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## ABSTRACT

This research study reports on the effectiveness with which the New Educational Program (NEP), a modification and refinement of the Job Corps Programmed Learning System, can provide effective learning experiences for underachieving adolescents and adults in various settings, including two juvenile detention facilities, a ninth grade class of underachievers, an MDTA skills center, and two out-of-school Neighborhood Youth Corps Programs (NYC). Program achievement is measured by achievement tests, quality of participation, and other outcomes indicative of achievement. The results vary depending upon the site, but some significant measure of success is achieved in all sites. On the average, students gain 9 grades in reading and 7 grades in math during their first three months. The best results are reported from one of the NYC programs in which the gain is 1.9 grades in reading and 2.12 in math after nine months' participation. About 45 percent of the students in the NYC program either use NEP credits to gain a high school diploma, or have passed the GED while enrolled in this program. This project is found to be an effective educational component in a variety of programs concerned with academic underachievers. The curriculum changes made based on experience in the unmodified NEP version are found to increase the NEP's effectiveness. (Author/AM)

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A STUDY OF THE EFFECTIVENESS OF THE  
GRAHAM ASSOCIATES' DEMONSTRATION  
PROJECT ON EDUCATION PROGRAMMING  
IN MANPOWER TRAINING PROJECTS  
by

Regis H. Walther & Margaret L. Magnusson

FINAL REPORT

May, 1975

U.S. DEPARTMENT OF HEALTH,  
EDUCATION & WELFARE  
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## SUMMARY

This a research study of a demonstration project in which the Graham Associates (GA) attempted to show that their New Education Program (NEP) could provide effective learning experiences in a variety of situations outside the schooling mainstream. NEP, an adaptation and refinement of the Job Corps Programmed Learning System, was used and researched in two Neighborhood Youth Corps programs (one in Long Beach and one in Spokane), in two juvenile detention facilities (one minimum, and the other maximum security), in a class of underachieving ninth graders, and in an MDTA skills center.

### Study design

The evaluative data consisted of reports on each NEP student on enrollment, during enrollment and on termination from the NEP. The students were given reading and math achievement tests on entry and at three-month intervals for a maximum of three retests. Teacher reports were obtained on entry, at the end of each month of participation, and at time of termination. Students' views of NEP were obtained after the program had been in operation for three months.

These data, together with observations of teachers and of the demonstration and research staff permitted the application of the following achievement criteria:

- Improvement in reading and math achievement test scores
- Quality of NEP participation
- Outcomes or sequels to NEP participation indicative of achievement.

Data collection began in the fall of 1973 and ended in 1974 with 528 subjects included in the study. The average school grade completed in the six study sites ranged from the eighth to the eleventh grade with the average for the total study group about 9.5 grades. The average age ranged from 15 to 18 for all sites except the MDTA Skills Center which was substantially higher (25.3 years). The juvenile detention sites were 100 percent male while the MDTA Skills Center had 75 percent females. The other three sites had about an equal number of each sex. The majority of the students were white, but substantial proportions were black or Chicano. The percentage of whites ranged from 84 percent for the 9th grade class to 35 percent for Long Beach. The percentage of blacks ranged from 45 percent for Long Beach to 2 percent for the 9th grade class. The percentage of Chicanos ranged from 35 percent for the MDTA Skills Center to 8 percent for Spokane.

### Results

The results varied depending upon the site but some significant measure of success was achieved in all sites.

#### Juvenile detention facilities

A significant gain in both reading and math test scores was achieved at the end of three months (about three fourths of a grade level). The progress did not continue during the second three month period. This lack of progress was probably due to the fact that students who stay in detention facilities have poorer motivation than those who are released early. Nevertheless the NEP program would be strengthened if its appeal to such students could be improved.

#### Ninth grade class

Since the NEP program was scheduled for only one semester at this site, only one retest was possible. The gains in reading averaged a full grade level while the gains in math were only

.4 grades reflecting perhaps, the greater interest of the teacher in the reading program. At this site the same teacher taught both reading and math.

#### MDTA Skills Center

The primary focus of this site was to prepare participants for jobs and only a small number stayed at the Center long enough to be retested. All of the retested students were in the Math Program and at the end of three months they averaged a gain of one grade level. The quality of the participation of students who were not retested appeared to be good because this site had the highest average ratings by the teachers of student interest and student progress.

#### Two NYC-2 programs

The Long Beach and Spokane NYC-2 programs provided solid evidence for NEP effectiveness. Average progress during the first three months of participation was almost one grade level for both programs with an additional one half of a grade for the second three month period. In Long Beach, the only program which was able to test students a third time, the rate of progress continued with a little over a half year gain during the third three month period. The students who participated in NEP for nine months and were tested three times, gained an average of 1.9 grades in reading and 2.2 grades in math.

Another possible measure of program effectiveness, which is only relevant to the two NYC-2 programs, is its holding power. In both Long Beach and Spokane, the NEP demonstrated good holding power. Students who left the program before being retested left primarily because they had completed high school, passed the GED or had obtained a job.

The two NYC-2 programs were also exceptionally successful in helping the students complete high school or pass the

GED, with the percentages ranging from about 43 percent in Long Beach to about 53 percent in Spokane. This high rate of success was due in large part to the arrangements made with local school authorities for the crediting of completed NEP units toward a high school diploma.

It was concluded that the New Educational Program developed by Graham Associates is effective in providing remedial education to underachieving adolescents and adults. NEP had been used in an earlier demonstration project and the design had been modified based on what was learned from the earlier project. The revisions in the design were found to make NEP more effective. Several ways in which NEP might be improved are discussed in the body of the report.

I

INTRODUCTION

In the fall of 1973, the Graham Associates (GA) of Walnut Creek, California, undertook a project designed to demonstrate that their New Education Program (NEP) could provide effective learning experience to persons in a variety of situations outside the schooling mainstream. This project grew out of a similar undertaking in 1972 (NEP-1) in which NEP was used in four California Neighborhood Youth Corps programs. In the second project (NEP-2), the subject of this report, NEP was used in two Neighborhood Youth Corps programs (one in California and one in Washington), in two juvenile detention facilities (one minimum, and the other maximum security), in a class of underachieving 9th graders, and in an MDTA skills center.

NEP is based on the Job Corps Programmed Learning System, materials from which provide its core curriculum. NEP projects are installed and monitored by GA; and successful solutions to problems of operation and of materials, developed through NEP experience, are incorporated into existing or new projects.<sup>1</sup>

Manpower Research Projects (MRP), of The George Washington University in Washington, D.C. contracted to study the effectiveness of NEP-2--a role that it had also undertaken in connection with the earlier GA demonstration project. In both NEP-1 and NEP-2, two kinds of reports were generated: GA operational reports and MRP research reports. Although some operational information necessarily is in-

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1. A more detailed description of the New Education Program is contained in the Appendix.

cluded in MRP reports, research reports are focused on the information necessary to the evaluation of NEP effectiveness.

### Study design

The purpose of the NEP-2 demonstration projects was to determine whether NEP, already tested in four Neighborhood Youth Corps projects in California, could be successfully adapted to a wide variety of settings. This study was designed to permit the evaluation of NEP-2 achievements in terms of academic gains and other measurable outcomes of NEP-2 experience.

The major evaluative data consisted of reports on each NEP student on enrollment, during enrollment and on termination-from the project.<sup>1</sup> These data were supplemented by on-site reconnaissance, conducted by MRP staff, and by reports provided by GA.

#### Student data included:

1. Results of academic achievement tests on entry and at three-month intervals for a maximum of three retests.
2. Student characteristics on entry, monthly reports of students' participation (attendance, interest, progress), and termination reports on the students by their teachers.
3. Students' views of NEP, structured through a short information form, used from time to time in each site project.

These data, together with the observations of teachers and of GA and MRP staff, permitted the application of achievement criteria. The principal achievement criteria were:

- 
1. The data collection forms used in this study were incorporated in the first Progress Report (October, 1973).

1. Improvement in academic test scores
2. Quality of NEP participation
3. Outcomes or sequels to NEP participation indicative of achievement.

The variety of settings in NEP-2 necessitated somewhat different criteria emphases in some sites. In the two detention sites, for example, attendance was compulsory and was of little value as an achievement criterion. In the MDTA skills center, to cite another example, many of the students were high school graduates and the academic achievement criteria of a high school diploma or passing the GED (high school equivalency test) were of less value than they were in other sites.

#### Scope and plan of report

The education system developed by Graham Associates and its operation in the several sites of this study has been reported by them;<sup>1</sup> and the first phases of the NEP-2 study have been fully described in an earlier research report.<sup>2</sup>

This final report on NEP-2 briefly reviews the characteristics of the various site projects in the following chapter. The achievements of the program are examined in Chapter 3.

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1. Enright, William J., and Graham, Gary S. The Development of a Comprehensive Basic Education System for Alternative Education Programs. (Springfield, Va.: National Technical Information Service, 1975).

2. Walther, Regis H., and Magnusson, Margaret L., A Study of the Effectiveness of the Graham Associates' Demonstration Project on Education Programming in Manpower Training Projects, report no. 2: The First Months. (Springfield, Va.: National Technical Information Service, 1974).

## II

### NEP-2 SITES AND STUDENTS

The purpose of NEP-2 was to test this education program in a variety of settings where students were outside the schooling mainstream. NEP-2 sites, briefly described below, amply satisfied the purpose of providing a variety of settings for program demonstration.

#### Byron Boys Ranch

A minimum-security detention facility for male juveniles, Byron Boys Ranch in Contra Costa County, California, was the first site to be started in NEP-2. Byron's existing education program, apparently adequate in terms of facilities and staff, was recognized to be educationally ineffective for many of the boys. NEP-2 was installed in an effort to improve the facility's education component.

The NEP-2 start at Byron principally involved the provision of materials, training the four experienced teachers in NEP-2 methods and procedures, administering initial tests to 55 new NEP students, and working out NEP credit arrangements with school authorities.

