DOCUMENT RESUME

ED 106 473 CE 003 636

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TITLE	A Self-Help Program for One Parent Households. Final Report.
INSTITUTION	Associates for Research in Behavior, Inc., Philadelphia, Pa. Science Center.
SPONS AGENCY	Social and Rehabilitation Service (DHEW), Washington, D.C.
PUB DATE	May 71
NOTE	87p.
EDRS PRICE	MF-$0.76 HC-$4.43 PLUS POSTAGE
DESCRIPTORS	Child Care Centers; Day Care Services; Economically Disadvantaged; Entry Workers; Fatherless Family; Federal Programs; *Females; High School Equivalency Programs; Improvement Programs; Individualized Programs; Job Training; *Office Occupations; *One Parent Family; Program Descriptions; *Program Evaluation; Questionnaires; Summative Evaluation; Tables (Data); Welfare Recipients; *Work Experience Programs
IDENTIFIERS	*Philadelphia (Pennsylvania)

ABSTRACT

This is a final progress report on a two-year project that developed a basic and clerical skills training system for women from AFDC (Aid to Families with Dependent Children) households that included the establishment of a company employing former trainees. The following were important components: comprehensive education; a day-care facility; individualized learning; evaluation and recording; counseling; incentives, and work transition. An overview of the project is found in the introduction. The personnel subsystem section covers recruiting, screening, intake procedures, and demographic and attendance data. The secretarial section focuses on the clerical and GED preparation and student performance data. The child development section includes a description of the day-care center and its objectives and activities in addition to data on attendance and the characteristics of users and nonusers. The marketing section explains the following goals: to provide semi-protected work experience for work transition cases; to perpetuate training programs; and to provide jobs, salaries, and advancement opportunities. The evaluation section offers a description and analysis of the evaluation procedures, using questionnaire responses as well as demographic, process, and criterion data. The pilot study of controlling payment on daily attendance, questionnaire instrumentation, and responses are appended. (JB)

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A SELF-HELP PROGRAM FOR ONE PARENT HOUSEHOLDS

Final Report

ASSOCIATES FOR RESEARCH
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34th and Market Streets
Philadelphia, Pennsylvania 19104

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May, 1971

This investigation was supported in part by grant number 10-P-56013/3-02 from the Social and Rehabilitation Service, U. S. Department of Health, Education, and Welfare, Washington, D. C.

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PREFACE

This is the final progress report on a two-year project to develop a basic and clerical skills training system for women from AFDC households. It has been preceded by two interim reports which have gone into greater detail in some areas than was practical in this report. In fact, we have attempted to limit this report to the essential details necessary to understanding the objectives and the work -- the major changes in direction evolving during the course of the project, the nature of the "ultimate" system, and the data necessary to evaluate the degree of achieved success. We have not attempted to burden the reader with a complete narration of intermediate operational events, a minutely detailed description of the system, or a mass of non-significant statistics. For those persons who would like to have more detailed information about the system as it finally evolved or a framework from which to attempt to set up a similar project, we have developed a companion piece to this report -- A Guide to the Operation of a Basic and Clerical Skills Program for AFDC Trainees.

As the reader will learn, the amount of record-keeping and data-gathering was enormous in this project. In presenting the analyses of these data, we have taken the position that there is no reason to clutter the report with non-significant numbers. Consequently, only those analyses essential for description and evaluation of program methods and accomplishments and/or those reaching an acceptable level of significance are presented and discussed. This level has been chosen with regard to normally accepted practices of statistical inference. We hope that we have not done a disservice to the reader who is normally interested in perusing all statistical outcomes down to the last degree of freedom. We hope that the approach selected has made this a more readable and interesting report without sacrificing that information which allows the reader the freedom of making his own evaluation.

Abraham Wolf, Ph. D. — Principal Investigator

Acknowledgements

The cooperation of many people is necessary for the successful development and execution of an experimental demonstration program of the magnitude of the one reported here. We would like to express our appreciation in particular to those individuals whose guidance, cooperation and help played vital roles in some stage of the project. There are others, too numerous to mention here, whose actions in the aggregate were equally important. To these people -- the welfare caseworkers, WIN counselors, work experience site personnel, and others -- we can only express our appreciation categorically.

Initial recruiting of trainees could not have been successfully initiated without the help of Mr. Arthur Browne, then Director of the Philadelphia County Board of Assistance and Mr. Howard Arnold, then Director of Operation Alphabet for the Philadelphia County Board of Assistance. When training activities for AFDC persons became the major province of the Department of Labor and Industry of the Commonwealth of Pennsylvania through the WIN Program, Mrs. Lucita Mitchell, Acting Director of the program, paved the way for a smooth transition between Welfare and Labor for our program and helped institute a cordial and productive relationship between Associates and the WIN program which eventually led to a successful conversion of the experimental demonstration program to operational program status. Mr. Irwin Chickinsky, the current Director of the WIN program in the Philadelphia region has continually given the program his wholehearted support and endorsement and enabled its continuation through the development of a contract with his regional office.

The site of the program for its two years as an experimental demonstration program was Berean Institute, a vocational school situated in North Philadelphia. The use of this facility was made possible through the help of Dr. William H. Gray, Jr., Chairman of the Board of Trustees. Mrs. Lucille P. Blondin, Principal of the school, shared with us the many problems of day-to-day administration of the program and facility and we wish to acknowledge her help, concern, and tolerance.

During the second year of the program, over 40 students were allocated to the Palmer School in Philadelphia to serve as a control group. We thank Mr. Stanley Damens, Director, for providing a meaningful control situation and for his cooperation with Associates' staff in data gathering.

To create a complicated training system for a hardcore population from scratch and to bring it to operational fruition in two years, requires a dedicated, creative, and energetic staff. The project's Technical Director, Mr. Leonard Feingold, whose dedication to the utility of the principles of behavior modification as a foundation of a truly applied psychology served as the impetus for the project, also provided the constant critical evaluation for reshaping components of the system until they functioned efficiently. The system as it stands

today truly reflects his dedication as an applied behavioral engineer. Miss Stephanie Jackson served initially as on-site administrator, teacher, and project evaluator. Her initial year's experience, thoroughly immersed in the day-to-day running of the project, allowed her to develop a "feel" for the trainees and the system. This perceptivity is reflected throughout this report as Miss Jackson's talent for the English language earned her the right to the major role in its writing. Subsequent to Miss Jackson, Miss Barbara Kidder took over the role as on-site administrator and has performed admirably in helping to refine the record-keeping systems, as backup teacher, and in the establishment of rapport and the development of a communication system with WIN counselors. Other members of the staff who during the two project years performed well and deserve specific acknowledgment are Mrs. Doris Blye, Miss Suzanne Hagner, Mrs. Carolyn Larry, Mrs. Talita Long, Mrs. Carolyn McGonigal, Mrs. Florice Meyers, Mr. Noel Phill, and Mrs. Velma Timbers. The project also benefitted materially from the technical support of Dr. Wallace H. Wallace, the financial guidance of Mr. Joseph C. Zoll, Jr., and the statistical consultation of Mr. F. DeWitt Kay, Jr.

Dr. Robert G. Hayden read the initial draft of the basic ideas and encouraged its submission. Dr. James D. Cowhig, then Chief of the Cooperative Research and Demonstration Grants Branch of SRS and currently with the National Science Foundation, provided encouragement and support during the submission of the proposal and during the first year of the project. Dr. Abraham S. Levine, Acting Chief, Division of Research and Demonstration, SRS, who succeeded Dr. Cowhig as project monitor, facilitated our work by his speedy processing of our requests. His tolerance of our pace during the preparation of this report is also gratefully acknowledged.

In this type of project which requires the melding of so many forces and people it is only right that we acknowledge two other elements: the trainees who came to the program with the hope that we could help them succeed, but exposing themselves yet another time to a set of partly unknown forces -- they could only trust us; and the systematic thinking of the behavioral scientists who formulated the principles and laid the empirical basis for the engineering that allowed us to repay this trust.

OVERVIEW

On May 1, 1968, Associates for Research received a grant from the Social and Rehabilitation Service of the Department of Health, Education, and Welfare to develop a training program in clerical skills for AFDC recipients.

The program had two basic objectives:
(1) it was to take a systems approach -- to deal with the whole complex of trainees' needs, e.g., training, child day care, transition to work;
(2) it was to develop a means of perpetuating itself and continuing the training effort through the establishment of a company employing former trainees.

Both of these goals have been accomplished, though not in the manner originally envisioned, and comprehensive guidelines have been developed for the establishment of other such programs, using currently available materials. The program has been demonstrated to perform better than comparable training currently available in the Philadelphia area, at competitive cost. Two to three times as many trainees under the program obtained jobs and/or job-related credentials as did trainees from a comparable control group. The program is currently operating on a contractual basis.

The systems approach taken incorporates the following components:

1. *Comprehensive education:* Basic skills leading to a high school equivalency diploma, and clerical skills are taught in a coordinated program which facilitates rapid progress in both areas.

2. *Day-care facility:* A day-care facility (not part of the continued program because of funding difficulties) was co-located with the original training program to provide child-care assistance as well as learning experiences for trainees' children.

3. *Individualized learning:* Students are tested and given individualized placement in programmed instructional materials; they work and progress at their own rate, receiving individual attention.

4. *Evaluation and recording:* An efficient, comprehensive record-keeping system has been developed, such that individual and program progress are easily monitored.

5. *Counseling:* Students are regularly counseled and assisted with problems which threaten to interfere with progress.

6. *Incentives:* An incentive system, using redeemable "trading" stamps is used to facilitate performance.

7. *Work transition:* A flexible work experience program has been developed to facilitate ready transition to full-time paying work.

A SELF-HELP PROGRAM FOR ONE-PARENT HOUSEHOLDS

SUMMARY

A two-year project to develop a clerical skills training program for women from AFDC households was undertaken from May, 1968, to April, 1970. As initially conceived, the project was to have two unique features. The training system was to be developed by taking a systems approach, i.e., by incorporating as many social and psychological factors affecting the learning situation as possible. After the training system matured, its continuation was to be partially or totally ensured by revenues generated from a company employing successful trainees.

The first objective has been achieved; a comprehensive training system has been successfully developed. The second objective has also been achieved, though not in the manner originally envisioned. A slower rate of training development than anticipated, and the need for the staff to devote considerable time to the development of a basic skills component mitigated against the formation of the projected company. The training system has, however, been perpetuated beyond the term of the grant period, which ended April 30, 1970. Since then the system has continued to train AFDC mothers at an average monthly enrollment of 40, under contract to the Bureau of Employment Security of the Department of Labor and Industry of the Commonwealth of Pennsylvania.

The major accomplishment of this project has been the development of the training system for basic and clerical skills. This system incorporates the following elements.

1. *Comprehensive education.* The program is designed to train students toward high school equivalency diplomas (GED) and jobs simultaneously. This is felt to be especially valuable in that it consolidates training, eliminates the problems to the students of having to attend two separate programs either simultaneously or in succession, and allows a better meld of the learning material -- e.g., business math and business English can be taught as preparation for both the GED and a job.

2. *Day-care facilities.* Although no longer part of the system because of funding difficulties, it is recommended that a day-care center be set up at the same location as the school to care for trainees' preschool children aged three or over (the minimum age allowed by state regulations for such centers). The day-care staff should provide training in basic skills, classroom behavior, and recreational and learning enrichment activities as well as custodial care.

3. *Individualized learning*. Because trainees drawn from the AFDC population will be heterogeneous in age and education (in the project, trainees ranged from 17 to 56 in age, from 5th grade to 10th in achievement), and will typically have problems and obligations far exceeding those of the average public school student, training was individualized as much as possible.

All students are tested with the California Achievement Test (CAT) on entering the program and begin with texts appropriate to their entering level. Since this placement is not always perfectly accurate, students can be set back to more elementary work if they have difficulty, or can take tests to by-pass work if they feel the material to be too easy. Both of these situations will occur.

Wherever feasible, work is done in programmed texts which require the student to answer questions as she works and which allow each student to work on her own, so that each can be working on the material most appropriate to her. Typing is also taught individually, with the help of tape-recorded lessons, so that each student can progress at her own rate, leaving the teacher with more time to circulate among students, helping them with individual problems.

4. *Evaluation and recording*. Detailed records are kept, and student progress is constantly examined, both for individual diagnostic purposes and program evaluation purposes. Each student has a folder in which are kept record sheets of all textbook work. Attendance is kept by the program secretary and typing and clerical records by the secretarial teachers. Tests are given frequently, and every lesson contains a brief quiz which must be scored by aides before the student is allowed to go on in her work. Thus, the students' progress is constantly being observed and problems can be caught and remedied immediately, saving the student both time and frustration. In order to ensure adequate learning, students are required to pass individual lesson quizzes at 90% and major tests at 85%. Students repeat work and/or are tutored until they can achieve this; this greatly facilitates the understanding of later material.

5. *Counseling*. Students are encouraged to approach any staff member with a problem, and any staff member who notices unusual absences, problems with work, etc., may approach a student. Services range from special help with academic-related problems, to helping straighten out delays or apparent discrepancies in welfare benefits, to advice and help in obtaining family planning assistance. Communication is maintained on a regular basis with WIN and DPA caseworkers, whose cooperation and assistance can be invaluable.

In addition to formal counseling and direct assistance with problems, staff members maintain informal contact with students, which greatly facilitates communication and avoids a stiff, formal, student-staff dichotomy.

6. *Incentives*. To increase both classwork and homework production, and to promote work-related behaviors such as regular attendance and promptness, and to help accustom the trainee to receiving rewards for

both quantity and quality of output, an incentive system is used. Although initially direct monetary payments were used, e.g., 25¢ for each quiz score of 90% or better, a more powerful and less costly system has been evolved; one which combines symbolic and material reinforcement. By using this system -- stamps which culminate in the purchase of some desired item specified by the student -- the same level of production can be obtained from the student at one-fifth the cost of the initial monetary incentive system. The data on the efficacy of an incentive system per se clearly indicate its usefulness in increasing the output of homework and classwork.

7. *Work transition.* Since few of the students have work experience of any kind, and many express great anxiety about their ability to survive in an office job, a work experience-work transition system has been set up. As soon as students begin to show signs of being work-ready, they are placed in work-training positions developed with the assistance of the WIN program. They are not released from school, however. Depending upon their performance needs, they may remain on work experience full-time, coming into school occasionally for special assistance; they may spend half the day at work and half in school; or they may be brought back into school full-time for a period before being returned to work experience. During this time students are given final brush-up work for the GED examination if they need it, and receive intensive training in the skills needed to pass the Civil Service Examination. The student is aided through these steps to a job, and given assistance with her application for a civil service rating once she has passed the test. If her passing score is low, she is given further training and encouraged to re-take the test to improve her score and thus her standing on the civil service listings. Students are moved into full-time paying jobs in several ways -- some are hired by the office in which they do their work experience; others are called up from the civil service lists; a few jobs are obtained by means of contacts with private industry. Students are given encouragement and assistance throughout the process of applying for and beginning a job and contacts are made with potential employers and supervisors where appropriate.

Associates' trainees were comparable in age and number of children to the Philadelphia AFDC population at large; 84% had dropped out of school between the 9th and 11th grades, as have most Philadelphia AFDC mothers (55%). Seventy-eight trainees were enrolled, but only 69 remained long enough to actively partake of training. The "average" trainee was in her late 20's or early 30's, had 3-4 children, had dropped out of school around the 10th grade, and had an achievement level about equal to that of a beginning seventh grader.

A little more than half of Associates' trainees completed the program. Of those who did not, an estimated half found jobs, or eventually returned to training, for an effective dropout rate of about 25%. About one-third of dropouts reported pregnancy and/or lack of child care as reasons for leaving. Another third cited such reasons as nerves, boredom, discouragement, lack of interest, or lack of progress. The remainder

cited personal or family problems, or health problems (either theirs, or their children's).

