of us.
2. The advertising media.
3. The illustrated advertisement
4. The written advertisement
5. Direct mail advertising
6. Planning the advertising campaign
7. Initiating the advertising campaign
8. Selling advertising space and time.
9. Measuring the effectiveness of advertising.

B. Achievable Goals in Performance
1. Identify and classify individual advertising media with major groupings of advertising media.
2. With information and selling points of a product, plan and write a headline, a subhead, and body copy for one effective newspaper advertisement.
3. A direct mail promotion requires a mailing list, develop such a list.
4. Design a direct mail envelope and letter that indicates your knowledge of the sales aim and audience and attracts attention, builds interest and desire, creates conviction, and gets action.
5. Set goals, determine methods of promotion, and select advertising media for the promotion campaign of a new consumer product.
6. Plan an advertising campaign, prepare layouts and write copy for the newspaper ads for a health studio or other service business.
7. Plan and prepare a sales presentation to a prospective radio advertiser for a given product.
8. Measure a given advertisements effectiveness by applying the triple associates test method.

IV. Promotion and Display

A. Subject Matter to be Included
1. Opportunities in promotion and display
2. Types of displays
3. Designing and judging displays
4. The know-how of display creation
5. The application of design
6. Types of materials used in displays
7. Promotion in sales
8. Public relations and publicity

B. Achieveable Goals in Performance
1. Be able to determine upon sight the following types of displays, open, closed, buildup, shadow box, and shelf.

2. Given a window display, judge its effectiveness using a display rating sheet.
3. Identify the outstanding design components of a given display.
4. Specify the uses of a list of given available display materials.
5. Given merchandise and a list of available display materials, select the most appropriate materials to be used in that display.
6. From a display provided which includes space, merchandise, and available materials, construct an appealing display that has sales power.
7. Select those promotion techniques that will sell the maximum amount of products at a profit from a supplied group of promotional techniques, a group of products and a store location.
8. Prepare a publicity release for the store opening of a particular retailer.
9. Plan a public relations program to promote good relations with employees, customers and the community for a specific business firm.

V. Introductory Salesmanship

A. Subject Matter to be Included
1. Importance of selling
2. The how of making a sale
3. Understanding prospects and customers
4. Product knowledge put to use
5. The sales opening
6. Demonstrating effectively
7. Overcoming customer objections
8. Closing the sale
9. Improving yourself in sales

B. Achieveable Goals in Performance
1. Determine the amount of selling effort that will be needed to close the sale of a given product.
2. After being presented with a sales conversation between a salesman and a customer, determine at what points the customer reaches the following stages of the sale: (1) attention, (2) interest, (3) desire, (4) conviction, and (5) action.
3. Given a sales demonstration, evaluate the approach, the the main body of the presentation, and the closing.
4. Determine which of the five buying decisions must be made before a sale can proceed after being given a list of selling statements.

5. From a list of prospect responses to sales presentations, distinguish between excuses and the objectives.
6. Identify the possible buying signals from a list of customer responses.
7. Develop a complete sales presentation for a given product or service.
8. Given a list of personal qualities, indicate the ones a successful salesman should possess, and then explain why each is important to his career.
9. Conduct a self-evaluation in terms of a sales personality.

VI. Professional Salesmanship

A. Subject Matter to be Included
1. Selling environment
2. Types of selling
3. Retail salesmanship the creative way
4. Industrial and wholesale selling
5. Determining prospective customers
6. Self-management in selling
7. Analyzing and improving sales performance

B. Achieveable Goals in Performance
1. Given a product of your choice, and a specific marketing mix, select and justify a channel of distribution.
2. Determine a specific product and diagram the channels of distribution from the producer to the ultimate consumer.
3. Develop a selling strategy which includes the channels of distribution and the types of salesmen needed to sell the product in this market as determined from a given product with estimated market demand supplied.
4. Prepare a list of possible objections that might be raised by a customer for your product, and prepare answers to these objections.
5. A telephone customer has a question or a complaint which is specific, determine a basis of understanding the customer's point of view and settle the complaint to the mutual satisfaction of the business and the customer.
6. Given a product, prepare an approach designed to attract the customer's attention and gain his interest.
7. Identify and qualify a list of prospects for your product.
8. Using the facts and information obtained about your product, prepare a sales presentation.