#### Pre-Placement Center

A related maximum-security detention facility, the Pre-Placement Center at Martinez, California, was set up as a NEP-2 site in December, 1973--about three months after the NEP-2 start at Byron. The Pre-Placement Center (PPC) is used by Contra Costa County for the detention of juveniles whose behavior has indicated that they need to be "locked up." Boys who "run" from Byron are usually detained at PPC

when they are again in custody; and boys at PPC who demonstrate good behavior may be transferred to Byron.

The NEP-2 PPC project began with seven students and with an already-trained teacher from Byron.

Because many NEP-2 students in Contra Costa County were both at Byron and at PPC in the course of their enrollments, the two facilities were treated as a single research site. The setting of NEP-2 education at Byron, however, was distinct from that at PPC.

At Byron, an inmate's day was divided in half by his activities: either work in the morning and education in the afternoon, or vice versa. Education was conducted in two large classrooms separated by a small combination reading laboratory and resource room. The space was well-arranged for NEP activities, with numerous individual study carrels and several tables for group work.

At PPC education was carried on with the students in their individual cells, because it was found that fighting broke out whenever the students assembled in groups. The privacy of PPC NEP-2 education may have improved the performance of PPC students in that no student was embarrassed by public (classroom) knowledge of his academic deficiencies; and, freed from social situations triggering defense mechanisms, he often worked well for lack of anything else to do.

At Byron-PPC the length of an inmate's detention was determined, to some extent, by the quality of his behavior and attitudes. Inmates whose good behavior, including their good behavior in NEP, indicated that they could be trusted to behave themselves if undetained could expect to stay a shorter time in Byron.

### Pacoima Skills Center

In November, 1973, GA started a NEP-2 project in a large MDTA skills center in Pacoima, California. This center has the reputation of being a "job factory," placing its emphasis on getting its students into jobs as quickly as possible and correspondingly de-emphasizing the usual education component of MDTA installations. In the fall of '73, the principal of the skills center had begun to "beef up" the center's education component and had hired a skilled and experienced teacher for the center's "learning lab." At this point, GA and NEP-2 were brought in.

The installation of NEP-2 in Pacoima required about five weeks, or more than twice as long as the normal start-up period. The reasons for the longer time in Pacoima included the facts that (1) the teacher was already at work and had little time for her training, (2) the needs for education were as variegated as the vocational courses of the Center (multi-clerical, automotive, welding, production machine operator, and landscape) and (3) the study lab classroom was ill-arranged for NEP-2 education.

At the end of the installation period, the study lab had been reorganized to comfortably accommodate students and NEP materials, and two kinds of learning settings had been added to the study.

Both of the Pacoima study groups involved math only.<sup>1</sup> One group of Pacoima math students was composed of multi-clerical trainees. The regular teacher of these students was trained in the NEP system, and clerical math students were required to attend three one-and-a-half-hour classes per week. Virtually all of the clerical math students were women.

The second group of Pacoima math students was composed of trainees, most all of whom were men, in Production Machine

1. A reading program was installed but the students did not stay in the MDTA program long enough to be retested.

Operation, Landscaping, Welding, and Automotive work. This group was under the study lab instructor, and attendance was voluntary.

Compared with students in other NEP-2 study groups, Pacoima students were older and better-educated. The usual academic goals of NEP (achievement of high school credits, including high school diploma, or preparation for the GED, including passing the GED) were of less importance than in other sites. Many Pacoima students were high school graduates, and all were primarily interested in the improvement of job-related academic skills.

### Spokane NYC

Two study sites were in out-of-school Neighborhood Youth Corps (NYC)<sup>1</sup> projects which were designed to serve 16- and 17-year-old dropouts. The first of the two NYC NEP-2 study groups was started in Spokane, Washington, in January, 1974.

Prior to the advent of NEP, the education of Spokane NYC enrollees had been provided at a continuation school<sup>2</sup> or in the NYC's own GED-prep program. Both of these education resources were deemed undesirable or improvable: the continuation school, located on the regular high school campus, had a generally poor reputation; and the NYC's program, located in very cramped quarters, offered only GED preparation. The Spokane NEP program was designed

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1. The term "NYC" has become anachronistic with the elimination of categorical manpower programs in 1974. Former categorical programs are now funded under The Comprehensive Employment and Training Act (CETA).

2. Continuation schools are facilities provided for students who have been terminated from regular or standard schools. Populations in these schools are composed of "problem" students. The resultant demands on the education systems in these schools are such that the education provided by continuation schools tends to be inferior.

to serve NYC enrollees who had formerly used the continuation school as well as to serve GED students. The implementation of NEP in Spokane involved finding new quarters--a renovated ex-laundromat with furniture provided by the community college--and the expansion of the NYC teaching staff to one half-time, and two full-time instructors, also provided by the College District. As in other NYC settings, Spokane NEP classes ran in three-hour morning and afternoon sessions, with students scheduled for approximately 15 hours a week.

NEP-1 experiences had established that the crediting of NEP work towards a high school diploma increased the effectiveness of NEP with high school dropouts. NEP-1 experience, limited to California, had shown the feasibility of arranging for school credits with local high school districts. In the state of Washington, it was found that Community College Districts have great flexibility in granting high school credits for work done in "special schools." Arrangements for the accreditation of NEP achievements were made with the Spokane Falls Community College, whose administrators had been most receptive to the NEP and who readily accredited the program.

#### Long Beach NYC

The other NYC site in the present study was started in March, 1974 in Long Beach, California. Although the Long Beach NYC listed eight potential education options for its enrollees, approximately 85 percent of the Long Beach enrollees were served by two education sites: the continuation school and the Learning Centers of the Youth Development Project (YDP). The Learning Centers, first developed in 1971, installed NEP in February, 1973. The Long Beach NEP-2 involved the Learning Centers, and the Long Beach NEP-2 start involved the updating of NEP-1 methods and materials, and adding the data-collection procedures required by the study.

When NEP-2 was installed in Long Beach, students already in the Learning Centers became study subjects. The test/retest cycle of NEP meant that some test results prior to a NEP-2 start were available in Long Beach. Although Long Beach was the last NEP-2 start, Long Beach test results were more extensive than those in other sites.

There are two Long Beach Learning Centers (LCs): LC-2 is located in the black central district, and LC-3 is located in the downtown area. Each is a store-front operation, staffed with a teacher and a teacher's aide, and accomodates 20-25 students. LC-2 had lost its teacher shortly after the NEP-2 start, with the former teacher's aide moving into the vacated position, and a new teacher's aide being hired. LC-3, on the other hand, retained its NEP-1 teacher throughout the study although a new teacher's aide (a friend of the teacher's) was hired at about the time NEP-2 started. The staff of LC-2 was black, while the staff of LC-3 was white.

Credit arrangements with the local high school district, allowing students to get high school diplomas for Learning Center work, had been made in 1973. These arrangements, in effect, chartered the Learning Centers as alternative high schools. Between the accreditation of the LCs in 1973 and the NEP-2 start in 1974, 34 LC students had become high school graduates and 42 had passed the GED exam.

#### Aviation High School

Aviation is a comparatively small (total enrollment of 1900) California high school in the South Bay Union High School District. During the 1973 fall semester, Aviation's Vice-Principal for Counseling began searching for alternative education for freshmen who, on the basis of their first semester's work, seemed destined to fail in Aviation and to find themselves, accordingly, in continuation school in

1974-75. Because the continuation school had a poor reputation, the Vice-Principal was unwilling to allow these failing freshmen to slide through their second semester into continuation school.

To arrest the process, the Vice-Principal organized a "pilot project" for the freshmen: she gave them a large classroom, a teacher and a teacher's aide with the hope that these special measures would reverse their academic failure. With the establishment of this special education project other problem students were assigned to it: a group of 6 sophomores who had severe reading problems, and a group of 19 freshmen who were also low-achievers in reading. Each of the reading groups met with the teacher for one class period (55 minutes); whereas, the "pilot" freshmen--a group of 25 failing students--spent their entire three-period class day with the teacher.

At this point, GA and the NEP-2 were called in. The installation of the NEP-2 in Aviation involved a re-organization of the classroom, assembling NEP materials and training of the teaching staff in the NEP system, and working out academic credit arrangements for NEP-2 work.

The classroom was NEPized by substituting tables and chairs for standard school desks, by placing materials along the walls, and by the creation of a 10-foot-square carpeted space for a rest and/or game area. It was decided that all the students would use this classroom: the sophomore readers in period 1, the pilot freshmen in periods 2, 3, and 4, and the freshmen readers in period 6.

In Aviation, the establishment of academic credit equivalents for NEP achievements involved equivalencies for work in standard classes. For the one-period readers, successful NEP achievement would merit 5 high school credits.

For the pilot students, the situation was more complicated since the goal with these students was not only to achieve a successful semester but to recoup failure in the preceding semester. It was decided that NEP work equivalent to 10 high school credits would be sufficient to arrest the slide to continuation school, and that NEP work equivalent to 20 credits would add up to a completely successful freshman year.

#### NEP-2 students

When the study period ended in September, 1974<sup>1</sup>, a total of 528 persons had been NEP students. By far the largest site, so far as number of subjects was concerned, was Byron/PPC, which accounted for 60 percent of all study subjects, for 58 percent of all male subjects, for 56 percent of all male white subjects, and for 58 percent of all male black subjects.

As would be expected from our site descriptions, the characteristics of study subjects varied greatly between sites (see Table 1). Pacoima students were much older and had completed more schooling, on the average, than students in the other sites; and, in terms of age and completed school schooling, Aviation students were at the other extreme.