Of the 36 trainees who remained to the end of the program, 24, or two-thirds, obtained jobs -- the ultimate criterion of success. Many of the remaining 12 are still in training, and have recieved either a GED diploma or a civil service rating, or both.

One group of Associates' trainees was matched to a control group of the same size and of comparable age, family size, education, achievement level, and IQ. The control group received training in the same areas as Associates' trainees (basic and clerical skills) but through other sources available in the Philadelphia area. Associates' trainees did better than control trainees in obtaining jobs (by a factor of about 2), and in obtaining high school equivalency diplomas and civil service ratings (by a factor of about 3). Associates' trainees made greater gains in academic achievement than control trainees as measured by the California Achievement Test, although the differences in the groups' final achievement levels were not statistically significant. Dropout rate was the same in both groups, and attendance was low in both groups (50 - 60%). Attendance in Associates' group was in fact lower than in the control group, indicating that Associates' trainees achieved their greater gains in less actual training time.

Estimated training costs for Associates' program, now that it is established and operating, are comparable to, or less than, those for the training received by control trainees.

EXPERIMENTAL DEMONSTRATION PROGRAM:

SELF-HELP PROGRAM FOR ONE-PARENT HOUSEHOLDS

INTRODUCTION

The following is an excerpt from the proposal which resulted in a two-year experimental demonstration program undertaking to train welfare mothers in clerical skills:

> The proposed program has four major features:
>
> 1) It proposes to attack a major hard-core segment of an indigent population--the household with only one adult, usually the mother. The program would cover unwed mothers, widows, widowers, and divorced or separated parents who have care of the children.
>
> 2) A unique feature of this program is that it is designed to be self-supporting, and capable of being operated in large part, if not wholly, by its recipients.
>
> 3) It is proposed to take a general systems approach -- that is, an attempt to incorporate all salient aspects of the problem, thus avoiding a situation in which correction of part of a problem is nullified by other uncorrected facets of the larger problem.
>
> 4) After government support is no longer needed, members of the staff will continue to be active in the program, contribute guidance, and be a part of the non-profit company established to market the services of the trained personnel. We intend to make a long-term commitment to the program. Again, it is of minimal use to set up a program, no matter how valuable, unless one spends the time to carefully train personnel adequate to maintain it and retains a consulting relationship, at least, to provide continuing guidance and enthusiasm.

This statement has been included to serve both as an introduction to the final report and as an aid to its evaluation.

The program began on May 1, 1968, and terminated on April 30, 1970. The first 6 - 8 weeks of the project were devoted to hiring and orienting staff; acquiring equipment, supplies, and educational materials; recruiting students; and developing tentative curricula, methodology and recording instruments.

Students were recruited through the Title V program then being administered by the Philadelphia County Board of Assistance. Most of the students enrolled in this program lacked not only vocational skills but also a high school diploma. For this reason, a two-part program was established to train women both in the basic skills necessary to obtain a high school diploma and the clerical skills necessary to obtain a job. All students were AFDC recipients -- the group described in item 1 of the proposal excerpt.

In accordance with item 3 of the excerpt, a number of special features were incorporated into the program:

1. *Comprehensive education.* As mentioned earlier, the program was designed to train the students toward high school equivalency diplomas (GED) and jobs simultaneously. This was felt to be especially valuable in that it consolidated training, eliminated the problems to the students of having to attend two separate programs either simultaneously or in succession, and allowed a better meld of the learning material -- e.g., business math and business English could be taught as preparation for both the GED and a job.

2. *Day-care facilities.* A small day-care center was set up at the same location as the school to care for trainees' pre-school children aged three or over (the minimum age allowed by state regulations for such centers). The day-care staff provided training in basic skills, classroom behavior, and recreational and learning enrichment activities as well as custodial care.

3. *Individualized learning.* Because of the heterogeneous nature of the trainees -- who ranged from 17 to 56 in age, from 5th grade to 10th in achievement, and who typically had problems and obligations far exceeding those of the average public school student -- training was individualized as much as possible.

All students were tested with the California Achievement Test (CAT) on entering the program and began with texts appropriate to their entering level. Since this placement was not always perfectly accurate, students could be set back to more elementary work if they had difficulty, or could take tests to by-pass work if they felt the material to be too easy. Both of these situations occurred occasionally.

Wherever feasible, work was done in programmed texts which required the student to answer questions as she worked and which allowed each student to work on her own, so that each could be working on the material most appropriate to her. Typing was also taught individually, with the help of tape-recorded lessons, so that each student could progress at her own rate, leaving the teacher with more time to circulate among students, helping them with individual problems.

4. *Evaluation and recording.* Detailed records were kept, and student progress was constantly evaluated, both for the benefit of the student and to fulfill the requirements of an experimental program. Each

student had a folder in which were kept record sheets of all textbook work. Attendance was kept by the project secretary and typing records by the secretarial teachers. Tests were given frequently, and every lesson contained a brief quiz which had to be scored by aides before the student could go on. Thus, the students' progress was constantly being observed and problems could be caught and remedied immediately. saving the student both time and frustration. In order to insure adequate learning, students were required to pass individual lesson quizzes at 90% and major tests at 85%. This also helped in the understanding of later material.

During the latter half of the project, a data storage and retrieval system was set up, using the computer facilities at the University of Pennsylvania. Most of the data from the program -- demographic data, achievement test scores, educational attitude questionnaires, textbook lessons and tests, attendance, incentives earned, and GED scores -- were punched on cards and fed into the computer to permit the kind of detailed analysis of the program which would have been a virtually insurmountable task if performed by hand.

5. *Counseling*. Early in the program, each student was assigned to a staff counselor who formally contacted the student at regular intervals. Once lines of communication had been established, however, and some of the students had received concrete assistance from staff members, the formal assignment of students to specific staff members was dispensed with. Students were encouraged to approach any staff member with a problem, and any staff member who noticed unusual absences, problems with work, etc., might approach a student. Services ranged from special help with academic-related problems, to helping straighten out delays or discrepancies in welfare benefits, to advice and help in obtaining family planning assistance. Communication was maintained with WIN and DPA caseworkers, whose cooperation and assistance was invaluable.

In addition to formal counseling and direct assistance with problems, attempts were made to maintain informal contact with students to avoid a stiff, formal student-staff dichotomy and to facilitate communication.

6. *Incentives*. Early in the program, when relatively few students were in attendance, in-class performance and level of output were quite satisfactory, but few students continued to do homework after the first week or so. This was felt to be important, since a great deal of textbook work was required before most students would be ready for the GED and office work -- and part of class time was taken up with typing.

To increase homework production, and to help accustom the student to receiving rewards for both quantity and quality of output, an incentive system was introduced. For each lesson of homework turned in -- provided the score on the accompanying quiz was 90% or better -- the student received a small payment (25¢ to 75¢ depending on the difficulty and size of the lessons) at the end of the day. This resulted in a rapid increase in homework production and as the program developed,

modifications were made in the incentive system to help develop other school- and work-related habits. For example, students were required to stamp their homework in a time clock before 9:15 to receive payment; later they were required to do a given number of classwork lessons before receiving pay for homework; special bonuses were given for large amounts of classwork production, or for high levels of promptness or attendance. The rules were always spelled out clearly to both students and staff so that individual staff members were never required to make subjective decisions regarding a student's performance.

7. *Work transition.* Since few of the students had work experience of any kind, and many expressed great anxiety about their ability to survive in an office job, a work experience - work transition system was set up. As soon as students began to show signs of being work-ready, they were placed in work-training positions developed with the assistance of the WIN program. They were not released from school, however. Depending upon their performance needs, they might remain on work experience full-time, coming into school occasionally for special assistance; they might spend half the day at work and half in school; or they might be brought back into school full-time for a period before being returned to work training. During this time students were given final brush-up work for the GED examination if they needed it, and received intensive training in the skills needed to pass the Civil Service Examination. The student was aided through these steps to a job, and given assistance with her application for a civil service rating once she passed the test. If her passing score was low, she was given further training and encouraged to re-take the test to improve her score and thus her standing on the civil service listings. Students were moved into full-time paying jobs in several ways -- some were hired by the office in which they did their work experience; others were called up from the civil service lists; a few jobs were obtained by means of contacts with private industry. Students were given encouragement and assistance throughout the process of applying for and beginning a job and contacts were made with potential employers and supervisors where appropriate.

In the original proposal and the two interim reports submitted, the project has been discussed in terms of five subsystems: *Personnel*, which covers the nature of program participants, their entry into, attendance during, and departure from the program; *Secretarial Training*, which covers curriculum, teaching methods, and progress in obtaining academic and clerical skills, the GED, civil service ratings, and jobs (the name is a holdover from the proposal, written before it became clear that academic preparation for the GED would be a major feature of the program); *Child Development*, which covers the activities of the day-care center; *Evaluation*, which covers data-gathering methodology and use as well as analysis of the effectiveness of both the total program and individual aspects of it; and *Marketing*, which covers progress in setting up a self-sufficient clerical business in order to help support the program past the two years of government funding, and includes job placement efforts as well as success in continuing the program past the original two-year funding period.

These divisions will be retained to maintain continuity with the proposal and the preceding reports. The content of the discussions under each heading may in some instances differ significantly from what was expected when the proposal was written. The discrepancies, however, are expected to provide valuable information about what can be anticipated and what is feasible given the student population and the nature of the program.

PERSONNEL SUBSYSTEM

This section of the report covers the following areas:

(1) recruiting, screening and intake procedures;
(2) nature of the student population;
(3) attendance;
(4) dropout rate.

Recruiting, Screening, and Intake Procedures

The first 29 students enrolled in Associates' program were recruited through the Philadelphia County Board of Assistance. The Board of Assistance at that time administered a work incentive program under Title V of the National Education and Security Act, providing counseling, child care and transportation funds, a monthly incentive, and assistance in obtaining jobs, training, and/or work experience. Most of the students obtained through the Board of Assistance were transferred to Associates' program from part-time night school courses in GED preparation. At the time these students were recruited (July - October, 1968), Associates obtained from the Board of Assistance data from a study which randomly sampled the total AFDC (Aid to Families with Dependent Children) population in the city. These data were compared with data gathered from Associates' students to obtain an estimate of the extent to which they differed, if at all, from the AFDC population at large. Tables 1a - c below show the age, education and number of children in the two groups.

Table 1: Comparison of students from Associates' program with random sample of total AFDC population

	Total AFDC Sample		Associates' Program	
	Number	Per cent	Number	Per cent
1a: AGE				
under 25	144	22.3	20	26.0
25 - 29	118	18.3	18	23.4
30 - 34	130	20.2	19	24.7
35 - 39	96	14.9	11	14.3
40 - 44	89	13.8	5	6.5
45 or over	68	10.5	4	5.2
Sample Size*	645		77	
1b: EDUCATION				
less than 8th grade	76	15.6	3	4.1
8th grade	51	10.5	5	6.8
9th - 11th grade	269	55.3	61	83.6
12th grade or more	90	18.5	4	5.5
Sample Size*	486		73	
1c: NUMBER OF CHILDREN				
One	130	18.8	12	15.8
Two	165	23.8	14	18.4
Three	123	17.8	15	19.7
Four	92	13.3	8	10.5
Five	76	11.0	14	18.4
Six	48	6.9	8	10.5
Seven or more	58	8.4	5	6.6
Sample Size*	692		76	

*Although Associates' program enrolled a total of 78 students, complete data was not available on all. Typically WIN or Title V counselors supplied demographic data on students at the time of referral, but this was often missing or incomplete and program staff attempted to fill in the gaps. Failure to obtain some data occurred because several students dropped out of the program almost immediately and could not be contacted.

The AFDC sample included 692 families. Data on number of children in the home were available on all of these; age data were obtained from 645 of these families in which the mother resided in the home with the children; education data were available for 486 of these mothers.

Chi-square tests performed on the data in the preceding tables indicate that the population of Associates' program did not differ significantly from the total AFDC sample in age ($.30 > p > .20$) or in number of children ($.50 > p > .30$). The groups did, however, differ significantly in education ($p < .001$). Visual inspection of the table indicates that the population of Associates' program included very few people at the educational extremes; less than 10% either completed high school or dropped out prior to completing the 8th grade. This composition is reasonable in view of the nature of Associates' program, covering GED and clerical preparation simultaneously. Elementary school dropouts are likely to need more basic training before being able to benefit from the program, and highschool graduates are more likely to be very close to job-ready than dropouts. Achievement testing is very useful in identifying exceptions to this generalization. One student who had completed three years of college obtained an achievement level of 7th grade; another who had dropped out of school at the end of the sixth grade obtained an achievement level of better than 9th grade.

Students were selected in cooperation with Board of Assistance caseworkers, who referred from their caseloads those people who expressed some interest in clerical training. The first six students, enrolled during July and August, 1968, were selected, on the basis of caseworkers' estimates, to represent a wide range of ability, achievement, and motivation levels. These were to serve as pilot students, to permit staff to obtain preliminary estimates on both the kind of student who could be benefitted and the effectiveness of various materials and methods before taking on a full complement of students. Prior to entering the program, students took the California Achievement Test (CAT) to provide placement information and a base against which to evaluate progress later.

In September, 1968, another group of students, recommended by Board of Assistance caseworkers, was tested. At this time an educational attitude questionnaire was added to the intake procedures. Only 23 of these students were actually enrolled in Associates' program. The remainder, matched with the enrollees in age and achievement were to serve as a control group, continuing with the training program in which they were enrolled at the time (part-time GED preparation classes in virtually all instances). Assignment to control or enrollee status was randomly determined within the restriction that the two groups be of equivalent age and achievement level.

This latter group of students was enrolled during October, 1968, the final month of operation of the Board's Title V program. The WIN program, which performs similar functions, was to take over at the beginning of November. This entailed a transfer of operations from welfare (Philadelphia County Board of Assistance) to labor (Bureau of Employment Security) under the Social Security Act of 1967. The complexity of the transfer created delays such that WIN did not actually begin operations until December, 1968. This meant that

for the month of November WIN enrollees did not receive their monthly supplementary incentive of $50.00 (reduced to $30.00 when WIN began operation). In addition, child care and carfare allotments were not available for most WIN enrollees; these were obtained for students in Associates' program, though checks were delayed.

By December, 1968, the WIN program began active operation and further recruitment of students was done in cooperation with WIN. In February, 1969, an additional eight students were tested and enrolled in Associates' program. At this time staff learned that during the hiatus between the two programs, most of the control group students had dropped out--only eight had made the transfer and were entered in the WIN program. Since original plans had called for expansion of Associates' program during the second year, steps were taken to establish a more adequate control group which would receive the same kind of training offered by Associates' program but would be trained through the conventional facilities available in the city. Arrangements were made with Palmer School--a secretarial training school in center city Philadelphia which had accepted AFDC enrollees in the past and had experience with MDTA training programs--to take a group of about 40 students. Those students without high school diplomas would receive GED preparation at the city's evening classes.

A total of 104 potential trainees, referred by WIN counselors, were tested beginning in April, 1969. Of these, three were rejected, having CAT achievement levels below 5th grade. This was an arbitrary decision, based on the opinion that a trainee with an achievement level this low would benefit more by first enrolling in one of the basic literacy courses offered by the city school district. One trainee of those previously tested had entered with a score below 5th grade, but had dropped out during the first week, so that no real data was available. Another 17 potential trainees either refused or were unable to accept training for various reasons. Of the remainder, 41 entered Associates' program and 43 entered Palmer School. Assignment was determined by pairing students on the basis of CAT scores and flipping a coin to determine which went to Palmer and which to Associates' program (on a very few occasions, the choice was forced by a child care or transportation problem which prevented attendance at one of the programs). The unequal numbers in the groups are a result of last-minute failures to accept training. Trainees were enrolled in groups of 6 - 12 over a period from May 12, 1969, to July 15, 1969. Groups of comparable size and composition entered Palmer and Associates' program simultaneously.