VII. Services Provided for Customers

A. Subject Matter to be Included
1. Trends in customer services
2. Credit as a customer service
3. Credit and collection procedures
4. Merchandise handling services
5. Accommodations for customers
6. Information and advice for customers
7. Shopping conveniences
8. The public relations of customer services

B. Achieveable Goals in Performance
1. Distinguish the customer services used to support a sale of a product, and those that are profit centers from a list of customers services provided.
2. Identify and classify the customer services provided in your locality by distributive businesses.
3. List some of the primary conditions for each type of credit plan offered to customers of business firms.
4. Design and implement a collection procedure to gain payment from a given delinquent customer.
5. Identify the accommodation services provided by a given marketing firm.
6. Identify the merchandise handling services provided by an area marketing firm.
7. Given a retailer, a wholesaler, and a manufacturer, identify the informational and advisory services that each might extend to customers.
8. Select several different types of retail stores and then identify the customer shopping conveniences provided by each.
9. Identify the types of users of rental equipment and determine the sources of retail services in your community.

VIII. Wholesaling

A. Subject Matter to be Included
1. Wholesaling as a marketing function
2. Wholesalers add value to products
3. Opportunities in wholesaling
4. Development of customer services
5. Physical distribution
6. Product line planning
7. Promotion of product line
8. Specialization in wholesaling
9. Wholesalings future in the marketing mix

B. Achieveable Goals in Performance

1. Locate and describe the number and type of wholesale firms doing business in your area. Determine the total number of people employed in those firms.
2. From a wholesaler's advertisements in trade journals or magazines supplied, identify the type of service promoted and explain how this service adds value to a given product.
3. Given a wholesale route salesman, identify and classify his service and his selling activities.
4. Recognize merchandise aids provided by a given wholesaler, and identify those aids that contribute directly to the selling process.
5. Identify the sources of data that may be used in product planning and specify the method used to evaluate each source as it applies to a given wholesale firm.
6. A wholesaler has a potential private label product, identify the steps taken to develop the product and market it.
7. Identify the methods used to check and record an incoming shipment and the types of materials handling equipment used to store goods and pick orders of a given large wholesaler.
8. Given a wholesaler, identify the techniques, list the media, and describe and evaluate his total promotion strategy.
9. List the type or types of wholesaling specialists best suited to operate in each environment from a given group of marketing transactions.
10. Evaluate your own skills, desires and aptitudes, and prepare an employment application form and covering letter for a wholesaler.

CONCLUSIONS

The curriculum of the tenth year is arranged to give the student an understanding of what marketing and distribution comprises. The student would be taught the various types of marketing organizations and their functions in our distribution system.

This tenth year curriculum is intended also to give the student the knowledge of the many positions available in the broad areas of distribution. It is at this time that the student becomes aware of personal requirements for the many positions available. The student has had the opportunity to explore the careers in distribution and is now equipped and prepared to make a choice of job for a vocational career and still have sufficient educational years ahead to fully prepare for a distributive occupation.

RECOMMENDATIONS

This Tenth Grade Distributive Education Curriculum is the plan that will best meet the needs of the distributive education student. It leads the student to the achievement of competencies necessary for initial employment and offers entirely new occupational opportunities. This means that the individual student will qualify for the distributive occupations according to his capacity for vocational development and the earlier maturation of his occupational objective will improve upon the success story of secondary vocational distributive education graduates.

With these improvements for student success in Distributive Education in mind, it is hereby recommended that the Wolcott Board of Education initiate this proposed Tenth Grade Distributive Education Curriculum Report into the secondary school curriculum to begin with the school year 1973-74.

It is further recommended that the State Department of Education designate this curriculum as a pilot project to be offered in the secondary school of the Town of Wolcott for the school year 1973-74 with success leading to state wide adoption by other school systems.

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