None of the Aviation students, and only 9 percent of the Byron/PPC students, were dropouts from standard school. All of the NYC students, on the other hand, were dropouts, and substantial proportions of them had been out of school for more than half a year when they enrolled in the NEP (68 percent in Long Beach, and 50 percent in Spokane). The older, better-educated Pacoima students contrasted sharply with study groups in the other sites: more than half of them had completed high school (or passed the GED), and 50

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1. Retesting continued for three months after this date.

percent of them had been out of school at least a year and a half when they started in the NEP.

Table 1 Selected Characteristics of NEP-2 Study Groups  
(Percents or means of all subjects)

	Byron & PPC N=196	Pacoima N=96	Long Beach N=92	Spokane N=95	Aviation N=49
<b>Sex--</b>					
Male	100%	24%	49%	48%	59%
Female	0	76	51	52	41
<b>Race--</b>					
White	65%	45%	35%	82%	84%
Black	23	17	45	6	2
Chicano	11	35	16	8	12
Other	1	3	4	3	2
<b>Intake variables--</b>					
Age (mean years)	16.3	25.3	17.9	17.7	15.1
Schooling (mean grades)	9.1	11.4	9.9	9.5	8.1
Months out of school					
6, or less	91%	18%	33%	50%	100%
7-17	9	32	40	35	0
18, or more	0	50	28	15	0
Work-relevant attitude <sup>a</sup> (mean score)	6.2	10.0	8.1	8.9	4.7
Interest in NEP <sup>b</sup> (mean rating)	3.0	4.2	3.7	3.0	2.8

a. Work-relevant attitude score, based on 12 attitudinal items in intake interview, is direct reflection of attitudes consonant with good adjustment to the world of work: the higher the score, the better the adjustment indicated by the attitudes.<sup>1</sup>

b. Rated on a 5-point scale running from 1 (indifferent) to 5 (very interested).

Among the younger out-of-school students (those in Byron/PPC, and the two NYC sites), the last schooling of about half had been in regular day time schools (see Table 2). The next most frequently reported prior school was continuation school (33 percent in Byron, and 39 percent in Spokane, where

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1. The 12 items making the Work-relevant attitude score are reproduced in the Appendix.

continuation school was a site of NYC education). In Long Beach, the other NYC site, relatively more students had attended evening classes after dropping out of regular school or were participating in NYC education.

Table 2 Kind of School when Last in School, Younger Out-of-school Students, by Site  
(Percents of all reported students)

	Byron & PPC N=196	Long Beach N=92	Spokane N=95
Regular, daytime school	55%	47%	42%
Continuation school	33	0	39
Evening classes	0	13	1
Site program	7	29	6 <sup>a</sup>
Other	5	10	12
Total	100%	99%	100%

a. NYC GED program.

At the time of enrollment, all students were asked to respond to 12 "Work-Relevant Attitude" questions: questions developed in connection with evaluation studies of work-training programs. These questions were excerpted from a 26-item scale that was factor-analyzed into three groups of attitudes: optimism, self-confidence, and socialization. Although originally developed as work-relevant attitudes, it was thought that the attitudes involved might also apply to schooling. It was of interest that the lowest average total work-relevant attitude score was produced by Aviation students, and the highest, by Pacoima students. The scores appeared to be generally related to age and schooling completed.

Average total Work-Relevant Attitude scores suggested attitudinal differences in the study subgroups (see Table 3). In Byron/PPC, for example, the average score was higher (6.8) among students whose experience was at Byron only than among other students in this site (5.3)--students who "ran," or who were at PPC at some time during their NEP experience.

Table 3 Attitudinal Differences in Study Subgroups  
(Mean Work-Relevant Attitude score)

	N	Mean
Byron/PPC		
Byron only	118	6.8
Byron & PPC, interrupted Byron	78	5.3
Pacoima		
Clerical math (compulsory)	73	9.9
Other math (voluntary)	23	10.5
Long Beach		
"Headstart"	24	8.1
Learning Center 2	34	6.5
Learning Center 3	34	9.5
Aviation		
Pilot freshmen (reading & math)	24	3.9
Sophomore (reading only)	19	5.3
Freshmen (reading only)	6	6.0

Almost as great a difference appeared in the average Work-Relevant Attitude scores of the Pacoima compulsory clerical math students (9.9) and the other Pacoima math students (10.5).

In Long Beach, three possible study subgroups were discerned in the site description: transferees from NEP-1, and new enrollees in Learning Centers 2 and 3. The transferees, operationally defined as students whose initial SAT tests were administered more than a month prior to their first monthly reports of NEP-2 participation and tagged "headstart" in Table 3, averaged higher Work-Relevant Attitude scores than did new students (students initially tested at the time of the NEP-2 start) in LC-2. The Long Beach students with the highest average attitudinal score were new enrollees in LC-3.

Similarly, in Aviation, average attitudinal scores indicated differences between the pilot freshmen, on the one hand, and the reading only groups, on the other hand.

The persons who administered the intake forms in NEP-2-- teachers, teacher's aides, and sometimes, at the time of NEP starts, one or the other of the Graham Associates--were asked to rate the new student's interest in NEP education on a 5-point scale running from 1 (indifferent) to 5 (very interested). Aviation students averaged the lowest interest ratings, while Pacoima students averaged the highest.

It was of interest that Long Beach students averaged significantly higher interest ratings than did students in the other NYC site, Spokane. The average initial interest ratings of Long Beach students in LC-2 (3.2), however, were very little higher than the Spokane average (3.0). The significantly higher average initial interest ratings of Long Beach students in LC-3 (4.1) suggested a different situation in this subgroup. Although interest ratings obviously could reflect the rater as well as the ratee, it was noteworthy that none of the four raters involved in LC-3 ratings averaged less than 4.0 in their ratings, while three of the five raters involved in LC-2 ratings averaged 3.0 and none averaged as much as 4.0.

Initial interest in a program may predict achievement prospects in that, other things being equal, high initial interest connotes easier achievement than does low initial interest. Average initial interest ratings in Byron/

PPC were substantially the same for all racial subgroups (see Table 4); and average initial interest ratings in Pacoima and in Aviation were substantially the same for sex/race subgroups. In the two NYC sites, however, average initial interest ratings indicated that black students were less interested in the NEP and might, therefore, be less apt to chalk up achievements in the program. This was particularly evident in Long Beach.

Table 4 Initial Interest in NEP by Site, Sex, and Race  
(Means, all reported subjects<sup>a</sup>)

	Byron & PPC N=196	Pacoima N=96	Long Beach N=92	Spokane N=95	Aviation N=49
Male subjects					
White	3.0	4.3	3.5	2.8	2.7
Black	3.0	4.3	3.1	2.5	
Spanish sur- names	<u>3.1</u>	<u>4.4</u>	<u>4.0</u>		<u>2.8</u>
Total	<u>3.0</u>	<u>4.3</u>	<u>3.4</u>	<u>2.7</u>	<u>2.7</u>
Female subjects					
White		4.3	4.5	3.4	2.8
Black		3.2	3.3		
Spanish sur- names		<u>4.2</u>	<u>4.7</u>	<u>2.3</u>	<u>3.0</u>
Total		<u>4.1</u>	<u>3.9</u>	<u>2.8</u>	<u>2.8</u>

a. Except in Pacoima, where only 76 percent of the subjects were reported, substantially all subjects were reported. The means are not reported if there are less than five subjects in a cell.

### Summary

The characteristics of NEP-2 students in the several sites of this study indicated that the program would be tested in a variety of settings. On the basis of physical environments, education needs and programs, and student characteristics, the study involved at least eleven distinct student subgroups:

1. Byron (minimum security detention)
2. Pre-Placement Center (maximum security detention)
3. Pacoima mandatory math
4. Pacoima voluntary math
5. Long Beach "headstart" (transfers from NEP-1)
6. Long Beach Learning Center 2
7. Long Beach Learning Center 3
8. Spokane NYC
9. Aviation pilot freshmen (reading and math)
10. Aviation sophomore (reading only)
11. Aviation freshmen (reading only).

In addition to these subgroups, primarily reflective of site programs and substantiated to some extent by intake information, there were indications that distinct subgroups associated with the sex and race of students were also present in some sites.

While the number of students involved in some of these learning situations might sometimes be too small to support final conclusions for the subgroup in question, the characteristics of study subjects assured that composite results would reflect the operation of the NEP in a wide variety of learning environments.

### III

#### NEP EXPERIENCE AND ACHIEVEMENT

In September, 1974, when the data-collection period of this study ended, the records of NEP students were reviewed for indications of the program's operations and achievements. The principal data sources were monthly and final reports of the students' participation, and test/retest results in reading and in math. In addition, the results of student questionnaires were useful in some sites.

##### NEP-2 participation

Apart from the specialized NEP-2 students (the Pacoima math and the Aviation reading students) most NEP-2 students were scheduled for at least 15 hours per week (see Table 5). Average attendance, the proportion of actual attended hours to scheduled hours in the students' record, ranged from 63 percent in Long Beach to virtually perfect in the confines of Byron/PPC. Average NEP-2 hours, reflecting the variables of scheduled hours, attendance, and calendar time in the program, ranged from 37 hours in Pacoima to 181 in Byron/PPC.

##### Interest and progress

The first monthly participation reports indicated average interest in NEP work well above the midpoint of a 5-point scale in each site except Aviation (2.9 in Aviation as compared with 3.9 in the other sites combined). Compared with the rating of interest in the prospect of NEP-2 education reported on the intake form (see Table 1, p. 12) actual interest in NEP work in the first month tended to be higher: slightly higher in Byron, Pacoima, and Aviation, and very

significantly higher<sup>1</sup> in Spokane (4.0 in the first reported month as compared with 3.0 on intake).