As this history indicates, all trainees were recruited through either Welfare or Labor counselors. All took the California Achievement Test, all supplied demographic data on age, number of children, ages of children, previous schooling, and previous work experience, and all but a few answered an educational attitude questionnaire. Trainees were then contacted by their caseworkers and/or Associates' staff and told when and where to report for training. When the trainee arrived

at Associates' program she was given a brief orientation covering information about the school program, hours, and regulations, and was immediately assigned academic texts; typing class began on the second day. During the first day, a staff member worked very closely with the students--showing them how to use the texts, how to turn in work, where and when to take tests, how to keep track of assignments, how to get tutoring help, etc.

Nature of the Student Population

For the purposes of description, the total student enrollment will be divided into three groups. Group I contains the original first-year students in Associates' program; Group II contains the second year students; and Group III contains students who entered Palmer School as a control for Group II.

The data to follow will permit an assessment of the population for which a program such as Associates' is appropriate; the separation of the population into groups will permit an assessment of the comparability of experimental and control groups, necessary to the interpretation of results.

Table 2: Demographic Data Summary

GROUP	I: Associates First Year	II: Associates Second Year	III: Control for Group II
Mean age	33.4	27.9	28.7
Mean Number Children	4.4	2.9	3.6
Mean Years Public School	9.8	10.1	10.3
Mean CAT Entry Score	7.0	7.5	7.6
Mean IQ (Otis)	85.8	91.1	90.3
Previous Work Experience (%)	46%	71%	72%

Differences among the groups are discussed in some detail in the evaluation section. "Average" trainees were in their late 20's and early 30's, had 3-4 children, dropped out of school around the 10th grade, and at the time of entering the program had academic achievement levels approximately equal to average seventh graders. All trainees were women and AFDC recipients. All but one, enrolled in Palmer, were mothers (in this latter instance the trainee was receiving AFDC assistance under a grant to her mother, as was one trainee in group II who did, however, have children of her own.)

Attendance and Dropouts

Mean attendance of students in all three groups was, by public school or work standards, low. Table 3 presents attendance and dropout figures for all three groups.

Table 3: Attendance and Dropouts

	I: Associates First Year	II: Associates Second Year	III: Control for Group II
COMPLETED PROGRAM			
Number	18 (56%)	18 (49%)	19 (48%)
Mean Days Attended	179 (8.3mos.)	112 (5.2mos.)	134 (6.2mos.)
Mean Per cent Attendance	52%	59%	64%
DROPPED OUT			
Number	14	19	21
Mean Days Attended	64	46	52
Mean Per cent Attendance	35%	53%	60%
TOTAL GROUP*			
Number	32	37	40
Mean Days Attended	129	78	91
Mean Per cent Attendance	47%	57%	63%
(EARLY DROPOUTS)			
(Number)	(5)	(4)	(3)
(Mean Days Attended)	(5)	(4)	(4)
(Mean Per cent attendance)	-	-	-

*In each group, a few students who attended fewer than 10 days have been excluded from these figures (5, 4, and 3 in Groups I, II, and III respectively). These students were felt not to have attended sufficiently long to have actively participated in training. Typically, they came one or two days and disappeared--or came several days, but at spaced intervals, often leaving before the end of the day. In at least one instance, the student declared that she had no desire to be in the program and had agreed to enroll only at the insistence of her counselor.

In reporting dropout figures, no correction has been made for trainees who moved away, entered another type of training program, left because of pregnancy, or obtained jobs on their own. While this would reduce the reported dropout rate considerably, some of this data is available only through informal contacts among students, ex-students and staff. Associates' staff was unable to maintain such close contacts with control students and the control school itself did not do so. Since there was no way of obtaining the data for all three groups with equal

reliability, a fair comparison can be made only by an objective, somewhat arbitrary criterion for completion for all three groups. The criterion for completion of the program, for the purposes of comparison, was maintenance of attendance into the final two months of the experimental grant, or acceptance of a program-related job prior to that.

Because of the relatively small size of Associates' program during its first year and the consequent close contacts maintained with students, information is available on very nearly all students who dropped out of the Group I, the first-year Associates students. A survey of what happened to these students will give an indication of the "true" drop-out rate. Of 37 students accepted for enrollment, 33 are considered as actually having enrolled--that is, having attended the program for 10 days or more and thus giving some evidence of a genuine desire to enroll. Of these 33 students, 18 completed the program under the criterion mentioned above. All have obtained either a GED, a Civil Service rating or both; 12 have obtained jobs as of this writing. All but one of the remaining six have continued to come in to school and maintain contact with the program, upgrading their skills.

Of the 15 students considered dropouts under the criterion used, four are now working (clerk, teacher's aide, hospital laboratory assistant, factory work); two have returned to the program; one left to attend another program offering courses she wanted. Thus only eight students of the 33 can be considered dropouts in the sense that they did not receive either training or work. Of these two could not be contacted, three gave severe family or health problems as reasons for leaving the program, and three indicated that they were discouraged, could not keep up, or felt they were not progressing. Viewed in this way, the dropout rate is 8 out of 33, or 24%, instead of 15 out of 33, or 45%

While any attempt to discuss reasons for the relatively small difference in attendance must be speculative, several points are worth mentioning. At about the time Groups II and III entered training, the WIN program announced an increase in the stringency of its attendance requirements, which may have contributed to the higher attendance of these two groups. In addition, Associates' program operated without air conditioning during its first year, and experienced numerous troubles with the heating system during the winter; both problems were made particularly severe because of the poor condition of the building in which the school is housed. Air conditioning was available during the second year, and while heating problems occurred again the second winter, they were somewhat less severe. Associates' program also required more hours of attendance per day than did the control program, since it offered both academic and vocational training. Since control students left school at 1:30, and Associates students at 3:00, it may have been easier for the former to attend school on days in which problems came up. Academic training for control students was given during the evening, two nights per week. Attendance data is unfortunately not available for this training. The Philadelphia School

District offers GED preparation at local high schools in several locations and students without GED's attended the classes nearest them. Because of high personnel turnover, data on these students is incomplete and unreliable.

One of the reasons for concern about attendance, other than the obvious interest in having students progress as rapidly as possible, was the belief that school attendance habits would be important in maintaining a job later. However, as of this writing, 24 of Associates' students have obtained jobs, and several have been on the job for nearly a year. No student has been dismissed for poor attendance -- and attendance levels such as those reported while in school would clearly be grounds for dismissal from a job. With the permission of the working students, Associates was able to obtain attendance figures for four who had been working for five to seven months. Their attendance while in school was 75%; the attendance of these same students at work was 97%. All absences were excused. Apparently, work is perceived differently from school and little difficulty is experienced in making this transition in attendance habits.

The problem of increasing attendance deserves more concentrated effort. While attendance at the level noted in Table 3 during training seems not to be detrimental to the students themselves in terms of affecting their ability to maintain attendance on the job, increased attendance would have a number of benefits beyond those of the individual student. For example, those students in Group II who completed the program were in training 9-12 months; in terms of actual days attended, they received an average of 5.2 months of training. If attendance rates could be markedly increased, then, students could be placed on the job much sooner, and openings would then be created for more students.

Associates has been able to continue the training program begun under the experimental demonstration grant by means of a contract with the Department of Labor and Industry of the Commonwealth of Pennsylvania. A number of these students have already completed training and obtained jobs; a comparison of these with students trained under the grant was made to determine whether or not the experience gained under the grant had resulted in increased training efficiency. Table 4 compares students obtaining jobs under the new contract with a similar group of students trained under the grant.

Students enrolled under the contract are recruited, screened, and enrolled in the same way as students enrolled under the experimental grant with two exceptions: enrollees no longer complete the Education Questionnaire, and must make a CAT score of 7.0 for acceptance (they are allowed up to two re-takes to raise their score, however.)

Table 4: Comparison of students obtaining jobs under grant and under contract

	Experimental Grant	Operational Contract
Number of students*	11	11
Mean entering CAT score	8.3	8.3
Mean per cent attendance	64%	64%
Mean days attended	158 (7.3 months)	83 (3.8 months)

* The number of students to be compared was set at 11, since at this writing 11 students have obtained jobs under the operational contract.

As the table indicates, there appears to be a marked increase in efficiency, but not as a result of increased attendance rate. It should be noted that the figures probably over-estimate the actual increase in efficiency. The first 11 students obtaining jobs under the operational contract are compared with 11 earlier students, deliberately selected because of their similar CAT scores. It may well be that some part of the apparent increased efficiency is due to the fact that the earliest students to obtain jobs are as a group somewhat harder-working and better-motivated, despite their identical attendance record.

Until very recently, efforts to increase attendance had been primarily indirect. Incentives were offered for homework production, and later classwork production was tied to homework, and both were required to receive incentives. This placed a premium on attendance, since those who attended regularly would obviously be able to turn in more work and earn more incentives, but attendance was not rewarded directly. Since the operational program began, attempts to reward attendance directly have been made; stamps are awarded weekly for attendance levels of 80 to 100%. Table 4 would seem to indicate that this has not been effective; however, the operational contract does not provide funds for the day-care center which was associated with the original experimental grant program. It may well be that the addition of incentives for attendance and the loss of the use of a day-care center have had opposing effects on attendance and have, in effect, cancelled each other out.

Associates' staff has recently been investigating another potential means of increasing attendance, through the distribution of child care and carfare payments. While in training, students receive bi-weekly checks for child care and carfare as well as $15 incentive checks without which the costs of attending a training program would be prohibitive for them. These checks are not fully contingent upon attendance in the program. If a student's attendance reaches the

minimum criterion set by WIN for retention in the program, she receives full payment--if not, she receives no payment--no provision is made for graded payments. In addition, because of the paper work involved, the system is delayed in its response. If a student's attendance has been at about the criterion level for a period of time, slips well below for a period of two weeks, then returns to the earlier level, there will be no change in her checks at all. The consequence of this system is that if a student is having a bad day, is discouraged, or just doesn't feel like going to school, she can easily afford to miss a day or so; if she does not do this to great excess, she is even rewarded for doing so. She will be retained in the program; she will continue to progress and, though her progress may be slowed, there will be no immediately apparent consequences; there will be no reduction in her payments--and in fact, if she stays home, she will have a small amount of extra money since she will not have to pay carfare (nor child-care if she happens to have a daily payment arrangement with her sitter).

Jobs do not, of course, work this way. Some paid time away from work is available for genuine illness, but this time is very limited. Typically, missing a day's work means missing a day's pay. In addition, the level of attendance required to keep a job is considerably higher than that required to remain in a training program. It would appear then, that an excellent means of increasing attendance would be to distribute child-care, carfare, and incentive payments directly on the basis of attendance, in much the same fashion as an employer does, with allowance for a specified number of days of "sick leave." This would require, in addition to approval of the government agencies involved, the development of a relatively simple, efficient record-keeping system. It might also be desirable to allow, at least initially, a greater number of "sick days" than is typically allowed on a job. It is reasonable to expect that students may need some time to adjust to this kind of situation, and to develop means of handling problem situations without missing school. Extra effort might also be required on the part of agency counselors and/or school staff in assisting students in handling such problems.

A brief pilot experiment has been performed, since Associates' program became operational, investigating the potential effectiveness of payments directly based on the number of days attended. The experiment resulted in a sizable increase in attendance, indicating that it may be well worth pursuing further. A report of the experiment may be found in the appendix.

A different view of attendance is presented in Figure 1, which shows weekly per cent attendance for all three groups from October, 1968, to the end of the grant in April, 1970. October is used as the starting date, since prior to this, only a small number of pilot students were taken into the program (4 in July and 2 in August); the acceptance of 23 more trainees in October increased the total enrollment sufficiently so that it was possible to obtain more stable attendance figures.

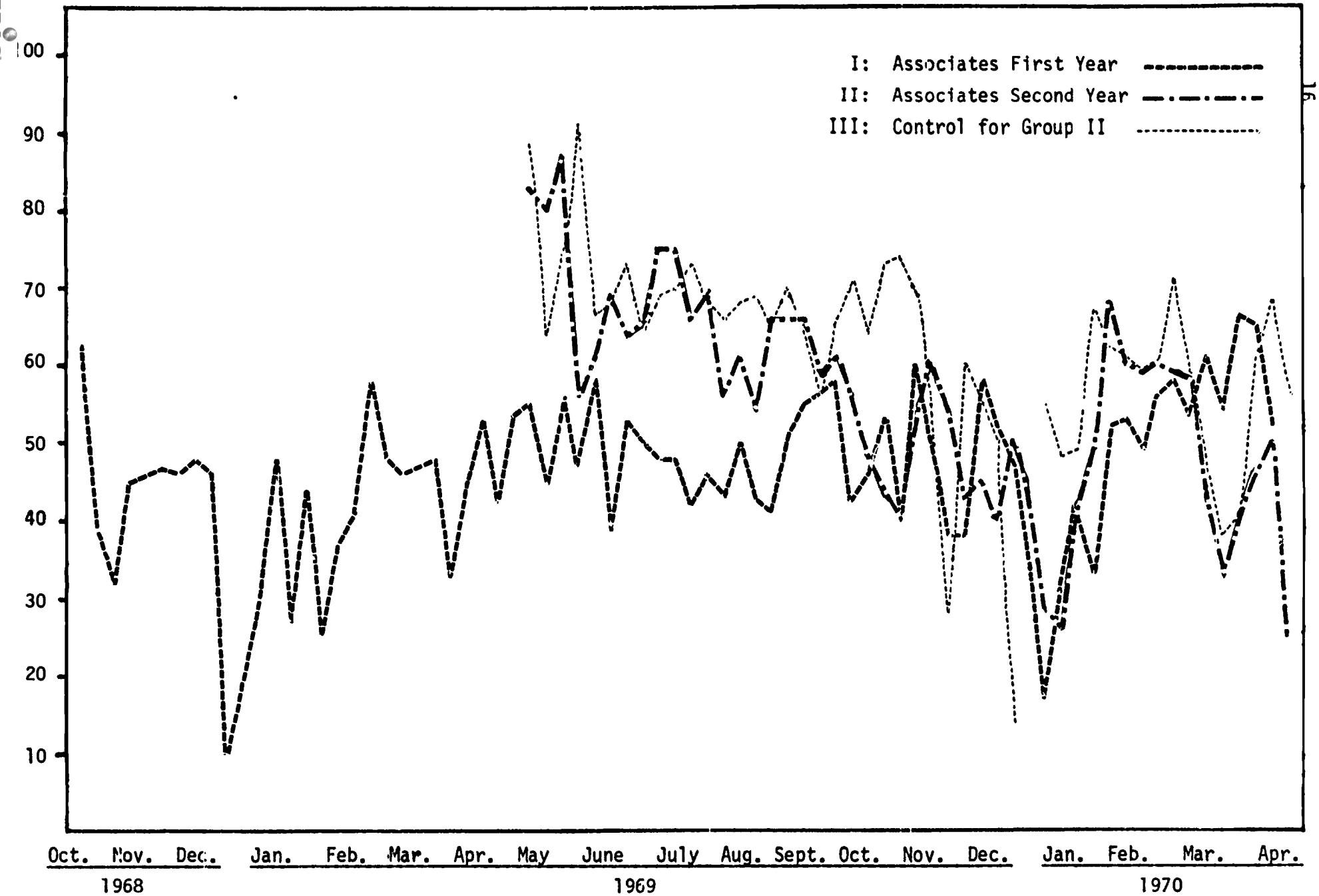

Figure 1: Weekly per cent attendance, October, 1968 through April, 1970.