Table 5 Selected Characteristics of NEP-2 Experience, by Site

(Means and percents all reported subjects)

	Byron & PPC N=196	Pacoima N=96	Long Beach N=92	Spokane N=95	Aviation N=49
Scheduled weekly hours <sup>a</sup>	15-22.5	4.5	15-20	15	5-15
Percent attendance (mean)	98%	73%	63%	68%	73%
Months in NEP-2 (mean)	3.9	2.6	4.9	2.8	3.6
Attended NEP-2 hours (mean)	181	37	137	124	90
Initial interest (mean) <sup>b</sup>	3.9	4.3	3.5	4.0	2.9
Initial progress (mean) <sup>c</sup>	3.1	3.2	2.9	3.1	2.2

a. Byron/PPC students were ordinarily scheduled for 2 or 3 one-and-a-half-hour classes per day.

Pacoima clerical math students were the only Pacoima students with scheduled participation.

Long Beach LC-2 usually reported 15 hours per week; LC-3 usually reported 20 hours per week.

Aviation readers were scheduled for 5 hours per week; pilot students were scheduled for 15 hours per week.

b. First monthly report (MR). Interest rated on 5-point scale: 1=totally uninterested; 5=always interested. Average rating when two or more teachers reported.

c. First monthly report (MR). Progress rated on a 4-point scale: 1=no progress; 4=good progress. Average rating when two or more teachers reported.

1. Throughout this report, certain conventions regarding "significance" will be observed. The adjective "significant" is reserved for descriptions of statistical significance and connotes differences that could be expected to occur by chance no more than 5 times in 100. "Very significant" connotes differences that could be expected to occur by chance no more than 1 time in 100.

Standard statistical procedures have been used to determine significance.

Average progress ratings on the first monthly reports clustered around the value of 3 (adequate progress), except in Aviation where students averaged 2.2 (little progress).

In her report on the first NEP month, the Aviation teacher noted that getting NEP-2 materials was her "most successful classroom activity," and that having the program materials solved most of her classroom problems. The difficulties surrounding the NEP-2 start in Aviation may have contributed to the lower interest and progress ratings of Aviation students in their first month. On the other hand, Aviation's relatively lower first monthly report ratings were consistent with the impressions, produced by intake variables, of relatively greater education problems in this site.

A number of NEP students were in the program for only one monthly reporting period, either because they terminated early or because they enrolled late. Short records were most prevalent in Spokane where the records of 26 percent of the study subjects contained only one monthly report (MR). In contrast, the records of almost all of the Aviation students contained at least two MRs (see Table 6).

Comparisons of first and last participation ratings (see Table 7) indicated that, except in Aviation, both interest and progress tended to diminish in the course of NEP experience. For the most part, the extent of rating change was not significant; but, in Spokane, the diminution of interest (from an average 4.0 on the first MR to an average 3.5 on the last MR) was very significant.

Table 6 Percentage of Students with more than one Monthly Report (MR), by Site

	Byron & PPC N=196	Pacoima N=96	Long Beach N=92	Spokane N=95	Aviation N=49
Student record--					
1 MR only	9%	17%	18%	26%	2%
2 or more MRs	91	83	82	74	98

Table 7 Changes in MR Participation Ratings by Site  
(Means and percents of all multiple-MR records)

	Byron & PPC N=176	Pacoima N=78	Long Beach N=67	Spokane N=70	Aviation N=48
Interest ratings <sup>a</sup> --					
First MR (mean)	3.9	4.4	3.5	4.0	3.0
Final MR (mean)	3.7	4.3	3.3	3.5	3.3
Characterization of change--					
No change	16%	54%	21%	27%	27%
Increased only	9	10	13	3	38
Decreased only	22	22	30	34	15
Fluctuated	53	14	36	36	21
Total	100%	100%	100%	100%	101%
Progress ratings <sup>b</sup> --					
First MR (mean)	3.0	3.3	2.8	3.2	2.2
Final MR (mean)	3.0	3.1	2.6	3.0	2.6
Characterization of change--					
No change	18%	51%	31%	36%	27%
Increased only	12	11	13	9	33
Decreased only	20	26	24	19	13
Fluctuated	50	12	31	37	27
Total	100%	100%	99%	101%	100%

- a. Interest is rated on a scale of 1 (low) to 5 (high).  
 b. Progress is rated on a scale of 1 (low) to 4 (high).

Aviation results were in striking contrast to those from the other sites: final MR ratings in Aviation were very significantly higher than were initial Aviation ratings. These Aviation results were also reflected in the character of rating change.

Significantly more of the student records in Aviation showed improvement only; that is, at some time in their NEP experience, their ratings improved and at no time thereafter did their improved rating diminish.

Although the character of change shown in Table 7 was, to some extent, constrained by first ratings (highest first ratings could only remain the same or decrease in subsequent MRs; lowest ratings could only remain the same or improve; and only records with three or more MRs could show both increase and decrease), rating changes generally suggested that, except in Aviation, the interest and progress of from one-fifth to one-third of the students deteriorated in the course of their NEP participation. In addition, about half of the Byron/PPC students, and a little more than a third of the Long Beach and Spokane students fluctuated in their interest and progress. The combined proportions of decreased and fluctuating interest--about 70 percent in these three sites--indicated that progress in the program might be difficult. While progress ratings tended to mirror interest ratings, changes in progress ratings in the NYC sites (Long Beach and Spokane) showed relatively fewer cases of decrease only.

#### Job Corps units

The core curriculum of the NEP is composed of Job Corps materials in reading, math, and GED preparation. These materials, as well as other materials incorporated in the NEP, comprise modular achievement units. Ordinarily, the units serve as short-term goals for the student, and a growing total of Job Corps units--often graphed as a visible

symbol of achievement--has been found to be a strong motivator for NEP participation.

The GED curriculum is directly related to the academic goal of completing the secondary level of education. In the three unspecialized sites, most NEP-2 students were working with GED materials (see Table 8): in Byron/PPC 66 percent; in Long Beach, 63 percent; and in Spokane, 75 percent. The goal of completing their secondary education was nearer to those students than it was to most of the other students in these sites who were working only in graded reading and/or math.

Table 8 Job Corps Materials and Job Corps Units Completed in NEP-2 Experience, by Site  
(Percents and means of all subjects)

	Byron & PPC N=196	Pacoima N=96	Long Beach N=92	Spokane N=95	Aviation N=49
<b>Materials--</b>					
Reading only	1%	1% <sup>a</sup>	0	4%	53%
Math only	1	72	2	6	0
Reading & math only	33	27	34	15	35
GED only	0	0	2	12	0
Ged, reading and/or math	<u>66</u>	<u>0</u>	<u>61</u>	<u>63</u>	<u>12</u>
Total	101%	100%	99%	100%	100%
<b>Units completed (means)--</b>					
Reading	3.0	.1	6.0	1.1	2.7
Math	2.3	3.5	5.3	2.1	.6
GED	<u>13.1</u>	<u>0.0</u>	<u>27.2</u>	<u>15.6</u>	<u>1.6</u>
Total	18.4	3.6	38.5	18.8	4.9
<b>Attended hours in NEP (means)</b>					
	181	37	137	124	90

a. Pacoima math students were the only Pacoima subjects who participated in the NEP testing program. The monthly reports of some Pacoima students, however, reflected work in reading also.

Long Beach students earned Job Corps credits at a much higher rate than did students in the other sites. This higher Long Beach rate may have been partly due to the fact that Long Beach teachers were more experienced in the use of NEP materials, more aware of the motivational advantages of recording Job Corps achievements for their students, and, consequently, better reporters of Job Corps unit achievement for the study.

Job Corps unit achievements, determined by passing unit tests, were indicators of academic achievement. The relationships between Job Corps unit achievements and other indicators of academic achievement, however, were not direct.

#### High school credits

Arrangements with local school authorities for the crediting of NEP work towards a regular high school diploma were reflected in reports of earned high school credits. Reported high school credits were substantial in two sites: Byron/PPC students were reported to have earned 40 high school credits, on the average; and Long Beach students, 39, on the average.

In Long Beach, total average high school credits were substantially the same as total average Job Corps units completed; whereas, in Byron/PPC, average high school credits were much higher than average Job Corps units. The difference between these two averages in Byron/PPC reflected the fact that inmates could earn high school credits for good behavior in other activities as well as for academic performance.

Compared to Byron/PPC and Long Beach results, the average of 7 high school credits earned by Aviation students was very small. In terms of their credit goals, however, Aviation students who stayed in the NEP to the end of the school year achieved substantial success.

All of the Aviation reading students who stayed in the NEP to the end of the school year earned 5 credits, or the equivalent of successful work in a regular English class for this period. The 18 pilot students who stayed with the program to June, averaged 12 high school credits, or 2 more than they needed to have their NEP semester counted as a successful school semester. Two pilot students, who earned 20 and 25 credits respectively, also recouped their failed first semester; and eight pilot students, who earned from 12.5 to 15 credits, partially offset their first semester failures.

Very few high school credits (2 on the average) were reported for Spokane students. Spokane required only 32 credits for a diploma (instead of the 160 needed in Long Beach); but, in view of the substantial numbers of Spokane students who completed secondary-level education (see Table 16, page 36), it seems likely that Spokane credits were incompletely reported.

#### Test/retest results

When study subjects enrolled in NEP-2 projects they were screen-tested with short tests developed by the Job Corps: RJS1 for reading, and MJS1 for math. Subjects were then tested with an appropriate level of a Stanford Achievement Test (SAT). At approximately three-month intervals thereafter, for as long as the subject remained in the NEP-2 project, subjects were retested. The differences between initial SAT scores and retest SAT scores provided an objective measure of academic achievement.

Fifty-six percent of all subjects were retested at least once (see Table 9), with the proportion of subjects having retests being highest in Aviation (80 percent) and in Byron and Long Beach (67 percent in each of these sites). Retest data were lacking for a majority of the Pacoima subjects (84 percent) and for about half of the Spokane subjects. Lack of retest data indicated that the subject was in the project

too short a time (less than 3.2 months, on the average) to be retested.

Table 9 Number of Retests and Time between Retests, by Site

	Byron & PPC N=196	Pacoima N=96	Long Beach N=92	Spokane N=95	Aviation N=49	All N=528
<b>Number of retests--</b>						
Three	0%	0%	11%	0%	0%	2%
Two	18	0	25	6	0	13
One only	49	16	30	42	80	41
None	33	84	33	52	20	44
Total	100%	100%	99%	100%	100%	100%
<b>Time between retests<sup>a</sup> (mean months)--</b>						
SATR1-SATR2	3.2	---	3.5	2.7	3.1	3.2
SATM1-SATM2	3.2	3.2	3.5	2.7	3.0	3.2
SATR2-SATR3	3.1	---	3.3	3.0	---	3.2
SATM2-SATM3	3.1	---	3.3	3.0	---	3.2

a. To save space, tests are designated as follows:

	Reading	Math
Initial test	SATR1	SATM1
First retest	SATR2	SATM2
Second retest	SATR3	SATM3
Third retest	SATR4	SATM4

First retest results indicated that the average grade level achievement of all NEP-2 subjects had increased very significantly after about three months of NEP-2 experience (see Table 10). The average grade level improvement in reading was .8 and the average grade level improvement in math was .7. In three sites (Byron/PPC, Long Beach, and Spokane) the average grade level improvement was about the same in reading and in math. These improvements were statistically very significant in both subject areas. In Aviation, reading retests, which reflected the freshman and sophomore reading classes as well as the pilot subjects, indicated a very significant average gain of an entire grade level. The math gains of Aviation students, which reflected only the pilot group, were less dramatic (.4 of a grade,

on the average) but showed significant improvement.

Table 10 Changes in SAT scores (mean grade levels) between Initial Test (SAT1) and First Retest (SAT2), by Site

	Byron & PPC	Pacoima	Long Beach	Spokane	Aviation	All
<u>Reading</u>						
Number	132	0	62	46	39	379
SATR1 mean	6.2		6.7	8.1	5.4	6.5
SATR2 mean	6.9		7.4	9.2	6.4	7.3
Increase	.7		.7	1.1	1.0	.8
CL <sup>a</sup>	***		***	***	***	***
<u>Math</u>						
Number	131	16	62	45	19	273
SATM1 mean	5.5	8.1	5.7	6.7	5.5	5.9
SATM2 mean	6.2	9.1	6.4	7.7	5.9	6.6
Increase	.7	1.0	.7	1.0	.4	.7
CL <sup>a</sup>	***	**	***	***	*	***

a. CL=Confidence Level, or the statistical significance of differences between the scores, indicated as follows:

- \* significant at the .05 level (could have occurred by chance no more than 5 times in 100)
- \*\* significant at the .01 level
- \*\*\* significant at the .001 level

Second retest results, entirely lacking in Pacoima and in Aviation, and substantially lacking in Spokane, indicated little or no progress in average grade level since the preceding retest in Byron/PPC. In Long Beach, however, second retests indicated continued progress at about the same rate in both reading and math. In the half year covered by first and second retests, Byron/PPC subjects involved in these results had significantly improved their achievement by about half a grade level (see Table 11). The maintained progress of Long Beach and Spokane subjects in the period between second and third retests improved their

reading and math grade levels by about 1.5 grades in the half-year period.

Table 11 Average grade level Increases between Retests

	Byron & PPC	Pacoima	Long Beach	Spokane	Aviation
One retest only (N)	(96)	(16)	(28)	(40)	(39)
Increase--					
SATR1-SATR2	.8		.8	1.1	1.0 <sup>a</sup>
SATM1-SATM2	.7	1.0	.8	1.0	.4 <sup>b</sup>
Two retests (N)	(36)	(0)	(34)	(6)	(0)
Increase--					
SATR1-SATR3	.5		1.3	1.5	
SATM1-SATM3	.6		1.4	1.6	

a. Average reading increases in the 3 Aviation sub-groups were: 1.3 (pilots, N=20); .5 (freshmen reading only, N=14); and .8 (sophomore reading only, N=5).

b. Pilot students only.

For students in the program long enough to be retested twice, the rate of gain registered in the first retest was maintained in the succeeding period in both Spokane and Long Beach. Byron students who remained in detention and in the NEP, however, averaged lower scores on the second retest than they did on the first. The failure of Byron/PPC students to maintain academic achievement gains in the second retest period probably stemmed from the fact that the longer the youth stays in a detention facility the more likely he was to have a poor attitude toward education since achievement in the education classes is one factor leading to early release. There was also more evidence that the youth who stayed in Byron long enough to be tested twice did not make as much effort on the second retest as he had on the first. The second retest in Byron should, therefore be disregarded in evaluating the effectiveness of the NEP program.

The length of the study period generally precluded more

than two retests among students who started in the NEP at the time the site project was activated. In Long Beach, however, third retest results were available for eleven students (see Table 12). The more extensive Long Beach retest results were due to the facts that (1) early retest results were available for headstart students and (2) late test results, forwarded after the data-collection period ended, were available in Long Beach. Although the participation records of these Long Beach students were incomplete, their final retest results indicated that they had improved by about two grade levels in their reading and math in 10-11 months. Students who stayed in the Long Beach program, in other words, maintained an average increase of a little more than half a grade for three retest periods.

Table 12 Changes in SAT Scores between Initial Test (SAT1) and Retests (SAT2, SAT3, and SAT4), Long Beach, by Subgroup

	Headstart	Learning Center 2	Learning Center 3	All
<u>SAT1 and SAT2 (number)</u>	(21)	(17)	(25)	(62)
Mean grade level increase				
Reading	.5	1.0	.8	.7
Math	.8	.4	.7	.7
<u>SAT2 and SAT3 (number)</u>	(14)	(4)	(16)	(34)
Mean grade level increase				
Reading	.8	.9	.4	.6
Math	.5	1.5	.7	.7
<u>SAT1 and SAT3 (number)</u>	(14)	(4)	(16)	(34)
Mean grade level increase				
Reading	1.4	2.1	1.0	1.3
Math	1.4	2.1	1.3	1.4
<u>SAT1 and SAT4 (number)</u>	(8)	--	(3)	(11)
Mean grade level increase				
Reading	2.2		1.0	1.9
Math	2.1		2.3	2.2

NEP-2 compared with NEP-1

Two sites in this study, Long Beach, California and Spokane, Washington--were Neighborhood Youth Corps (NYC)

projects; and results from these sites provided the opportunity of comparing NEP-2 with its predecessor program, NEP-1. Compared with NEP-1 NYC study groups, the composite NYC NEP-2 study group contained more women, more whites, and fewer Spanish surname subjects (see Table 13). The two composite NYC groups were similar in age and schooling. The NEP-2 group was reflected in relatively more single retests, and about one-fifth of the subjects in both composite NYC groups were retested two or more times.

Table 13 Selected Characteristics of Neighborhood Youth Corps Study Groups in NEP-1 and NEP-2, Selected Variables

(Percents or means of all reported subjects)

	NEP-1 <sup>a</sup> N=207	NEP-2 <sup>b</sup> N=187
<b>Sex--</b>		
Male	66%	49%
Female	34	51
<b>Race--</b>		
White	17%	59%
Black	30	25 <sup>a</sup>
Spanish surname <sup>c</sup>	41	13
Other <sup>d</sup>	12	3
<b>Intake variables--</b>		
Age (mean years)	17.4	17.8
Schooling completed (mean grades)	9.8	9.7
<b>Number of retests--</b>		
Two, or more	23%	21%
One only	22	37
None	55	42

a. Includes Orange County, San Francisco, and Santa Barbara.

b. Includes Long Beach and Spokane.

c. Includes Chicano, Mexican-American, and Latin-American.

d. Includes American Indian, Asian, and Filipino.

Retest results were similar, with NEP-2 showing a little more strength in reading gains. In both NEP-1 and in NEP-2, comparisons of second retests (SAT3) with initial SAT scores indicated that study subjects who stayed in NEP approximately

six months improved their reading grade levels by at least one grade on the average, and, their math grade levels by 1.5 grades, on the average (see Table 14).

Table 14 Changes in SAT scores between Initial Test (SAT1), First Retest (SAT2) and Second Retest (SAT3) in Neighborhood Youth Corps Sites, NEP-1 and NEP-2

	NEP-1	NEP-2
<u>SAT1 compared with SAT2</u>		
Reading		
Number	94	108
Increase (mean grade level)	.6	.9
Math		
Number	91	107
Increase (mean grade level)	1.1	.9
<u>SAT1 compared with SAT3</u>		
Reading		
Number	47	40
Increase (mean grade level)	1.0	1.3
Math		
Number	45	40
Increase (mean grade level)	1.5	1.4

Schooling outcomes

Except in Pacoima, where NEP students were primarily interested in the improvement of job-related academic skills, schooling outcomes were important indications of NEP achievement. Depending upon the students' places in standard schooling systems--whether students were still "in school," or whether they had dropped out of school--meaningful NEP

achievements consisted of either (1) earned high school credits that would enable students to maintain or improve their positions in the schooling mainstream, or (2) the completion of secondary level schooling through the accumulation of enough credits to earn a high school diploma or through successful preparation for the GED.

### Aviation

The Aviation NEP was exclusively targeted on enabling students to maintain or to improve their positions in the schooling mainstream. Most of the Aviation students--all of the readers and fourteen of the eighteen pilot students who stayed in NEP to the end of the school year--earned high school credits sufficient to keep them in the schooling mainstream. Substantially complete retest results for Aviation students indicated that their high school credits were backed up with significant gains in academic skills.

Three of the pilot students, however, failed to achieve the program's goal of avoiding continuation school in their sophomore year: they were ejected from the NEP and wound up in continuation school in the second semester of their freshman year. This outcome was reflected in the teacher's April report, which noted that in the week following spring vacation, when her aide was absent, the pilot class got out of control. At this point the teacher removed the carpet and cushions from the games/recreational area of the classroom. Although this change towards a more conventional schoolroom "helped," the teacher's May report noted that some pilot students were still problems. This time, the teacher organized a group discussion, the result of which was to send the "rowdies" to the office. The troublemakers were not encouraged to return.