Attendance was erratic for all three groups. Group I's winter attendance was better the second year, when heating problems were not so severe. It is also possible that the improved attendance was a result of the elimination of dropouts from the group, leaving the better attenders in the program. Both Groups II and III had much higher attendance early in the program than later. Possible explanation for the initially high attendance of Groups II and III is that at the time these groups enrolled, a strongly worded announcement was made by the WIN program, and meetings were held with trainees, stating that 90% attendance would be required for retention in training programs. This may have resulted in the initial high attendance which then dropped off somewhat when it was discovered that the regulations were not to be rigidly enforced and that exceptions could be made. There are sharp drops in attendance with all three groups in mid-winter, around Christmas time.

Summary

Trainees were recruited first through the Title V program administered by the Philadelphia County Board of Assistance and later through its successor the WIN program administered by the Department of Labor and Industry of the Commonwealth of Pennsylvania. Trainees took the California Achievement Test and filled out an educational attitude questionnaire prior to entering. The only admission requirement imposed by the program was the achievement of a grade level score of 5.0 on this test. Trainees were enrolled in small groups of 5-10 to facilitate orientation to the program.

Trainees were all mothers on welfare (AFDC recipients). The "average" trainee was in her late 20's or early 30's, had 3-4 children, had dropped out of school around the 10th grade and had academic achievement levels about equal to average seventh graders. Associates' trainees were comparable to the total group of Philadelphia mothers on welfare in age and number of children; the program population had a considerably smaller proportion of people at the educational extremes -- high school graduates and those with less than an 8th grade education -- than the total Philadelphia AFDC population.

Attendance was low (around 50%) and somewhat erratic, particularly in winter. Attendance problems can be attributed in part to the problems and heavy responsibilities of the trainees, as well as to sporadic problems with the physical facility in which the program was housed. Associates is still actively engaged in developing methods of raising attendance.

The dropout rate is slightly less than 50% if dropouts are defined as trainees leaving the program prior to its termination without having been placed in a job through the program.

However, follow-up data indicates that slightly better than half of dropouts, defined thus, either later returned to training or obtained jobs -- for a revised dropout rate of about 25%.

SECRETARIAL TRAINING SUBSYSTEM

As mentioned earlier, this section covers both clerical training and GED preparation. Staff, methods, and materials used will be described as well as a brief summation of some of the results. A more detailed analysis will be given in the section on the evaluation subsystem.

GED PREPARATION

The basic teaching staff consisted of the following:

Aides --Aides' duties were to distribute text and test materials, monitor tests, score and record lesson and test papers, maintain materials and supplies, keep attendance records, assist students in using the texts and refer students to tutors or other staff members when problems arose. The aide-to-student ratio was maintained at about 1:10 (based on average daily attendance, not total enrollment). Of the four aides who worked during the program, two were high school graduates, one had a year of college, and one received her GED while working in the program staff and using the texts for home study, with some assistance from other staff members. All performed very satisfactorily.

Tutors -- Tutors were mostly college students who worked a few hours a day, covering more of the school day. A student could see a tutor at any time on her own initiative, or could be sent to a tutor by an aide after poor performance on a test or set of lessons. In the latter case, the student was required to see a tutor before re-taking the material. Occasionally, an aide would act as tutor when the problem was a simple procedural misunderstanding or when the aide was confident of her ability in the area. Both tutors and aides were given instructions in tutoring methods - basically, exposing the student to a number of questions or problems of the same type as those missed, demonstrating how to correctly solve them, leading the student through a few answers on his own.

In addition to this basic staff, the project secretary maintained incentive records and made incentive payments based on records turned in by aides. An on-site administrator performed both supervisory functions and some active teaching and tutoring functions when necessary, as well as handling problems referred by teaching staff and, in consultation with the Technical Director, assisting in curriculum revision, evaluation, and execution of incentive techniques.

The following curriculum was used in preparation for the GED, those items marked with an asterisk (*) were also part of the clerical preparation: Publishers are listed in parentheses.

ENGLISH

English Grammar: Lessons for Self-Instruction in Basic Skills (California Test Bureau)
English 2200 (Harcourt Brace)
*English Usage Drills for the Typewriter (McGraw-Hill)
*Punctuation Drills and Exercises for the Typewriter (McGraw-Hill)
*Spelling Drills and Exercises for the Typewriter (McGraw-Hill)
*Words Frequently Confused (internal program)
Social Studies Vocabulary (internal program)
English 2600 (Harcourt, Brace & World)
*Business English (McGraw-Hill)
Supplementary English Tests (Cowles -- from book on GED preparation)

MATHEMATICS

*Sullivan Math, Books 2-10 (McGraw-Hill)
Exercises with Multiplication Tables (internal program)
Introduction to Mathematics (parts of Bks. 1,3,4 -- Encyclopaedia Britannica)
Geometry (Cyclo-Teacher)
Algebra (Cyclo-Teacher)
Basic Mathematics, Books 1-5 (Addison Wesley)
*Decimals and Percentages II (McGraw-Hill)
Supplementary Mathematics Tests (Cowles)

READING LITERATURE

Practice Pad 3 (Reader's Digest)
Advanced Practice Pad (Reader's Digest)
Building Reading Power (Charles Merrill)
Coronet Learning Programs (Coronet)
*Vocabulary
*Dictionary
Figures of Speech
Reading: Lessons for Self-Instruction in Basic Skills (California Test Bureau)
Reader's Digest Stories, levels 5 and 6 (Reader's Digest)
Steps to Better Reading (Parts of Books 1,2,3 -- Harcourt, Brace and World)
Supplementary Reading and Literature Tests (internal)

SOCIAL STUDIES

Coronet Learning Programs (Coronet)
Westward Expansion
Maps
Latitude and Longitude
*Social Science Vocabulary (Cyclo-Teacher)
Supplementary Graphic Data Tests (Cowles)
Introduction to American Government, Books 1 and 2 (Behavioral Research Labs.)

SCIENCE

TMI Science Program (Grolier) -- covers sound, heat, light, electricity, communications, physiology.
Coronet Learning Programs (Coronet)
- Cells
- Weather
- Solar System
- How Scientists Work and Think
- Heart and Circulation

CLERICAL PREPARATION

Preparation for clerical work was handled primarily by two secretarial teachers under the direction of the Technical Director. The clerical program was gradually streamlined and is now being handled by one secretarial teacher, with the assistance of a secretary-administrative assistant. The teacher handles most of the typing, filing, office practice, and Civil Service Examination preparation; the administrative assistant handles primarily job-placement activities.

The clerical curriculum used in addition to those items starred in the GED curriculum is given below.

TYPING

Winger, Rowe and Lloyd -- Gregg Typing I and II (McGraw-Hill)
Lloyd, Rowe and Winger -- Typing Skill Drives (McGraw-Hill)

FILING

SRA Filing Skills (Science Research Associate)
Gregg Filing Kit (McGraw-Hill)

CIVIL SERVICE

After the student has completed the filing course she is given intensive practice in taking the Civil Service exam. Two practice tests are being used. One is printed in the U. S. Civil Service Commission publication Stenographer, Typist, Clerk, and Office Machine Operator: What It Is, and How It Is Given; the other is an internal test using this as a guide. The student is given this test with the same timing procedure she will follow when she takes the test.

Preparation for taking the verbal portion of the exam comes from a vocabulary study sheet and an internal program designed to teach the student how to approach an analogy question.

BUSINESS PRACTICE

Bell Telephone Teletrainer
Supervised Practice -- work under supervision of scretarial teacher or project secretary.

RESULTS

As of this writing, 36 students have completed Associates' program; 19 have completed the control program. Anyone who either obtained a training-relevant job prior to the end of the program (April 30, 1970) or who continued in attendance during at least part of the months of March and April, was considered to have "completed the program." This was an arbitrary decision and perhaps resulted in an occasional miscategorization. For example, one Associates trainee, who left the program after about three months but returned from mid-March to the end of April, is thus listed as completing the program lathough she was not actually in attendance long enough for us to train her effectively. Another trainee, who attended for a year and obtained her GED through the program, but because of illness and personal problems did not attend for the last few months of the program, is considered a dropout. She does not consider herself a dropout and has in fact returned to school under the continuation of the original program being operated under a contract with the WIN program. Decisions about such students involve some subjectivity, however, and it is particularly important in comparisons with a control group that such opportunities for bias be eliminated -- thus the arbitrary, objective criterion for determining dropout rate.

Table 5 below presents the performance of the first-year and second-year Associates trainees and control trainees completing the program.

Table 5: Student Performance

	Associates First Year		Associates Second Year		Control for Associates Second Year	
	No.	%	No.	%	No.	%
Obtained GED*	7	39%	10	63%	3	21%
Obtained C. S. Rating	16	89%	14	78%	5	26%
GSI	5	28%	2	11%	0	0
GSII	3	17%	1	6%	3	16%
GSIII**	8	44%	11	61%	2	11%
Obtained Job	9	50%	11	61%	6***	32%
Sample Size	18		18		19	

* The base number of students for this category is 18 for Associates First Year, 16 for Second Year, and 14 for Control, since some students already had high school diplomas or GED's on entering the program.

** No student actually entered a job at the GSIII level, since paid office experience was required in addition to a high rating.

***One of these women quit her job after two weeks.

As the table indicates, Group II was clearly superior to the control group, Group III -- approximately three times as many Associates students obtained GED diplomas and Civil Service ratings, and 1 1/2 times as many obtained jobs. Shortly after this table was created, an additional four Associates students obtained jobs; they are not included for comparison purposes, however, since staff was not able to re-survey control group students to determine whether or not more of them had also obtained jobs.

SUMMARY

Associates' staff has developed a dual, closely-integrated curriculum for training in basic and clerical skills. The program is specifically oriented toward the acquisition of high school equivalency diplomas, civil service ratings, and clerical jobs.

In comparison with a control group of trainees, closely matched in demographic characteristics and entering achievement levels and abilities, who obtained similar training through other sources, Associates'trainees were considerably more likely to obtain the stated objectives.

CHILD DEVELOPMENT SUBSYSTEM

The child development aspect of Associates' program was subsidiary to the main purpose of the program, to train mothers. Originally, the day-care center was conceived primarily as an aid to those mothers who were unable to find adequate care for their pre-school children. However, it was felt that both mother and child would benefit more from a day-care center that offered learning experiences than from one that provided mere domiciliary care -- and mothers were encouraged to bring pre-school children to the center.

The day-care center was staffed primarily by two people -- a supervisor and an aide -- who ran the center under the direction of the project's technical director. Intensive consultation and assistance were necessary initially to help develop record-keeping systems and methods of operation. Once the center began operating smoothly, however, relatively little time was required; brief daily consultations, sometimes by telephone, and regular monitoring of the records were usually sufficient. In addition, the technical director typically spent at least one morning per week at the day-care center -- and occasionally more time if problems arose.

The day-care facility functioned in two large rooms, one of which could be partitioned into two smaller rooms. A small office and a rest room were also available. This entire area was self-contained. A kitchen on the floor above was shared with other tenants of the building and was used to prepare snacks and lunches for the children.

Children ranged in age from three to six, although during the summer mothers occasionally brought in school-age children.

The day-care center operated on the same general principles as the adult training program. The three basic concepts underlying the child development subsystem were:

1. Reinforcement of positive behavior: Positive behaviors, such as completing a lesson, cooperating in activities, cleaning up after play activities, were consistently rewarded -- both with praise and attention and with tokens. The tokens could be exchanged for participation in popular activities, free play, snacks, small prizes, and trips. Praise and attention were given liberally by the staff for good work or good behavior, at their discretion; tokens, however, were given according to a predetermined system for given amounts of work or behavior.

2. Non-reinforcement of negative behavior: Negative behavior was generally ignored, while praise was given to children showing positive behavior. If the child's behavior became disruptive to the classroom, he was "timed out" -- removed from the classroom and isolated -- for several minutes.

3. Step-wise programming: All material was programmed in small steps to permit frequent reinforcement and to ensure presentation of the material in steps that the children could grasp. Such programming is a continuous process, since the teacher must be aware of when a child is having problems, and must be creative enough to break the material down into smaller steps. It may also be necessary to ask the child to take larger steps or move to more advanced material when things seem to come very easily and the child shows signs of becoming bored.

Each child had a variety of tasks to do during the day -- some were specifically educational and some involved cooperative behavior such as putting materials away after using them. Normally, a child's day was spent partly on educational tasks, partly in free play, and partly in structured activities with varying educational content, such as skits, finger-painting, drawing, listening to stories, etc. A small snack, usually milk or juice and cookies, was served at mid-morning, and lunch was served around noon, following which the children took a short nap. Occasionally, the children were taken on a trip to a play, a museum, the zoo, a special children's program, or an outing in the park.

The skills taught are listed below:

1. Identification of basic shapes: triangles, squares, circles, lines, and X's.

2. Color discrimination.

3. Ability to count objects from one to twenty.

4. Identification of the lower- and upper-case letters of the alphabet.

5. Ability to write the letters of the alphabet.

6. Verbal skills

7. Basic reading skills.

Two examples of the educational material learned in the day-care center are presented below. By keeping daily records and graphs of each child's individual progress, it was possible to summarize the specific abilities that each child had acquired at any point.

Subject A: a 3 year-old girl after 36 days of attendance

1. The ability to count correctly from one to eight.

2. The ability to identify the letters of the alphabet from A to P.

3. The ability to identify the four colors red, blue, yellow, and green.

4. The ability to write the letters of the alphabet.

Subject B: a 5 year-old boy after 53 days of attendance

1. The ability to count correctly from one to 18.

2. The ability to identify both upper and lower case letters of the alphabet.

3. Successful completion of B. F. Skinner's Handwriting Book 1, "Write and See" and start of Book 2.

4. Daily exercises in phonetics to be able to begin the Sullivan Primary Reading Books.

In addition to these general activities and learning situations, special programs were set up to deal with occasional individual behavior problems. Again, the same principles were used -- the child was timed out, and/or fined tokens for bad behavior and rewarded for good behavior. The major difference between this and the usual school activities was that the teacher might have to deliberately set up an apparently free situation in which the child was given the opportunity to perform his negative behavior while making sure that the alternative of positive behavior and reward was also possible. The following is an example of the treatment of such an individual behavior problem.

Before	Treatment	After
Child stole small items candy, prizes, etc., from teacher's office. It was a nuisance to keep the door locked.	Child told that if he stole anything from office he would be docked five tokens and timed out for 15 minutes in a room by himself. Situation set up with loose M&M's on desk; child asked to go to office and bring scotch tape to teacher. Immediately upon return, child was asked if he had taken anything; mouth examined and M&M's found inside. Docked and timed out. Situation and outcome repeated twice.	Child sent to office frequently with no stealing. Given praise for being teacher's helper. No more known instances of stealing at school.

One of the problems encountered in the operation of the day-care center was irregular attendance -- caused both by poor attendance on the part of some of the mothers and by failure to bring the child regularly on the part of some mothers who were themselves good attenders. These two factors, combined with the occasional addition of school-age children

during the summer, resulted in a daily attendance which ranged from zero to fifteen.

The following graph, Figure 2, illustrates this variability. Figure 3 shows the attendance of 26 individual children during the months of June and July, 1969 -- approximately the same time period covered by Figure 2. The best attender, student A was in the day-care center for 60% of the days it was open during these two months. Several other students, not on the graph, came into the center during June and July, -- all were students who did not regularly attend, but were brought in by their parents for a day or so because of the failure of other child care arrangements.