The incidents in Aviation's pilot group following spring vacation appeared to illustrate that these "problem" stu-

dents had achieved an esprit de corps by their third NEP month. If so, this majority interest in achievement represented a noteworthy attitudinal improvement.

#### Byron/PPC

Although NEP students in the two detention sites, Byron and Pre-Placement Center, were outside the schooling mainstream, the goal of education in these sites was to enable students to keep up with their classmates on the "outside" so that schooling could be successfully resumed when they returned to their homes.

From retest results it is evident that Byron/PPC students who were in the NEP long enough to be retested averaged significant gains in reading and math, particularly in their first three NEP months. These results agreed well for the maintenance of good standing in "outside" school systems.

Byron/PPC subjects who were not retested appeared to be of two kinds: (1) relatively well-adjusted young men, near the end of their detention periods and, in some cases, relatively near, also, to having enough high school credits for a diploma; and (2) relatively ill-adjusted young men who "ran" before they had been in the NEP long enough to be retested. Retested Byron/PPC students differed significantly from those without retests (see Table 15) in the larger proportion of students "graduated" from detention (28 percent as compared to 13 percent) and in the smaller proportion of students who "ran" (8 percent as compared to 20 percent).

On the other hand, more of the unretested students achieved high school diplomas, and the proportion of Byron/PPC students who left detention and the NEP to return to regular school was about the same, whether or not the student had been in the NEP long enough to be retested.

Table 15 Schooling Outcomes in Byron/PPC by Retest  
(Percents and means of all students)

	Retested N=132	Not Retested N=64	All N=196
High school diploma	3%	11%	6%
Returned to school	31	30	31
"Graduated" from detention	28	13	23
"Ran" from detention	8 <sup>a</sup>	20	12
Still in detention at end of study period			
Total	<u>29</u> 99%	<u>27</u> 101%	<u>28</u> 100%
High school credits (mean)	48	22	40
Hours in NEP (mean)	225	87	181
Average credits per 100 hours	21	25	22

a. Includes one retested subject who was ejected from the NEP.

Because both retested and unretested Byron/PPC students earned high school credits at about the same rate, it could be concluded that the NEP enabled all students in this site to keep up with their schooling. The higher proportion of runaways in the unretested group, however, suggested that more of these students would not return to regular school. If so, the failure to return could not reasonably be ascribed to NEP.

#### Long Beach and Spokane

In the two NYC sites, the NEP substituted for mainstream schooling: most of the out-of-school young people in these sites would complete their secondary education in the NYC or not at all. Although retest results were more extensive in Long Beach than in Spokane, these results in both sites indicated that students who stayed in the NEP long enough to be retested made significant improvements in their reading and math skills.

About the same proportion of retested students in both sites (19 percent in Long Beach and 24 percent in Spokane) completed their secondary schooling in the NEP (see Table 16). The proportion of unretested students in these sites who achieved a diploma or passed the GED was even larger: a result suggesting that many NEP students came aboard when they were close to completing their secondary school educations. Although the NEP could not take substantial credit for this achievement of short-term NEP students, these results suggested that the shortness of some NEP experience could be associated with academic achievement for the student. Somewhat the same situation was also suggested in higher proportions of Long Beach unretested students who left the program for a job (20 percent, as compared to 3 percent of the retested Long Beach students). These results suggested that lack of academic achievement among unretested Long Beach students may have been offset, to some extent, by vocational achievements. Again, these possible vocational achievements of short-term students could not, by and large, have been influenced by NEP.

In both NYC sites, relatively more of the unretested students were described as terminating because they had quit the NYC, had been ejected by the NEP, or had lost interest in the NEP. Although some situations reflected in the NYC-quits were not inconsistent with subsequent school achievement (e.g., quits due to pregnancy or moving), it might be assumed that some NYC-quits (e.g., quits due to jailing or loss of interest in the NYC) connoted poor prospects for subsequent achievement as did terminations due to ejection from the NEP and to loss of interest in the NEP.

These terminations tended to weed out students who were not benefiting from NEP and to result in a residual student body with better prospects of NEP achievement. At the end of the data collection period, the Long Beach stu-

dent body of 40 was composed of 33 students (83 percent) with retest experience and of 7 new students who had not been in long enough for a retest. The Spokane end-of-study student body numbered 32, with 25 (78 percent) retested students and 7 new students. Because the new students in these two sites were entering situations where the tone set by the majority of the students could be expected to be one of achievement, the achievement prospects of the new students were good.

Table 16 Schooling Outcomes in Long Beach and Spokane, by Retest

(Percents of all subjects)

	Long Beach		Spokane	
	Retested N=62	Not Retested N=30	Retested N=45	Not Retested N=50
Completed high school or passed GED	19%	23%	24%	54%
Left NYC/NEP for job	3	20	9	8
Terminated from NYC <sup>a</sup>	8	27	9	16
Ejected from NEP	5	3	2	4
Lost interest in NEP	0	3	0	4
Still in program at the end of the study period	<u>65</u>	<u>23</u>	<u>56</u>	<u>14</u>
Total	100%	99%	100%	100%

a. Terminated because pregnant, moved, or jailed.

Pacoima

In contrast to the students in other sites, Pacoima students were almost exclusively interested in the NEP as a means of improving job-related academic skills. Many of the Pacoima students had already completed their secondary school education, and even those who lacked a diploma or a GED were in the NEP to polish skills in order to qualify

for jobs. Only a small proportion of the Pacoima students (16 out of 96) were reflected in test/retest results which indicated that math students (the only Pacoima students in the study) improved by one grade level, on the average, in about three months.

Compared to Pacoima students who did not stay in the NEP long enough to be retested (see Table 17), retested Pacoima students were significantly more apt to have left the skill center for a job. Although the number of retested Pacoima students was small, Pacoima results indicated that the NEP had been effective in improving math skills and suggested that improved math skills were associated with enhanced employability.

Table 17 Schooling Outcomes in Pacoima by Retest  
(Percents of all students)

	Retested N=16	Not Retested N=80
Left skill center for job	88%	55%
Terminated from skill center	13	28
Terminated from NEP only	<u>0</u>	<u>18</u>
Total	101%	101%

Most of the Pacoima retests (13 out of 16) occurred in the compulsory, clerical math group.

Ratings of usefulness

Students' termination reports included a rating by a member of the NEP staff as to the overall usefulness of NEP experience. This 3-point rating (1=a waste of time; 2=some-what useful; 3=very useful for the student)<sup>1</sup> served to

1. The rating on the form was in reverse order; i.e., 1=very useful.

summarize the views of the program on its usefulness to each student. Comparisons of average usefulness ratings between retested and unretested students (see Table 18) tended to support the expectation that retested students benefited more from NEP than did the short-term unretested students. The differences between the two groups, however, were often slight. This lack of contrast suggested that (1) raters may have been unimpressed with the usefulness of NEP experience, notwithstanding fairly solid academic achievements and/or (2) raters may have tended to report a "safe" middle rating of "2."

Table 18 Usefulness of NEP Experience, Retested and Unretested Students by Site and Subgroup

(Means, all reported subjects)

	Retested		Unretested		All	
	N	Mean	N	Mean	N	Mean
All Byron	126	2.4	62	2.1	188	2.3
Uninterrupted Byron	78	2.5	35	2.2	113	2.4
Byron and PPC	48	2.3	27	2.0	75	2.2
All Pacoima	16	3.0	78	2.7	94	2.8
Clerical math	13	3.0	59	2.9	72	2.9
Non-clerical math	3	3.0	19	2.3	22	2.4
All Long Beach	53	2.6	27	2.3	80	2.5
All headstart	19	2.6	3	2.7	22	2.6
All LC-2	14	2.5	16	2.4	30	2.5
All LC-3	20	2.8	8	2.0	28	2.5
All Spokane	44	2.4	50	2.5	94	2.5
All Aviation	37	2.2	11	2.0	48	2.1
Pilots	18	2.3	5	1.6	23	2.1
Sophomore(reading only)	14	2.0	5	2.2	19	2.1
Freshman(reading only)	5	2.2	1	2.0	6	2.2

This lack of contrast was particularly evident among the Pacoima clerical math students, Long Beach headstart and LC-2 students, Spokane students, and Aviation reading only. The usefulness of the NEP in such situations apparently was not closely related to program tenure. Well-qualified students,

such as GED-ready NYC students, undoubtedly benefited from the finishing touches provided by short-term NEP experiences as did students who had farther to go, academically, and needed more NEP time to do so. From the point of view of substantial NEP contributions to the students' education, however, the high NEP usefulness ratings for unretested students mean less than the high usefulness ratings of students who were in NEP long enough to be retested.

### Student questionnaires

Data-collection forms included a one-page student questionnaire, primarily designed to provide feedback on program operations. These forms were not used with regularity or consistency, but they are of interest because they provide a direct reflection of the views of NEP students.

To insure free feedback, instructions for the administration of the questionnaires provided for anonymity at the option of the student. In all, 225 questionnaires were received, and 43 (19 percent) of them were anonymous. Virtually all of the unsigned questionnaires were from Byron/PPC (58 percent) and Spokane (40 percent). Comparisons of signed and unsigned questionnaires in these two sites indicated no significant differences and suggested that the greater incidence of anonymous questionnaires in Byron/PPC and Spokane may have reflected administration procedures in these two sites.

In Pacoima, Aviation, and Spokane, student questionnaires were completed near the end of the study period: March/April in Pacoima, June in Aviation, and August in Spokane. These end-of-study questionnaires, reflecting active students in the program, clearly could provide little useful feedback to the NEP staff. On the other hand, they provided a fairly complete reflection of student bodies in these sites.