While Associates feels the day-care center has been highly effective for some of the families in the program, it did not have the impact that had been hoped for. Individual children made marked improvements in behavior -- both social and educational -- but very few children came regularly. In part this was due to the irregular attendance of some mothers, but many children who were eligible were brought to the center only rarely or not at all, the mother preferring to use other arrangements.

In questioning students, we found two major reasons for not bringing children to the day-care facility:

1. Several mothers had two or three children of nursery-school age (3-6) and indicated that the process of getting them all waked up, fed, and dressed, and then bringing them on a 20-40 minute bus or trolley trip, sometimes requiring a transfer, was too much for them. Understandably, these mothers found it much simpler and less tiring to simply take the children down the block to a neighbor or have a neighbor or relative come into her house to care for them.

2. In many instances mothers had children younger than nursery-school age, or small children who attended school only a half-day, in addition to the child or children eligible for the day-care center. This meant that outside child care arrangements had to be made whether the day-care center was utilized or not, and often the mother found it more convenient to have all the children cared for at the same place.

Most of the mothers who used the day-care facility regularly either had only children of nursery age or had other children who were considerably older than the nursery-age child, and well able to care for themselves with perhaps minimal assistance from a relative.

Table 6 which follows illustrates the points made above.

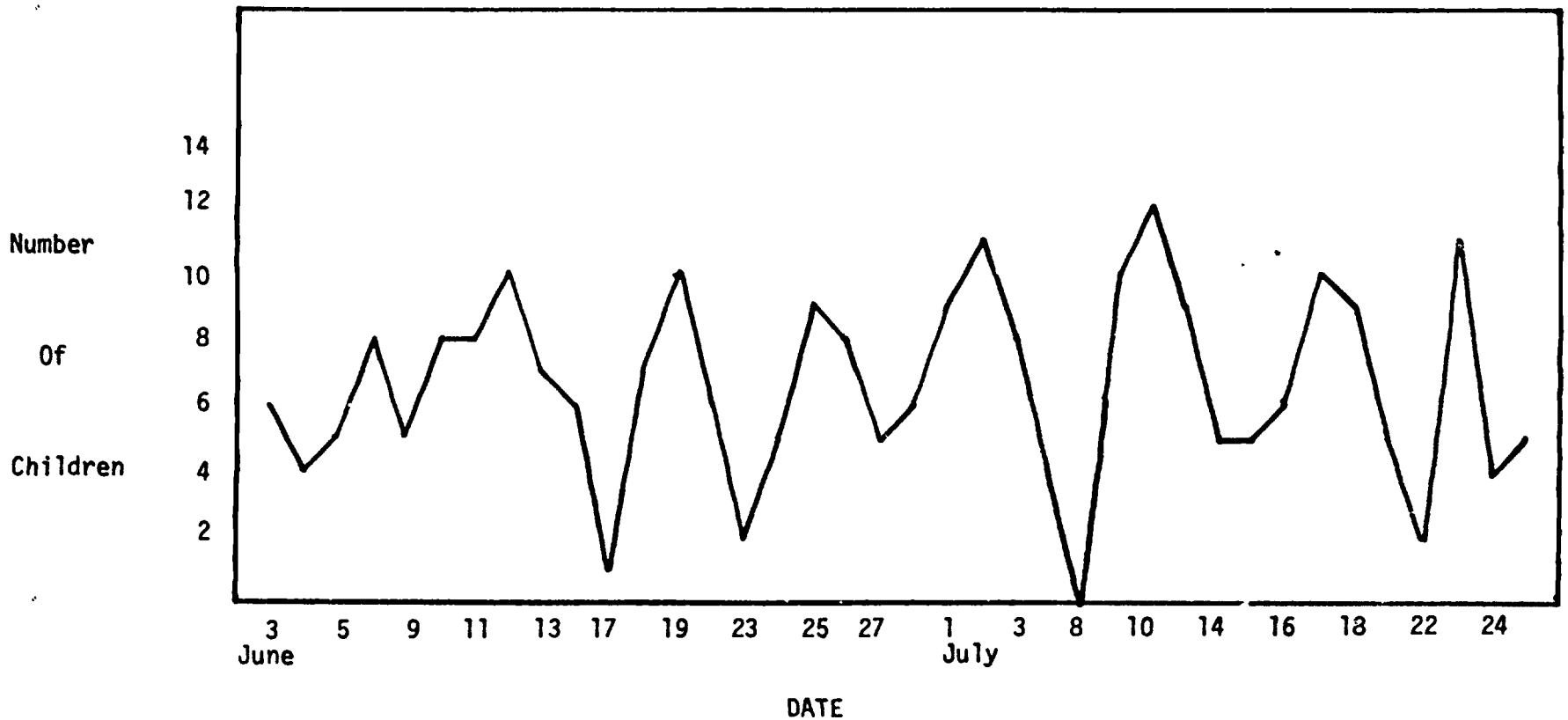

Figure 2: Daily attendance at day-care center during the months of June and July, 1969.

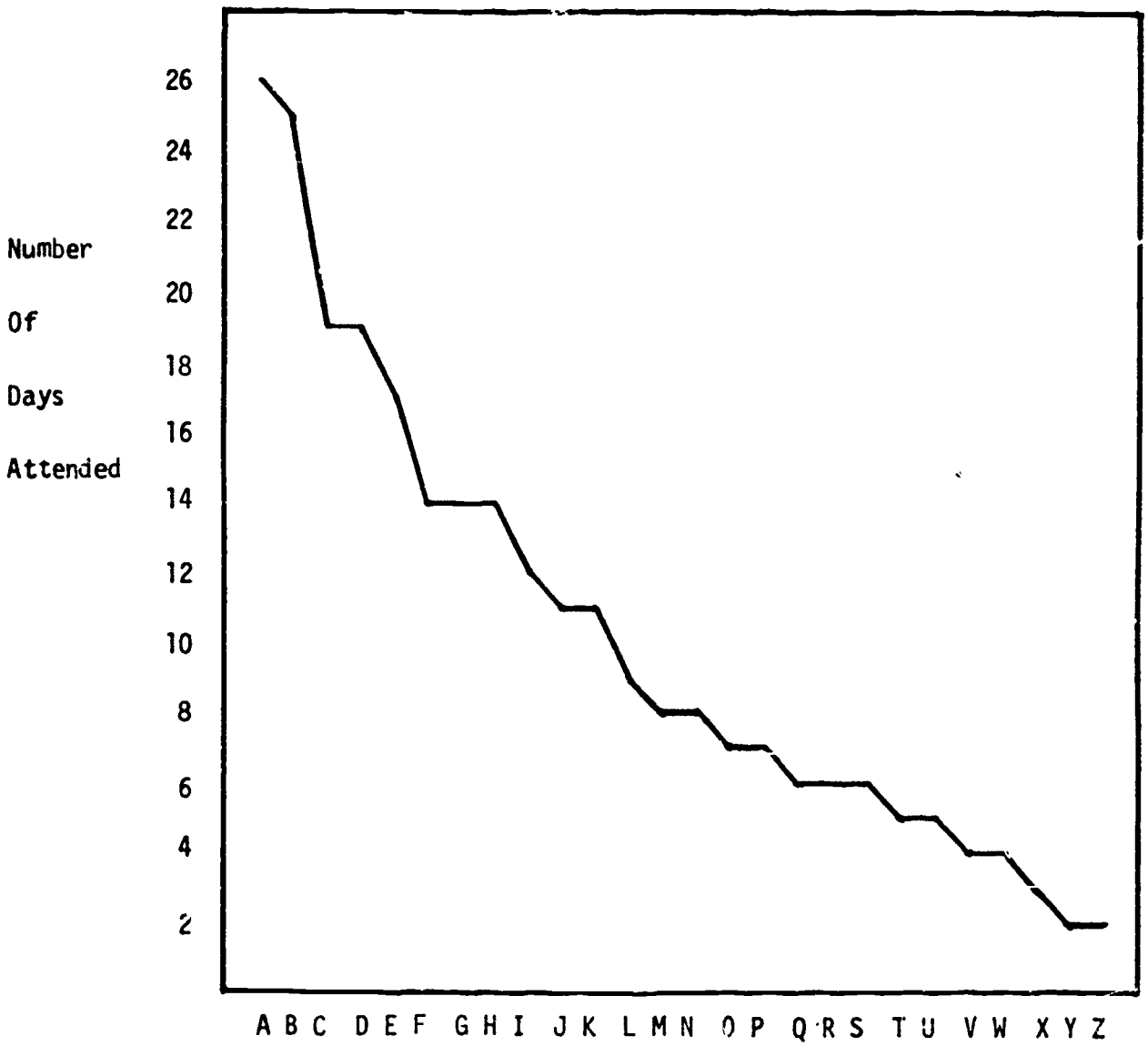

Figure 3: Total number of days attended by each of 26 individual students during the months of June and July, 1969.

Table 6: Characteristics
of Users and Non-Users of Day-Care Center
(including only women with children between 3 &
6 years of age)

	Regular Use (35 da. or more)	Irregular Use (10-35 days)	No Use (less than 10 days)
Age	30.5	26.9	25.6
Number Children	4.5	4.0	4.3
Entering CAT Score	7.6	7.2	7.9
Percent with Children under three	37%	28%	55%
Percent with difficult trip to school*	37%	57%	86%
Sample size	8	7	2;

* A trip was considered "difficult" if it required some walking and at least one transfer of transportation.

To be maximally useful, then, a day-care center should be able to accept all ages -- from infants through perhaps 12-year-olds. While the program did care for older children during the summer, it was not feasible during the school year for young children who needed care for an hour or so before or after school to get to the day-care center. The nature of the program did not permit us to meet the city and state regulations regarding the staff, equipment and facilities required for care for children under three, and the center was therefore approved by city and state agencies only for children three and over.

The ideal arrangement would appear to be a number of small but complete day-care facilities located in several neighborhoods around the city, accommodating children of all ages. Each of the facilities should have a small bus which could take a trip through the neighborhood in the morning and afternoon, picking children up and taking them home. Having a variety of neighborhood locations, near children's homes, would make coming in for short periods before and after school much more convenient. This would solve both the problem of having to make different child-care arrangements for different children, and that of having to make difficult or complex travel arrangements with several children.

This plan is obviously much too expensive and elaborate for a single small program such as ours, but might very well be feasible if utlized by parents in a variety of programs as well as working parents.

MARKETING SUBSYSTEM

The marke ing subsystem, as originally conceived, was to result in the development of a contract secretarial business, largely staffed by program trainees. It was hoped that ultimately some trainees might move into supervisory and/or managerial positions, gradually moving program staff out of direct operation and into consulting roles. The business was to be established with a non-profit status. Excess profits were to be used to train more people, hopefully perpetuating the program. It was not expected that such a business could be developed very rapidly nor be able to support a training program for some years; it was hoped, however, that if the business could be established and generate some income, the contacts and public relations developed would greatly facilitate the solicitation of supplementary funds from businesses and community and/or other agencies.

The marketing subsystem was to serve the following functions:

(1) provide a semi-protected work experience situatic to assist trainees in the transition from training to work;

(2) provide a means of perpetuating the training program;

(3) provide jobs, salaries, and advancement possibilities for trainees.

A contract secretarial business has not, in fact, been established for a number of reasons, although other means have been found to fill the three functions just described. The development of such a business was delayed during the first year of the program by the need to spend large amounts of time in curriculum and methodology development -- as well as the need to wait until a sufficient number of trainees reached a productive level. At the end of the first year of training, not enough trainees were sufficiently work-ready to begin development of a business. Several factors contributed to this: a high turnover in secretarial training personnel; low entering achievement levels of most trainees; heterogeneity of the student population; highly variable amounts of time needed by trainees to reach productive levels; problems with the method and equipment used to teach typing -- which, though excellent in many ways and proven effective in area high schools, required extensive changes and modifications to suit trainees in Associates' program.

Despite these problems, some investigation was made into contract secretarial work. Information was sought regarding companies already doing this type of work, and reports were discouraging. One of the most promising initial sources of work in the Philadelphia area is manuscripts for reports, theses, term papers, etc. from university students and faculty -- these are short-term jobs which do not require expensive, time-consuming solicitation and do not commit a fledgling business to sizable, potentially ruinous contracts. Unfortunately, this work requires a very high level of skill, beyond that of Associates' inexperienced trainees. Contact was made with

an agency which puts out contracts for simpler, more routine work, and samples of one of the simplest jobs -- typing address lables -- were given to trainees for practice. Very few were quickly able to reach a profitable production level. In addition, Associates' staff was extremely reluctant to commit trainees to work of this sort, since it is very limited and could result in trainees being gradually pushed into very routine, limited, "dead-end" jobs.

As a consequence of the factors discussed above, the idea of a contract secretarial business was abandoned, at least for the time, and other means were sought to fill the functions of the marketing subsystem. These functions were filled, as described below, through work experience situations developed through the WIN program (work experience is one of the steps in WIN's Employability Plans) and through preparation for the Civil Service Examination.

(1) *Assistance with transition to work*

Work experience situations were developed for trainees through the WIN program in accordance with that program's Employability Plans. Work experience typically lasted 13 weeks. Channels of communication were set up between program staff, supervisors at work experience sites, and coordinating personnel from the WIN program. In order to provide maximum assistance to the trainee, the following were felt necessary: that trainees who had not passed the high school equivalency examination, or who had specific clerical skill deficits be permitted to work less than full-time, spending the remaining time in school remedying the deficiency; that trainees working full- or nearly full-time be permitted to return to school occasionally for a few days to remedy specific problems; that trainees placed in work experience sites offering a limited variety of experience be replaced by a new trainee and allowed to go to another site if they mastered the work at the first site quickly. WIN program and work site personnel were very cooperative and the resultant flexibility and information exchange were extremely valuable to both staff and trainees. Students were, for the most part, extremely pleased with the work experience. Complaints were rare, the most common one being that there was not enough work and/or that the work was too easy. This was usually remedied by transferring the student to a work site with a heavier work load and/or more challenging and diversified duties.

That this experience enabled students to successfully make the transition from training to work is evidenced by the fact that only one trainee of 24 placed in jobs has left her job for reasons other than a cut-back in staff or a better job. No student has been fired; two have been laid off. One of these latter immediately sought and found another job, coming in to school in the meantime to borrow a typewriter to practice on. The other student has not as yet found another job. Several students have now been working approximately a year, and many have upgraded themselves; some of these have taken a day or two of leave from work to come in to school for a brush-up in preparation for a re-take of the Civil Service Examination or for a typing proficiency test.

Starting salaries for students ranged from $4,300 to $6,300 per annum. Two working enrollees have been accepted for advanced education in social work in a diploma program at a local university. The first trainee to be hired from the program has recently accepted a job in the Philadelphia District Attorney's office at a salary of $6,800 per annum.

Following cessation of the SRS grant, Associates was able to obtain a small grant for efforts on the problem of transition to work. This has enabled staff to maintain at least monthly contact with working students. In addition, staff members have held several informal gatherings for ex-students, both working and not working. While these are primarily social, ex-trainees have often provided useful information in the form of problems or questions about the work situation, means of changing or advancing a position, means of handling child care, obtaining benefits, filling out tax forms and a variety of other problems.

(2) *Perpetuation of the program*

The training program developed through the SRS grant has been continued past the funding date, via a contract with the Department of Labor and Industry of the Commonwealth of Pennsylvania. The relationships developed with the WIN program and the performance of Associates' trainees on their work experience sites were instrumental in this continuation. The trainees promoted good public relations in a number of agencies throughout the city as well as with WIN program personnel.

(3) *Jobs, salaries, and advancement possibilities for trainees*

The majority of trainees who completed Associates' program, using the criterion stated in the description of dropouts, did obtain jobs. A more complete discussion of jobs and credentials obtained by trainees as well as a comparison of Associates' trainees with control trainees may be found in the description of the Evaluation Subsystem.