The administration of student questionnaires in Byron/PPC and in Long Beach, on the other hand, occurred at intervals in the course of the study and provided samplings of student views at a number of different points in time; and, particularly in Long Beach, some students completed more than one questionnaire. The timing of questionnaires in these two sites suggested that the form could have served its feedback purpose in Byron/PPC and in Long Beach.

All told, the study produced 182 signed questionnaires<sup>1</sup> (see Table 19), with from 19 percent (Byron/PPC) to 63 percent (Aviation) of all students returning signed questionnaires. Except in Long Beach, most students with questionnaires completed only one form.

Table 19 Signed Student Questionnaires, by Site

	Byron & PPC N=196	Pacoima N=96	Long Beach N=92	Spokane N=95	Aviation N=49
Number of forms	N.	N.	N.	N.	N.
One	38	22	44	27	31
Two	1	1	13	4	3
Percent of all students with at least one questionnaire	19%	23%	48%	28%	63%

The questionnaires asked the student to rate NEP on a number of points--the interest of NEP materials; the helpfulness of NEP teachers, and the like--to suggest improvements, and to comment on the program generally. When questionnaires were coded, the student's responses were characterized in a 3-point rating: 3 (favorable); 2 (mixed); and 1 (un-

1. Because of the possibility of multiple responses, anonymous questionnaires had to be excluded from consideration.

favorable).

In their responses on the questionnaires, NEP students strongly endorsed the NEP (see Table 20). On a 5-point scale comparing the amount learned in NEP with the amount learned in other education, the students averaged 4.2; on a 4-point scale rating the interest of NEP materials, the students averaged 3.1; and on a 4-point scale rating the teachers helpfulness, the students averaged 3.7. The coder's evaluations of all responses, including comments, rated on a 3-point scale, averaged 2.5.

Table 20 Selected Variables, Student Questionnaire, by Site

	Byron & PPC N=38	Pacoima N=22	Long Beach N=44	Spokane N=27	Aviation N=31	All N=162
You feel you are <sup>a</sup> learning... more	3.9	4.8	4.3	4.3	4.2	4.3
Materials are <sup>b</sup> ... interesting	3.0	3.5	3.2	2.9	3.0	3.1
Teacher is <sup>c</sup> ... helpful	3.3	3.8	3.9	3.8	3.5	3.7
Overall rating <sup>d</sup>	2.2	2.9	2.7	2.5	2.4	2.5

a. 5-point scale. Compared to the last school you attended, you feel now like you are learning: (1=much less; 5=much more).

b. 4-point scale. The materials you are using now are: (1=very boring; 4=very interesting).

c. 4-point scale. When you are trying to understand and learn, you find that the teacher is: (1=not at all helpful; 4=very helpful).

d. 3-point scale. Coder's overall rating of responses: (1=unfavorable; 3=favorable).

Pacoima students turned in the best report of the NEP and students in the two NYC sites (Long Beach and Spokane) turned in similar and next-best ratings. Aviation and Byron/PPC students tended to view the program with least approval; but, even in these sites, students gave the program high ratings.

#### Comments from student questionnaires

Student questionnaires concluded with two open-ended questions, How do you think this program could be improved? and What other positive and negative reactions do you have? Half of the first set of questionnaires from students contained written comments describing possible improvements (see Table 21), and 32 percent described positive or negative reactions, with most of these reactions being positive. Although only a small fraction of all NEP-2 students was reflected in specific student comments, the comments are of interest because they show the program from the student's viewpoint. Student comments did not lend themselves to statistical evaluation, but they provided insight into how the program worked in the several sites.

#### Pacoima, Spokane, and Aviation

In three sites, questionnaires reflected end-of-study student bodies and constituted a kind of "final word" on NEP-2.

The comment of one Pacoima student, "I didn't think I could learn any more after I had graduated from high school, but I have," summarized the value of NEP-2 for students primarily interested in academic skill improvement rather than in the completion of secondary-level education. The comments of Pacoima students that were picked up as negative qualifiers pertained to the whole Pacoima education system: one student wrote, for example, that she would have liked more extra-curricular school activities, and another,

that she would have liked a course in Accounting.

Table 21 Comments from NEP-2 Students, First Student Questionnaires

(Percents of all subjects signing questionnaire)

How do you think this program could be improved?	N=162
No comment	39%
Comment, no improvement described	22
Comment, improvement described--	
Materials and curriculum changes	17
More teachers (more individual help)	9
Other (classroom setting, discipline)	14
Total	101%
Other positive and negative reactions--	
No written reactions	68%
Reactions--	
Positive	26
Negative	6
Total	100%

Qualifying comments in Spokane tended to point up the idea that some youngsters in educationally-efficient programmed instruction missed such attributes of standard schooling as physical education, a football team, or, as one student wrote, the program should "be more like a regular school." Such comments were more than balanced by Spokane students who commented to the effect that they didn't think the program needed any improvements, or, far from wanting extra-curricular activities, desired more emphasis on academic performance. One Spokane student expressed this attitude: "The only thing it (the program) needs is a little more strickness for working on school work." The comment of another Spokane student implied a commitment to academic performance: "From my experience the improvement (of the program) would have to come from students rather than from the administration."

At the end of the school year, most of the Aviation students completed questionnaires reflecting four months of NEP-2 experience, and most of them praised the program and its teacher. It was of interest that several students commented, explicitly or implicitly, on the value of the class as a resource for students in academic difficulties. They wrote that the program could be improved:

"If we could have it here next year."

"By putting more classes like this into the school."

"If could allow more students to get to know how this class is put together."

This last comment probably referred to the circumstance that Aviation students originally were assigned to the NEP-2 project by their counselors, and students who might want to avail themselves of the program did not know about it. Two students joined the project in May, too late to be retested, because they had heard about it and felt that they could do better work in the NEP-2 classes.

Most of the critical comments from Aviation students were contributed by members of the sophomore reading group. In response to the question, How could this program be improved? they wrote:

"...easier reading books for those who can't read to good."

"I think this class could do other things than just read."

"...have better reading selections, having them not so boring."

"They should have reading games."

"By doing more oral words, not just those little booklets."

These comments suggested some dissatisfaction with the class, particularly with its materials; but also reflected an implicit commitment to the task of improving reading skills.

Student Questionnaires in Byron/PPC and in Long Beach were completed at intervals throughout the study and provided snapshots of the programs in these two sites.

The particular atmosphere of the detention site was reflected in many of the comments of Byron/PPC students. For example, one such student wrote: "I think that I can learn a lot more out (in?) of this program than I can on the outside school." Several of the Byron/PPC students expressed a desire for more conventional schooling in such comments on how the program could be improved as:

"Learn more from the teacher, not a pamphlet," and

"Get rid of the carels."

These comments were similar to those of students in other sites who wanted a conventional school experience. There was some indication, also, that carels have a negative connotation for some students.

Another Byron/PPC student commented "It's not the school that has to be improved. It's me. I got to start doing my work." This comment suggested that the student was becoming committed to the academic task, or at least, hoped that whoever read his comment would interpret it in this light.

More often than in other sites, comments from students in Long Beach expressed explicit criticisms of the physical setup: too small, too little furniture, the pay-phone, and the like. The idea that improvement could be achieved primarily through better student participation, or commitment--expressed by students in each site--was expressed in Long Beach by two LC-3 students. One wrote that the program could be improved,

"by spending a little more time on making everyone do a little more work because we're in here to get a high school education."

The other wrote,

"By students coming to the Center to try to learn instead of doing nothing."

Much the same thought, related to equipment, was expressed by the student who commented:

"By taking the pool/table out, and other games."

Comments such as these could serve as useful feedback to NEP-2 staff when, as in the case of Byron/PPC and Long Beach, they were registered before the program ended.

#### Effectiveness of Beginning Reading program

In the study of NEP-1 it was found that Beginning Reading was the weakest part of the Reading Program. In an effort to strengthen this part of the program, the Graham Associates substituted the Sullivan Associates Programmed Reading for Adults for the Sullivan Associates Programmed Reading series which had been designed for young children. NEP-2 results were significantly better than NEP-1 results, in that 50 percent of the students who were tested twice made a gain of .4 grades or more. These results were still poorer than those students who entered the NEP-2 program at one of the Graded Reading Levels (see Table 22). It should be noted that because of regression toward the mean, low scores tend to increase and high scores to decrease due to chance alone. The "true" differences are probably greater than shown. In future development of the NEP-2 program additional attention needs to be given to strengthening the Beginning Reading Component.

#### Summary

Improvements in reading and math skills, indicated by retests, provided solid evidence that NEP-2 resulted in substantial academic gains for students of widely varying characteristics. Across the board, NEP-2 students averaged a gain of .9 grades in reading and .7 in math during their first

three months in the program. These results are similar to those achieved in NEP-1.

Table 22 Gains and Losses on Reading Test, 1st Retest, by Reading Program

	Beginning Reading N=40	Graded Reading N=164
Gain <sup>a</sup>	50%	68%
No change	43	17
Loss	8	15
Total	101%	100%

a. A "gain" is defined as increase in test scores of .4 grades between 1st and 2nd administration. "No change" is a change score between +.3 to -.3. A loss is decrease of .4 or more.

Multiple retest results indicated that, except in Byron/PPC, academic progress was maintained in subsequent test/retest periods. Results in Byron/PPC, a declining rate of achievement between the first and second retest, suggested that students in extended detention pose particularly difficult problems of academic motivation and performance.

Solid evidence for the effectiveness of the NEP-2 program was provided by the two NYC-2 programs, Long Beach and Spokane. Average progress during the first three months of participation was almost one grade level for both programs, with an additional one half of a grade for the second three month period. In Long Beach, the only program which was able to test students a third time, the rate of progress continued with a little over a half year gain during the third three month period. The students who participated in the program for nine months, and thus were tested three times, gained a spectacular 1.9 grades in reading and 2.2 grades in math.