It is impossible to estimate whether or not the development of a contract secretarial business would have resulted in more and/or better jobs for trainees. It seems unlikely, however, in the light of the economic conditions prevailing in 1970 and the layoffs and cessations of hiring by a number of major local employers -- including the City of Philadelphia -- at about the time that many of Associates' trainees were seeking jobs.

Summary

The marketing subsystem was to meet the following objectives:

(1) assistance in the transition from training to work;

(2) perpetuation of the training program;

(3) Placement of trainees.

The primary vehicle for the fulfillment of these objectives was to have been the development of a non-profit contract secretarial business.

Associates' program was able to meet these objectives, although it did not prove feasible to establish the business originally envisioned. Instead, a flexible, intensive work experience program was developed with the cooperation of the WIN program. Vital components of the work experience were regular communication with the trainee and her work experience site, as well as quick attention to and remediation of, trainee problems and deficiences which were uncovered.

EVALUATION SUBSYSTEM

This section will cover two basic areas:

(1) a description of the evaluation system, including measures taken, and

(2) an analysis of the program, including a comparison of the performance of trainees in Associates' program with that of control trainees.

DESCRIPTION OF THE EVALUATION SYSTEM

The evaluation system was based on the collection of three kinds of data: (1) demographic and entry level data, (2) process data, and (3) criterion data.

Demographic and Entry Level Data

Demographic and entry level data consisted of the following: age, number of children, previous education, previous work experience, entry level achievement scores on the California Achievement Test (CAT), responses to an Education Questionnaire, and IQ (Otis Quick Scoring Test). This data was collected for several reasons.

It was to be used to compare the student population with the total AFDC population in Philadelphia. This would indicate whether or not the sample had been biased in some way, and to what extent the effects of the program could be generalized to the AFDC population at large. It also permits a comparison of entry level characteristics between Associates' enrollees and enrollees in a control program.

All potential trainees were administered the California Achievement Test, a demographic questionnaire, and the Education Questionnaire on a single day. The testing took 5 - 6 hours.

The California Achievement Test was selected because (1) it offered a sufficiently wide range of grade-level achievement scores, and (2) it has finely differentiated sub-tests which were useful in diagnosing trainees' weaknesses in enough detail to permit coordination with instructional materials--i.e., a student doing poorly in division could be assigned to a program specific to this skill.

The Otis Quick Scoring Test of Mental Ability, Form C, for Senior High School and College, was used because of (1) its brevity, (2) its ease of administration, and (3) previous experience with it having yielded a fairly wide range of scores with a similar population. It was recognized that the Otis is verbally weighted and thus might put the trainees at a disadvantage. However, it was not used as a screening instrument. The intent was to use the data to determine the value of relative IQ as a predictor of success in the program, and as added insurance of comparability of the experimental and control groups. Because of sensitivity to intelligence testing in the disadvantaged community, the Otis was not given until after termination from the program. Comparison of the mean IQ for both Associates and control trainees with that obtained from a

similar population -- black secretarial trainees in a dialect remediation program* in which the IQ tests were administered in the beginning -- suggest that the scores obtained in the current testing do not reflect enhancement due to the experimental and/or control training situations. The mean IQ and standard deviation for the combined groups in this study were 90.8 and 8.5, respectively. In the previous study they were 90.6 and 8.6, respectively.

Since the program operated under an experimental research and demonstration grant, one of the goals was to develop a model to assist other personnel interested in operating similar programs. Such data would help Associates specify the nature of the population for which the program was effective, and provide estimated probabilities of completion for various types of trainees.

In addition, the CAT score was expected to provide an index of the change in achievement level as a consequence of the program when compared with a second administration of the test at the end of training. The possibility was also considered that the CAT score might be able to serve as a predictor of success on the GED examination.

Process Data

Process data was data gathered continuously during the operation of the program: attendance, work production and scores (both academic and clerical), incentives earned. This data was collected both for internal use during the operation of the program and for later use during a final analysis of the program's effectiveness. A detailed description of data-gathering methods and use may be found in the accompanying Guide to the Operation of a Basic and Clerical Skills Program for AFDC Trainees.

Internally the data was used both as an indicator of problems (or lack of them) and as an indicator of the effect of manipulations within the program. For example, graphs were kept of daily homework production; a drop in the graph would indicate objectively to staff that a problem was being encountered in homework production. After analyzing the situation, a decision might be made to change the consequences of homework production. The graph would then be used to indicate what effect, if any, this manipulation had on homework production.

Process data was also intended for use in the final analysis of the program. For example, successful and unsuccessful trainees were to be compared on such measures as average attendance, average homework and classwork production, incentives earned, etc.

As soon as the materials used in the training program became reasonably stable, the development of a computerized data storage and retrieval system was undertaken. It went into active operation at the beginning of the second year of the project. The system was to serve

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*The Dialect Remediation Project: Final Report. Center for Community Studies, Temple University, Contract 81-37-03, Office of Manpower Research, Manpower Administration, U. S. Department of Labor, 1966.

two functions; it was to serve as (1) a diagnostic aid by making rapidly available to the technical staff sufficient information about the progress of any trainee in every area of her training, and (2) an evaluative aid by making accessible the huge amount of data obtained when trainees are tested on a daily basis, incentives are given, attendance records are kept, etc.

In retrospect, the first objective was not really accomplished. The lag time generated by the transfer of the data to cards, the transportation time to the computer center, and the processing time was too great to satisfy the feedback requirements of the technical personnel. Current experience indicates that a well-designed non-computerized recording system can adequately fulfill the diagnostic functions required by the technical personnel. The only weakness of such a system is the difficulty of assessing across-trainee effects, and consequently making an evaluation of the effectiveness of particular programmed instructional material and certain other materials or techniques. In a mature system, where much of this evaluation has already been made, this problem is diminished.

The computerized system did prove valuable in the evaluation of the project, especially in the analyses of the process data. It is our opinion that such a system could also prove valuable diagnostically if (1) trained keypunch personnel are always available on-site, and (2) a remote terminal is used to eliminate time lag between punching and processing. Situational conditions which would make such a system particularly valuable are (1) the initiation of a project with a large number of trainees, and (2) the introduction of a substantial number of new training materials.

At the end of the second project year, a data file had been set up containing the following data:

Entry level characteristics of trainees:
- age
- number of children
- ages of children
- entry level achievement (CAT)
- education
- work experience
- response to educational questionnaire
- IQ

Process data:
- attendance
- homework production, including specific lessons done, scores, and dates
- classwork production, including specific lessons done, scores,and dates
- incentives earned

Exit level characteristics:
- exit level achievement (CAT)
- exit response to educational questionnaire
- GED attainment
- Civil Service rating attainment
- job attainment
- some follow-up data on dropouts

Eleven programs have been specifically written for data input and extraction. On the output side, those used most extensively have been (1) the program providing weekly incentive and attendance data; (2) the program printing out students' lesson work, organized by student and program; and (3) the program preparing summary reports on completed frames (a sub-unit of programmed instructional material) by date, type of lesson (classwork, homework, or test) for any given grouping of students specified by the programmer.

The entire data storage and retrieval system has been written for use with the University of Pennsylvania Computer Center's IBM 360/75 computer. It is therefore machine-specific; as each computer center has its own systems approach and terminology, some features of the system are peculiar to the University of Pennsylvania's installation. For this reason, the systems operation manual is not included in this report. It can be made available upon request.

Criterion Data

Criterion data concerns the trainees' success in the program, and answers the question of how many trainees met the program's objectives for them. These are GED attainment, job attainment, Civil Service rating attainment, and program completion.

ANALYSIS OF RESULTS

Table 1 in the Personnel Subsystem provides a comparison of the enrollees of Associates' program with a random sample taken from the total Philadelphia AFDC population. The measures available were age, number of children, and previous education. Associates' enrollees differ significantly from the total AFDC population sample only in previous education ($X^2 = 21.78$, $df = 3$, $p < .001$). A much greater proportion of Associates' enrollees had dropped out of school in the 9th through 11th grades than was the case with the AFDC sample. This category accounted for 55% of the AFDC sample, and 84% of Associates' enrollees -- and it is reasonable to expect that most enrollees in a combination vocational training - highschool equivalency program would fall into this category.

Entry Characteristics: Comparability of Associates and Control Trainees

Table 7 presents the entry level characteristics of first- and second-year enrollees in Associates' program and control trainees for the latter group, who enrolled in Palmer School.

Table 7: Entry Characteristics of Program Trainees

	Associates First Year	Associates Second Year	Control for Associates Second Year
Age	33.4	27.9	28.7
Number of children	4.3	2.9	3.6
Years of public schooling	9.8	10.1	10.3
CAT mathematics grade level	7.1	7.2	7.4
CAT language grade level	6.7	7.6	7.9
CAT reading grade level	7.0	7.7	7.5
Total CAT grade level score	7.0	7.5	7.6
IQ	85.8	91.1	90.3
Work experience (% having)*	46%	71%	72%

*Work experience was almost entirely unskilled, and of a variety of types

Analyses of variance were performed on all variables except work experience, for which a chi-square test was used. The three groups do not differ significantly at the .05 level on the following measures:

years of schooling
CAT mathematics score
CAT reading score

Further comparisons, using t-tests (except in the case of work experience, again) were made between second-year Associates students and control students on those variables for which significant differences were found with analysis of variance. Second year Associates trainees did not differ from their control group at the .05 level on any of the remaining measures. On visual inspection of the table, the only difference which appears to be of any consequence is in number of children which was "close" to significance ($t = 1.605$, $df = 76$, $p < .10$).

It should be noted that this single point of possible difference between the two groups is apparently not crucial with regard to a later evaluation of their achievements; a set of correlations performed on data from all Associates' students (reported later in this section) shows no significant correlation ($\alpha = .05$) between number of children and either criterion data (GED, job, civil service rating, program completion) or process data (attendance, work production). The only variables found to be correlated with number of children were age (the older the woman the more children she is likely to have) and work experience (the more children, the more likely the mother is to have had work experience).

Criterion Data: A Comparison of Associates and Control Trainees

There are four measures of success in terms of which second-year Associates students and their controls can be compared: GED attainment, Civil Service rating, job attainment, and program completion.

A student was considered to have completed the program if she was in attendance for at least part of the final two months of the grant, or began work on a program-related job prior to that time. This assured objective determination of completion, and avoided bias in favor of Associates' program caused by more detailed knowledge of students' situations and reasons for their absence. For the same reason, all students who did not meet these criteria were considered dropouts; no correction was made to allow for students who got married, moved, became pregnant, or left for non-program related jobs.

Table 8 compares Associates and control students on success measures plus final CAT score. While an increase in CAT score is not a criterion of success, it can reasonably be expected to be related to teaching effectiveness.

The table does not include all Associates students (and perhaps not all control students) who obtained jobs. Both Associates and the control school continued their efforts past the termination of the grant. Following the termination of the control school's efforts (the end of July, 1970) the school staff was contacted, and a member of Associates' staff contacted, individually, all control students who met the criterion for program completion and surveyed them to determine their job, GED, and Civil Service status. They were also offered advice and assistance in submitting Civil Service applications if they wished. Several control students took advantage of this, and arrangements were made for one to brush up on her typing and take a proficiency test. In mid-August, data-gathering from control students was complete, and a second-year Associates trainee who obtained a job shortly thereafter is thus not included in the table which follows.

Table 8: Comparison of Associates and Control Performance

	Associates Second Year	Control Group
Number obtaining GED	10	3
Number obtaining job	11	6
Number obtaining civil service grade	14	5
Number completing program	18	19
CAT mathematics - mean gain	1.0	0.4
CAT language - mean gain	1.6	1.2
CAT reading - mean gain	0.7	0.7
Original sample size	41	43

Chi-square tests were performed on the frequency data, and t-tests were performed on the CAT scores. The tests indicate that a significantly higher proportion of Associates' students obtained GED certificates and Civil Service ratings than did control students ($X^2 = 5.24$, $df = 1$, $p < .05$; $X^2 = 9.81$, $df = 1$, $p < .01$). There was no significant

difference between the two programs in dropout rate. Although on visual inspection of the figures, Associates' program appears to be clearly superior in terms of obtaining jobs, a chi-square test performed on the figures for job attainment does not reach significance at the .05 level ($X^2 = 3.18$, df = 1, $p < .10$). The final grade level achieved by Associates' trainees on the CAT was not significantly higher than that achieved by control trainees.

All the comparisons disucssed are based on those trainees completing Associates' or the control program (except, of course, in the case of program completion itself.

In terms of these criteria, Associates' program appears superior to a control program; although differences do not always reach statistical significance, they are consistently in favor of Associates' program.

Several important points should be made here regarding the ultimate success of Associates' program and its apparent superiority to alternative training methods:

1. It is clear that, given very similar groups of trainees, Associates' program was able to accomplish more than the alternative training methods available. It is fair to say that these methods are representative of what is typically available to AFDC mothers, at least in the Philadelphia area. The control GED training was offered to trainees under an arrangement between the WIN program and the School District of Philadelphia which conducts evening classes at a number of locations throughout the city; these classes are designed specifically and solely to enable the student to obtain a GED diploma. The control clerical training was provided by Palmer School, an established secretarial training school in Philadelphia. While it is not one of the best-regarded schools in the area, it has nevertheless been operating successfully for many years, has conducted MDTA programs in the past, claims a flexible, individualized program, and has been one of the schools into which welfare counselors have in the past tried to move their "best" candidates for secretarial training ("best" in terms of educational achievement, apparent ambition, and counselor's estimate of chances of success).

2. Given the better results obtained by Associates' program, it then becomes relevant to ask how much more (or less) it costs. A direct comparison of the costs of training students under the experimental grant is virtually impossible. Two training sources, rather than one, were needed to train the control group. In both instances, these were established schools, taking in a small additional group on an already-operating base. Associates' program did not exist before May, 1968, and therefore incurred large set-up costs not incurred by the other training sources. Attempting to determine the "real" cost per student would be extremely difficult -- and a much simpler method of comparison is available.

Both Palmer School and Associates have continued to offer training on a contract basis and it is therefore possible to compare their current training costs and time. Palmer School currently offers a 48-week

course, covering much the same material as offered in the clerical portion of Associates' program. Palmer School offers this course, for 48 weeks, at a cost of $864.00 plus books (1969 figures). Associates' training, covering 24 - 36 weeks, at a cost of $1200 - $1800, offers the material covered by Palmer, plus intensive GED training, special civil service preparation, and much greater attention to individual problems, needs, deficiencies, and assets than is possible in a standardized set of courses which must offer a given number of hours of instruction in each area to each person.

When the extra training offered by Associates' program is taken into account, the costs are similar for the two programs; when the shorter time to completion and higher success ratio of Associates' program are considered, it appears much the more economical of the two.

3. Two of the basic points of difference between the control training and Associates' training were:

Associates' program provided GED and clerical training simultaneously within a single, coordinated program; control trainees received GED and clerical training from two unrelated sources at different times and locations.

Associates program used individualized instruction, using programmed texts, wherever possible and appropriate; control trainees were taught in group situations, using standard conventional textbooks.

The foregoing analyses attempt to answer the question, "Did Associates' program do any better than what was already available?" This is the most crucial question to be asked; once answered in the affirmative, it becomes important to know how the program operated. While this is answered in some detail in the companion document to this report, A Guide to the Operation of a Basic and Clerical Skills Program for AFDC Trainees, there are a number of more detailed analyses which are both interesting and useful. These fall into two general categories: (1) an analysis of incentive effectiveness, and (2) an examination of the relationships among entry level data, process data, and criterion data, in order to isolate some of the variables related to program effectiveness.