Another possible measure of program effectiveness is its holding power. This measure is obviously not relevant

to Byron/PPC because attendance was compulsory, as long as the youth was confined to the detention center, and only marginally relevant to Pacoima. In both Long Beach and Spokane the NEP-2 demonstrated good holding power. Students who left the program before being retested left the program primarily because they had completed high school, passed the GED, or had obtained a job. Only about 12 percent of the total sample left NEP-2 because they lost interest, were ejected, or were terminated from the NYC without getting a job.

The two NYC-2 programs were also exceptionally successful in helping the students complete high school or pass the GED with the percentages ranging from about 43 percent in Long Beach to about 52 percent in Spokane, of those students who were no longer enrolled in NEP. This high rate of success was due in large part to the arrangements made with local school authorities for crediting of completed NEP units toward a high school diploma.

In this study, NEP-2 was found to be an effective educational component in a variety of programs concerned with academic underachievers. The curriculum changes made in NEP-2, based on experience in NEP-1, were found to increase the effectiveness of NEP-2 compared with NEP-1. The program's impact could be increased even more by strengthening the Beginning Reading Program and by developing more effective long term motivational strategies. In some programs, particularly Long Beach and Spokane, it was evident that NEP-2 was successful in keeping a large proportion of the students actively engaged in improving their academic skills for a considerable period of time. There were others, however, whose interest decreased after several months of participation, the most dramatic example being the juvenile detention facility at which the second retest scores actually decreased compared with the initial test. While improvements can be

made in the motivational aspects of the NEP program, it still has greater ability to motivate students and demonstrate improvements in academic skills than do other educational programs which have been studied by researchers.

## APPENDIX A

### DESCRIPTION OF THE NEW EDUCATION PROGRAM (NEP)

The following description is taken from Graham Associates report on their demonstration grant.

The New Education Program, as noted, is based on the Job Corps Programmed Learning System, and covers three broad subject matter areas: reading, mathematics, and advanced general education (i.e., grammar, literature, natural science, social studies, and mathematics).

It is this system, even more than the specific materials used in the three academic areas, which, in the judgement of Graham Associates, has made the New Education Program uniquely successful in meeting the needs of manpower training program clients and other students with a history of school failure.

Following is a discussion of the major characteristics of the Job Corps/New Education Program system.

#### A. Individualized Instruction Format

The goal of any educational program is, of course, to best meet the individual needs of its students. In a traditional school setting, sheer student numbers and lack of individualized materials often prevent teachers from achieving this goal. Students who are unable to respond positively to grouping or other traditional classroom techniques often fall far behind in the primary grades and suffer from severe basic skill deficiencies by the time they have completed elementary school. This lack of success engenders loss of self-confidence, and such students eventually experience great difficulty coping with learning situations in general, and with peer group pressures in particular. Most students in manpower programs and related settings have become educationally disadvantaged in this manner. Upon enrollment, these students view the NEP at best as a "last chance," and at worst, as "just another school." Fortunately, the curriculum has been specifically designed to overcome these problems. The success of the format can, in a large part, be attributed not only to an individualized presentation of materials, but also to an overall system of implementation which facilitates positive learning experiences for each student, regardless of his or her initial skill level. Three characteristics of the program best illustrate this point:

### 1. Diagnostic/Prescriptive Technique

Before beginning work in the various academic areas, each student is given diagnostic tests which effectively identify skill deficiencies or information gaps. From the diagnosis there are explicit steps leading to the proper prescriptive materials. The structure of this diagnosis and placement procedure has distinct advantages for the student. Once testing has been completed, the student immediately skips over any areas in which he has exhibited competence. Duplication of work on skills already possessed is thus eliminated. Moreover, since credit for such achievement is built into the program, the student is rewarded for whatever skill level he has been able to demonstrate. This initial recognition has provided many students with a much-needed positive orientation toward their work.

The process of identifying skill deficiencies has long been part of the education process, but few diagnostic tools have told the teacher precisely where to go from there. The availability of a concise diagnostic/prescriptive procedure is therefore a significant advantage of the New Education Program.

Since the diagnostic tests were created for these study materials, and test results are keyed to individualized student assignments, the program makes it unnecessary for the teacher to search for or develop specialized lessons for each student. Freed from this time-consuming demand, the teacher is able to devote his or her energies to a basically tutorial approach. Such an approach is particularly important because of the many learning difficulties and widely varied skill levels present among students in manpower or similar programs.

### 2. Student-Centered Approach

Once the student has been placed, he is able to proceed with a great deal of autonomy. Since every student works with materials geared to his or her own needs, dependence on the progress of other students is eliminated. As advancement is made in each academic area, the structure of the system continues to promote this independence. Within each level, frequent self-administered progress checks allow the student to recognize personal successes, and facilitate the setting of reasonable goals. Such reinforcement engenders self-confidence by permitting the student to take responsibility for his or her own actions. Thus, by emphasizing feelings of capability and personal accomplishment, the structure of the program itself generates self-motivation, and diminishes peer group pressure.

The net result is a very positive classroom atmosphere which optimizes chances of continuing student progress.

### 3. Open Entry/Exit

The development of curricula which will adequately meet the needs of educationally disadvantaged students is a major concern in current secondary education. More and more, public school administrators are seeing the need for programs which

can accept students at any time, immediately provide them with appropriate courses of study, and release them purely in accordance with individual readiness. Meeting these criteria has always been a high priority in schools related to manpower programs and correctional facilities. Because the NEP curriculum is completely open-ended, it is ideally suited for use at such educational sites. Student entry, advancement, and exit are not dependent on any designated time or school-year schedule. This characteristic of the system solves the kind of problems often associated with the arrival of a new student in the middle of the traditional school semester. Individual programming eliminates pressures on such a student to "catch up." Furthermore, the format permits more positive kinds of motivation than adherence to universal schedules or fixed "graduation deadlines," since completion dates may vary in accordance with each student's abilities and comfortable rate of progress.

In this connection, academic lessons in all curricular areas are presented in small units, in check-list format. This allows for very short-term goal setting and frequent success reinforcement, both strong motivational factors in programs geared to the needs of students who have rarely experienced success in school. This feature also insures that the teacher will have contact with each student at very frequent intervals to check progress and provide one-to-one instruction.

**B. Adaptable to New Materials**

A major strength of the Job Corps/NEP System is its flexibility with regard to the assimilation of "new" materials in all academic areas. Excellent selections are frequently available from outside resources, and creative teachers inevitably bring along a variety of educational tools which they have used successfully in the past. With some time set aside for levelization and coordination, such materials can easily be built right into the existing system. This characteristic permits the kind of natural growth that is essential to the continuing success of any academic program.

**C. Easily Understood System and Format**

Many otherwise progressive educational programs are so complex that it may take months for new teachers to adapt to them. Obviously, a system which perplexes even the teacher will certainly be confusing to the student. Such a situation is particularly frustrating to students who have already had many negative classroom experiences. Fortunately, this is not the case with the New Education Program. The program has been thoughtfully designed and includes thorough and explicit training materials. As a result, the administration and implementation process can be learned in an extremely short time. Each academic component is accompanied by a comprehensive manual. With these as guides and with the assistance of a skilled trainer, it is feasible to have a school fully operational during the second week of staff familiarization. Students, as well, have no difficulty adjusting to the program.

Most are able to proceed with a workable understanding of the format as soon as initial placement is completed.

D. Pre-Developed Record Keeping System

The thorough record keeping system developed for the curriculum is of great benefit to both teacher and student. Each academic component has a specifically designed form for recording student progress. These forms are always available to the student so that he can review accomplishments and plan future work. The teacher uses the recorded information for individualized lesson planning, as a counseling aid, and for administrative reporting. The forms must therefore be kept up to date for the system to operate effectively.

E. Readily Accepted for Credit

Because of its structure, thoroughness, and academic content, the New Education Program has been fully accepted by school districts at all experimental sites. Curriculum specialists from various districts have examined each phase of the program. On the basis of their reports, a relationship has been developed with the local school district at each NEP site, whereby NEP students are able to receive regular high school credits and even the diploma itself, strictly through participation in the NEP, and without the need to take tests or complete other assignments extrinsic to the New Education Program. This is particularly meaningful since most "alternative education programs" never receive official accreditation. The high school equivalency certificate (GED) has therefore been the only possible form of completion offered through these programs. Accreditation, however, gives the student another choice with regard to his or her educational objectives.

Under the structure developed by Graham Associates, a student can either prepare for the GED, or receive units toward a high school diploma. The real prospect of graduation from high school has proven to be the single greatest motivating factor at those NEP sites serving school-age youth and young adults.

F. Relatively Inexpensive

The overall cost of materials is of particular importance to administrators who wish to set up schools. Graham Associates has found the Job Corps Curriculum to be most reasonable in this regard.

## APPENDIX B

### WORK-RELEVANT ATTITUDES

Responses to items 1-7 were structured in a 4-point scale: 1=strongly agree; 2=somewhat agree; 3=somewhat disagree; 4=strongly disagree. Responses to items 8-11 were structured in a 4-point scale: 1=almost always; 2=usually; 3=sometimes; 4=almost never.

1. Becoming a success is mainly a matter of luck; hard work doesn't help very much.
2. The wise person lives for today and lets tomorrow take care of itself.
3. You feel that you have little influence over the things that happen to you.
4. A high school education is worth all the time and effort it requires.
5. Most people cannot be trusted.
6. You are generally enthusiastic about new plans.
7. Most bosses have it in for you and give you a hard time.
8. You feel happy.
9. You get even with people who wrong you as soon as you can.
10. During your spare time, you have something that you like doing.
11. You expect to do well in things you try to do.
12. Would you say that your chances of becoming a respected and law-abiding member of your community are: excellent, reasonably good, not very good, or very unlikely? (1=excellent, 4=very unlikely)