Incentive Effectiveness

Incentives are analyzed separately partly because they were in fact a major item in Associates' program, and partly because they represent a sometimes-controversial, often-misunderstood approach to learning. Behavior modification and reinforcement theory are discussed elsewhere in this report, as well as in the Guide. Here we are concerned with whether or not the specific incentives used in Associates' program were effective.

Incentives were used systematically in two areas: homework production and classwork production. Incentives were introduced in the form of small cash payments for homework (lesson quizzes passed at 90%, unit

tests at 85%) on November 22, 1968. These payments ceased on January 20, 1969, and were reinstituted on February 14, 1969. Figure 4 which follows illustrates the effect of incentives on homework production. The points on the graph are average daily homework production for consecutive one-week periods (i.e., total number of homework frames done, divided by total number of student-days put in that week). The graph covers a baseline period prior to introduction of incentives (Baseline), the initial incentive period (Incentive I), the period during which incentives were stopped (No Incentive), and the beginning of the reintroduction of incentives (Incentive II).

Visual inspection of Figure 4 indicates that incentives were indeed effective. Homework production increases dramatically when incentives are first introduced, drops back to the original level within a month when incentives are stopped, and rises sharply at the reintroduction of incentives.

Statistical analyses performed on the data (t-tests, using the same set of 25 students throughout) indicate that all three changes are significant at the .001 level (Baseline - Incentive I, $t = 5.898$, $df = 21$, $p < .001$; Incentive I - No Incentive, $t = 4.558$, $df = 15$, $p < .001$; No Incentive - Incentive II, $t = 5.066$, $df = 15$, $p < .001$).

Incentives for classwork production were introduced later in the program in a somewhat different form (August 4, 1969). In this case, no payments were made for classwork production; instead a minimum level of classwork production was required before payment would be made for homework. The level was initially made very low (one unit of classwork for each day's homework), then increased when students became accustomed to it.

Figure 5 indicates that this contingency was effective for both first- and second-year students. A t-test performed on the combined groups' daily average production indicates that the change in classwork production is statistically significant ($t = 6.755$, $df = 13$, $p < .001$).

With the incentives effectively increasing production of homework and classwork, it is intriguing to pose the question, what is the degree of cost and benefit of such gains? As most researchers realize, this question is generally not answerable as a simple equation. Typically, such a situation is too noisy to produce the parameters necessary for calculation of the cost/benefit ratio. This case is no exception.

We can, however, estimate the the cost of the increment in homework production. In order to do this we will use the factors in Table 9. The sample of behavior we will use is the effect of incentives on homework production as given in Figure 4. During the baseline period, the average number of frames produced per person per day was 26.9. After the introduction of incentives (a period of two months, but with only 22 days usable in the analysis because of Christmas vacation), the average daily frame production rate per person increased to 67.0 -- an an increase by a factor of approximately 2.5. The total cost of in-

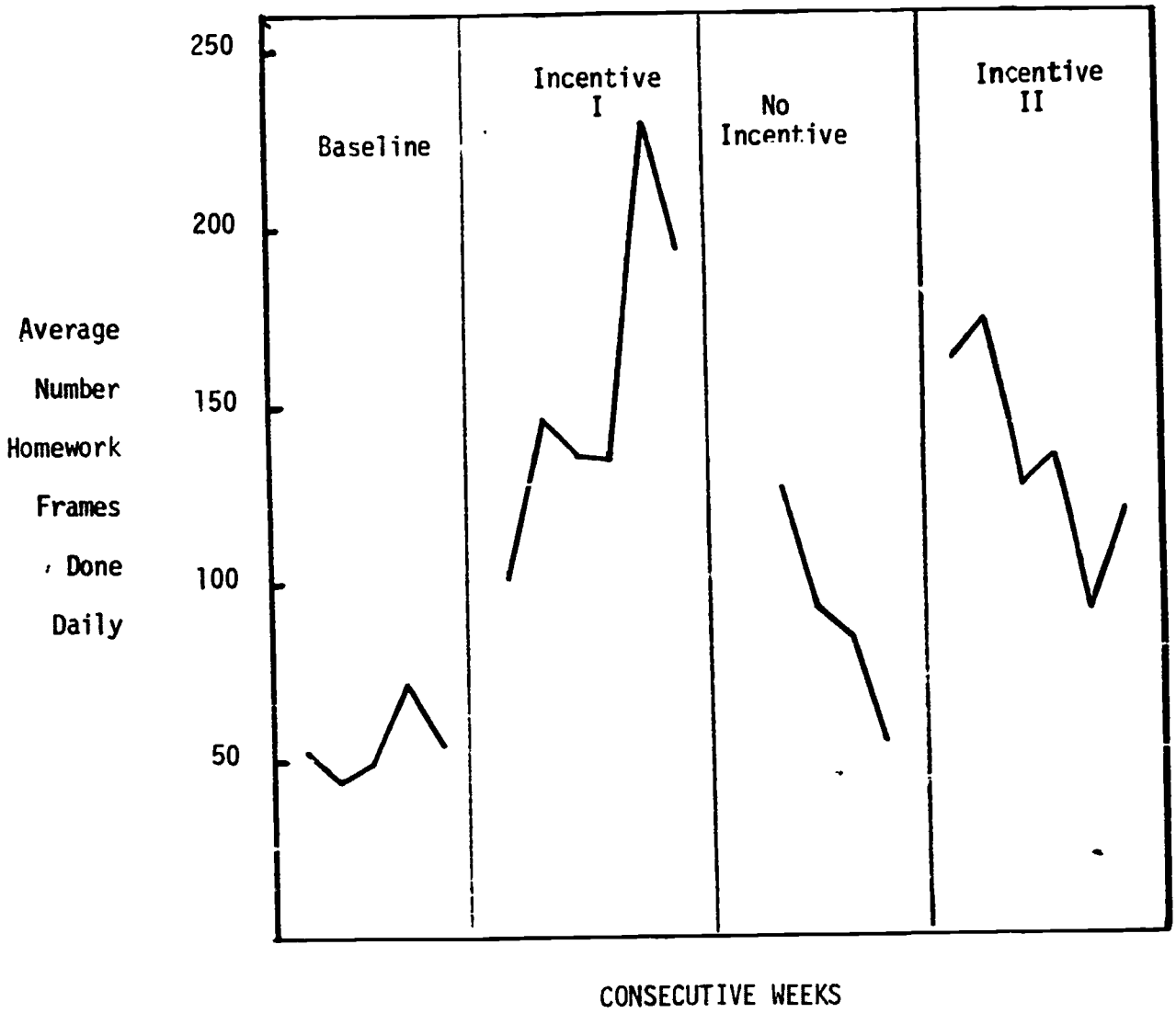


Figure 4: Effect of introduction, cessation, and re-introduction of incentives on homework production.

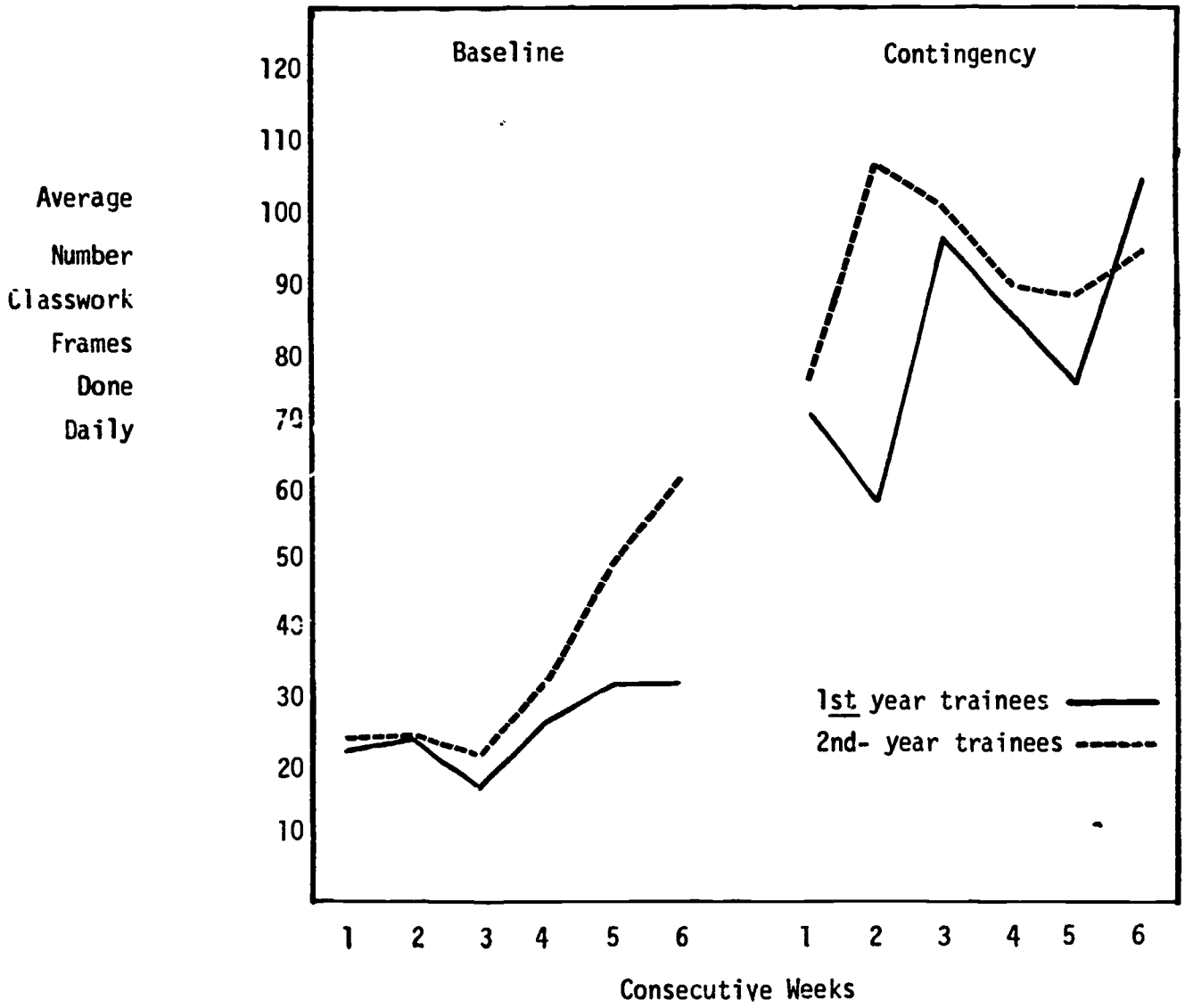


Figure 5: Average classwork production by first- and second-year trainees over 12-week period; homework payments made contingent on classwork production at the end of the sixth week.

centives during this period was $1050.25, or $47.74 per day for the total group, or $1.91 per person per day. If we take the average month to have 21 days, the computed monthly cost of incentives per person comes to $40.11. The current monthly cost per trainee in Associates' program is $190.50. (Current monthly cost per trainee is used because it represents a more stable estimate of costs, and because cost at the time these data were collected was confounded by many types of developmental costs not associated with a production training program.) Using this as the base, the incremental cost of incentives is 21.1%. Thus, it can tentatively be said that the additional 21.1% in costs added by incentives results in about a 150% increase in the amount of homework produced.

In terms of ultimate benefit, we would like to have the answers to two questions: (1) How much did the increased homework contribute to quicker completion of the course, and what is its relation to other criterion variables? (2) How much did it contribute to making this program better than the control program?

The answer to the second question cannot be given, as it is difficult to estimate the amount of variance contributed by homework to program success in a post hoc manner and with a small N. Similarly, with respect to the first question, the N is insufficient to properly equate for all variables other than homework production. We will have to rely on the logic that the faster a trainee completes requisite work, the more quickly she will obtain the end goal. It should be noted, however, that there is a positive relation between the average amount of classwork and program completion, and that incentives, as detailed above, were instrumental in increasing classwork.

At the current time the cost of incentives is less than one-fifth the cost reported above, and the output of homework has remained constant. This is due to a completely revised incentive system based on a combination of symbolic and material reinforcers. This system is much more flexible and introduces such desirable psychological elements as delay of reinforcement. A description of this system is given in the Guide to the Operation of a Basic and Clerical Skills Program for AFDC Trainees. Briefly, it is based on daily indications of accomplishments in terms of stamps which culminate in material rewards. It forces the person to delay acquisition of the material reward, but maintains daily motivation by providing progress cues toward the attainment of the reward. It is also based on the assumption that the whole is greater than the sum of its parts, i.e., that a reward worth $10 takes on greater psychological value and is capable of greater motivating power over a given period of time than the same $10 distributed in small amounts during that same period of time.

Table 9

Factors Involved in Determining Costs and Outcome of Initial Incentive Manipulation of Homework Production

Factor	Value
Number of trainees	25
Mean daily baseline production	26.9
Mean daily incentive production	67.0
Increment factor in production	2.49
Total cost of incentives (22 days)	$1050.25
Mean cost of incentives/month/person	$47.74
Base cost of training/month/person	$190.50
Increment in cost due to incentives	21.1%

Correlational Analysis: Relations Among Entry, Process, Criterion Variables

In these analyses three questions are posed:

1. How do the entry level variables, e.g., age, relate to final performance variables, e.g., GED attainment?
2. What other variables relate to final performance variables?
3. How does performance during the course of the program relate to other aspects of the training process and to end performance?

To study these relationships, a correlation matrix was developed using the variables noted below. These correlations were developed using all Associates trainees (N = 78) from both years in order to obtain more stable data.

Correlational Variables

GED attainment
Job attainment
Civil Service rating attainment
Program completion
Per cent repeats (percentage of all lessons done which were repeats of a previously failed lesson)
Homework production (Average frames/day)
Classwork production (Average frames/day)
Per cent attendance
Day attended
Incentives earned (average dollars/week)
CAT entry score
IQ (Otis Quick Scoring)
Number children
Age
Work experience
Education

Table 10 which follows lists all pairs in the correlation matrix with significant correlations. (Each pair is listed twice -- once under each member -- so that all correlations with any given measure are presented together.) Since no comparison with control trainees is involved, all trainees who received a Civil Service Rating, GED or job through the program, whether or not they completed the program, were included. The definition of program completion was also changed slightly, so that two additional trainees, considered dropouts for the purposes of the control group comparison, were considered as having completed the program for the purposes of the correlation -- a total of 38 trainees, 19 from the first year group and 19 from the second year group. In both instances the additional trainees returned to the program following the cut-off data for the comparison of Associates and control trainees.

Entry level variables

An important point to note here is that none of the demographic characteristics -- age, number of children, previous education, or work experience -- is related to criterion variables such as program completion, job attainment, or attainment of credentials. Neither are they related to performance while in the program -- attendance, work production, incentives earned, etc. This is both useful and encouraging information, since it means that women of a wide range of ages and backgrounds can expect to be successful in such a program. Women past forty, women with 5 or more children, women with junior high school educations who have never worked before -- all have a similar chance of success.

A related question would ask what entering ability or achievement level is necessary to succeed in such a program. In two instances, there is a relationship between these variables and criterion variables. The higher the CAT score, the more likely the trainee is to obtain a GED diploma. The higher the IQ, the more likely the trainee is to remain in the program. Neither of these is surprising -- and, in fact, it is somewhat surprising that more correlations of CAT score and IQ with criterion variables were not noted. The average Associates trainee had a CAT score of about seventh grade and an Otis IQ between 85 and 90- Since program completion and GED attainment are dichotomous variables, t-tests were performed on this data.

The average IQ of trainees completing the program is 90.5 with a range from 78 to 116; the average IQ of non-completers, or dropouts is 84.7, with a range from 73 to 93. ($t = 2.696$, $p < .01$) This suggests that if one wishes to consider IQ as a screening variable for a program such as Associates, an IQ of 80 would be a reasonable cut off point, with the recognition that the range from 80 - 90 is a problematical one, and people in this range may require greater attention.

Of the 38 trainees who completed the program, 19 obtained GED diplomas. The average CAT entry score of those who received GED's is 7.9, with a range from 6.2 - 9.6. The average score of those who did

Table 10: Significant correlations among entry-level data, criterion data, and process data obtained from Associates' trainees

Pair	Correlation Coefficient	Significance Level
GED attainment - job attainment	.375	.05
GED attainment - civil service rating	.337	.05
GED attainment - mean incentives earned	.376	.05
GED attainment - CAT entry score	.446	.01
Job attainment - GED attainment	.375	.05
Job attainment - civil service rating	.449	.01
Job attainment - per cent attendance	.574	.01
Job attainment - days attended	.370	.05
Job attainment - mean incentives earned	.307	.05
Civil service rating - GED attainment	.337	.05
Civil service rating - job attainment	.449	.01
Civil service rating - days attended	.396	.05
Program completion - mean classwork production	.447	.01
Program completion - per cent attendance	.254	.05
Program completion - days attended	.740	.01
Program completion - mean incentives earned	.313	.05
Program completion - Otis IQ	.380	.01
Per cent repeats - days attended	.458	.01
Per cent repeats - CAT entry score	-.409	.01
Per cent repeats - Otis IQ	-.292	.05
Mean homework production - mean classwork production	.318	.01
Mean homework production - mean incentives earned	.522	.01
Mean homework production - CAT entry score	.259	.05
Mean classwork production - program completion	.447	.01
Mean classwork production - mean homework production	.318	.01
Mean classwork production - days attended	.284	.05
Mean classwork production - mean incentives earned	.566	.01
Mean classwork production - CAT entry score	.262	.05
Per cent attendance - program completion	.254	.05
Per cent attendance - job attainment	.574	.01
Per cent attendance - days attended	.459	.01
Per cent attendance - mean incentives earned	.537	.01
Per cent attendance - Otis IQ	.321	.05

Table 10 (Cont.)

Pair	Correlation Coefficient	Significance Level
Days attended - mean incentives earned	.320	.05
Days attended - job attainment	.370	.05
Days attended - civil service rating	.396	.05
Days attended - program completion	.740	.01
Days attended - per cent repeats	.458	.01
Days attended - mean classwork production	.284	.05
Days attended - per cent attendance	.459	.01
Mean incentives earned - CAT entry score	.363	.01
Mean incentives earned - Otis IQ	.292	.05
Mean incentives - GED attainment	.376	.05
Mean incentives - job attainment	.307	.05
Mean incentives - program completion	.313	.05
Mean incentives - mean homework production	.522	.01
Mean incentives - mean classwork production	.566	.01
Mean incentives - per cent attendance	.537	.01
Mean incentives - days attended	.320	.05
CAT entry score - GED attainment	.446	.01
CAT entry score - per cent repeats	-.409	.01
CAT entry score - mean homework production	.259	.05
CAT entry score - mean classwork production	.262	.05
CAT entry score - mean incentives earned	.363	.01
CAT entry score - Otis IQ	.672	.01
Otis IQ - program completion	.380	.01
Otis IQ - per cent repeats	-.292	.05
Otis IQ - per cent attendance	.321	.05
Otis IQ - mean incentives earned	.292	.05
Otis IQ - CAT entry score	.672	.01
Number children - age	.256	.05
Number children - work experience	-.351	.01
Age - number children	.256	.05
Work experience - number children	-.351	.01
Education - no significant correlations		

not is 6.7, with a range from 5.3 - 8.3 ($t = 3.871$, $p < .01$). On the basis of this information, Associates now uses the CAT as a screening device, with a score of 7.0 as a cut-off. Applicants who do not make this score are allowed to re-test if they wish, and will be accepted if they make a score of 7.0 or better on the second or third try. The staff recognizes that a re-take of the test after a short period of time will frequently result in an artificially increased score due to practice. However, trainees with scores below 7.0 have been successful in the past -- and the interest and determination indicated by a desire to re-take the test may well be as important as the score itself.

CAT score and IQ are correlated with a number of process variables (as well as with each other). The higher a trainee's CAT score, the greater his average work output and incentive earnings -- and the lower the percentage of lessons which must be repeated. This is to be expected -- students with higher achievement levels will turn work out faster and more easily, making few mistakes from the beginning. IQ is related to repeats and incentives in the same way as the CAT score, but does not show a significant relationship with work production. It is, however, positively related to percent attendance. IQ is not, however, used as a screening device, since it is highly correlated with the Cat, but probably less reliable, and certainly less informative with regard to placement in training.

In summary, the data indicates that -- within common-sense limits -- the program is appropriate to women of a wide range of age, education, ability, achievement, and family size. It is suggested that trainees should have attained an achievement level of at least 7th grade prior to entering the program, particularly if a high school equivalency diploma is one of their goals.

Criterion data

A survey of the correlations found with measures of success -- job, GED, Civil Service rating, program completion -- is the other side of the coin in relation to the previous analysis. As noted, only two of the entry level variables -- IQ and CAT -- have any significant predictive value in terms of criterion variables. In addition, these variables show several significant correlations with each other, as expected. For example, trainees who obtain GED's are more likely to acquire jobs than trainees who do not. Of more potential interest are correlations between criterion variables and process data -- performance while in the program.

Civil service rating attainment is significantly related only to two other measures of success -- job and GED -- and to number of days spent in the program. This reflects the fact that virtually everyone who stayed in the program was able to obtain a Civil Service rating -- 34 of 38; no one obtained a GED or job who did not also obtain a Civil Service rating. This in turn reflects the staff's approach to the Civil Service Examination. The Civil Service rating was felt to be a particularly valuable credential and trainees were given extensive practice and encouraged to try to improve their ratings. Trainees were usually relaxed and already very familiar with the examination conditions and typically

performed very well. While a similar approach was taken to the GED examination, it is unfortunately a much longer and more difficult set of five tests. The obvious relationship between the Civil Service examination and a job, plus the fact that it could be taken in one session, made trainees much more ready to take and/or re-take this examination than the GED. It is probably fair to say that almost anyone who stays with the program will obtain a Civil Service rating.

Two measures of performance while in the program seem to be importantly related to criterion variables. Average incentive earnings show a significant positive relationship to program completion, GED attainment, and job attainment; per cent attendance shows a significant positive relationship to job attainment and program completion. Actual number of days attended shows a significant positive correlation with job and civil service rating attainment (and, of course, program completion). It is, of course, impossible to say from this information what causative relationships, if any, are involved. The correlations do suggest, however, that the use of incentives is an important factor in the program -- and that Associates' current concern with raising attendance is well-placed.

With the exception of CAT and IQ, already discussed, no entry-level characteristics measured are significantly related to success in the program; relationships of IQ and CAT are limited, the former being positively related to program completion, and the latter to GED attainment. This is an encouraging finding, since within the wide range of students provided by WIN and welfare, it suggests that program characteristics and the trainees' efforts are more important in determining success than the trainees' demographic characteristics and educational background. It supports the contention of behavior modification and modern instructional technology that given the right learning experiences, anyone can succeed -- and adds force to the operational credo that if a student doesn't learn, it is up to the teacher to try another approach.

Process Data

The relationships of measures of performance within the program are worth examining for a variety of reasons.

One somewhat unusual aspect of the program was the requirement that trainees repeat all lessons and tests failed until they were able to obtain passing scores (90% and 85% respectively). This has been criticized on the grounds that students who must repeat often are not really learning anything by the repetition; that if they cannot grasp the material the first time around (or perhaps the second) they will never grasp it and the final high scores they obtain will be artificial and will not really represent knowledge gained. This point of view suggests that it would be better to fail people who have to repeat often and remove them from the program, rather than let them put forth a tremendous effort when they're not really learning. If this point of view is correct, one would expect a negative correlation between repeats and success in the program. Those students with a high percentage

of repeats should be less likely to obtain GED's, civil service ratings, and jobs. This is, in fact, not true. Per cent repeats shows no significant correlation with success measures. The measure does show a quite reasonable negative correlation with IQ and CAT -- brighter, better educated trainees are more likely to grasp the material on the first try, and thus a smaller percentage of their lessons will be repeats. The relationship between days attended and per cent repeats indicates that the quicker students -- those who need to repeat seldom -- get through their work faster, are likely to be among the first to obtain jobs, and therefore spend fewer total days in the program.

Work production -- average frames done per day -- is also not significantly related to criterion variables except in the case of classwork production; the greater the trainee's average daily production of classwork, the more likely she was to complete the program. This may reflect an increased tendency to stay with a situation into which one has put a great deal of effort. Both classwork and homework production were -- as expected -- significantly correlated with incentives earned. Both are also significantly correlated with entering CAT score. Again, it is reasonable to expect that trainees with higher achievement levels will find school work easier initially, and turn out work at a faster rate than those with low achievement levels. Attendance and its relation to criterion variables has already been discussed.

One more point must be made with regard to process data correlations. The use of incentives was a major aspect of Associates' program, and average incentives earned is correlated with a wide range of other program variables. It shows a significant positive correlation with all criterion variables except civil service rating attainment -- and as noted earlier, nearly everyone who completed the program got a civil service rating so that relatively few correlations would be expected. Incentives also show a significant correlation with two important measures of performance within the program -- work production and attendance. While rate of work production does not show a significant relationship with the attainment of the criterion variables, it can certainly be expected to be related to the length of time taken to attain them. The relationship between attendance and incentives suggests that Associates' current efforts to investigate means of using incentives to increase attendance are well-founded.

The correlations discussed suggest the following tentative conclusions:

1. Such factors as age, previous education, previous work experience, and number of children appear to have little bearing on a trainee's chances to success in a program such as Associates' and should not be used to bar anyone from such a program.

2. Ability and achievement level, as measured by the CAT and Otis IQ, do seem to have some bearing on a trainee's chances of success, through there is no significant relationship to civil service rating or job attainment. If one or both of these factors is to be used in screening applicants, then, the cut-off point should be quite low.

3. Within-program measures of performance such as rate of work production, and number of lessons failed (per cent repeats) do not show a significant relationship to criterion variables, or measures of program success. These factors may determine the speed with which the trainee attains her goal, but not whether or not she attains it. The slower worker, who makes mistakes along the way (but corrects them) appears to have just as good a chance to eventually succeed as the fast worker to whom things come easily and quickly.

4. Within-program factors such as attendance and average incentive earnings do show a significant positive relationship to attainment of criterion variables. The first is an expectable finding -- if we assume the program is beneficial, then the better one's attendance, the better one's chances of success. Although its nature is less clear, the second is also an expectable finding and suggests that reinforcement can be both powerful and wide-ranging in its effects.

Education Questionnaire

One measure of entry-level characteristics -- response to the Education questionnaire-- has not yet been discussed. Since the instrument was developed by staff members, there are no norms available, and there is no convenient, meaningful way to reduce the total questionnaire to a single measure as can be done with most other measures. For these reasons the education questionnaire is being considered separately.

The questionnaire was designed to obtain an estimate of trainee's attitudes toward both education and work through her strength of agreement or disagreement with a number of statements about education and work. Questions were also asked about the trainee's ambitions -- both for herself and for her children -- and the trainee's estimate of the chance of fulfilling these ambitions.

The questionnaire was administered to most trainees who entered after the pilot trainees (a few trainees in each group did not receive the questionnaire because of time pressures). It was also administered at the end of the program both to trainees who completed the program and to as many dropouts as could be contacted. A copy of all items on the questionnaire, as well as mean before- and after- responses for Associates and control trainees, can be found in the appendix. A brief summary of the results will be made here.

The most important potential uses of the questionnaire were (1) as a possible predictor of potential dropouts and (2) as an indicator of ways in which the program experience might have changed significant education- or work-related attitudes. With this in mind, the following comparisons were made.

Comparison of first- and second-year Associates trainees and controls:

Analyses of variance were performed on the responses to both before- and after-questionnaires. There were significant differences at the .05 level among the groups on two items on the initial questionnaire and on one item on the final questionnaire. Since there were 49 items analyzed -- and therefore 98 analyses, including both questionnaire administrations -- one would expect about 5 of these analyses to reach .05 significance levels on the basis of chance. It was therefore considered unwise to place any great importance on these differences. The best conclusion which can be made is that there were no differences among the two Associates groups and the control group either in initial or final response to the Education Questionnaire.

Comparison of responses of dropouts and non-dropouts:

This comparison was made using all Associates trainees, i.e., first and second years. Analyses of variance were performed, on the responses of three groups -- trainees who completed the program (N =27), trainees who dropped out after having at least two weeks of training (N =29), and trainees who dropped out in less than two weeks (N = 8). Significant differences in response (.05 level) occurred on three items. This is about what would be expected by chance from populations which do not differ. The safest conclusion, then, is that the Educational Questionnaire is not useful in detecting future dropouts.

Analyses of change scores:

Finally, t-tests were performed to determine whether or not there had been significant changes in response to the questionnaire over time. In the case of control trainees, changes significant at the .05 level occurred to three of the 49 items -- again it was considered unsound to attach importance to the changes.

In the case of Associates' trainees, changes significant at the .05 level or better occurred with six items among first-year trainees and with ten items among second-year trainees. In only one instance did both groups show significant change on the same item, so that fifteen different items are involved. In seven instances in which one group showed a significant change, the other group showed a change, though non-significant, in the opposite direction. These considerations suggest caution in interpreting the results. The lack of agreement may reflect sample or treatment differences or basic unreliability of the questionnaire as a measuring instrument.

Table 11below lists all items on which at least one group of Associates' trainees registered change significant at the .05 level. Students were asked to express agreement or disagreement with statements on a 5-point scale with "1" indicating strong agreement; estimates of chances of success or degree of disappointment were made on a 4-point scale, with "1" indicating the highest chance of success.

Table 11: Significant Changes in Response to the Education Questionnaire

	Item and Number	Associates First Year	Associates Second Year
8.	Sometimes a person has to be nice to people he doesn't like.	-.19	.28*
12.	Students should spend most of their time in school reading and listening to teachers; they can practice working and doing things themselves later.	.31	.88**
22.	Students should be able to decide for themselves what things they want to learn.	1.13*	.76*
23.	A person should take less money in order to work at a job that he really likes.	-.44	-.56*
27.	Students should always be told ahead of time exactly what kind of work is expected of them.	-.06	.50**
28.	Hard work always pays off.	.80*	-.17
30.	Children who do not want to do what their parents want them to do should always be punished.	.47	.56*
31.	People who know a lot should always be respected.	1.07**	.20
34.	Getting along with people you meet for the first time is usually easy.	-.06	.60**
36.	New jobs are usually hard on the nerves.	-.13	-.60*
40.	What do you think her [your daughter's] chances would really be of getting this much education?	-.69*	.20
41.	How would you feel if she couldn't get the amount of education that you would like her to get?	-.79**	-.33
43.	What do you think his [your son's] chances would really be of getting this much education?	-.14	.61*
46.	What do you think your chances really are of making this amount [specified by respondent] of money?	-.93*	.17
48.	What do you think your chances really are of getting this type [specified by respondent] of job?	.18	.63**

* Significant at .05 level
** Significant at .02 level

A positive change in Table 11 indicates decreased agreement with the item (or decreased estimates of chances or amount of disappointment); a negative change indicates increased agreement. The only pattern that suggests itself is in the second-year data in which the decreased agreement with items 8, 12, 27, and 30 suggests increased independence. This attitude would be consistent with the atmosphere of the training system. The seeming contradiction of the decreased agreement to item 22 would also be consistent with a system in which trainees have learned to accept advice when they have truly had the chance to make the choice and found the advice relevant and beneficial. This interpretation is, however, subject to the caution given earlier.

Dropouts

In addition to the analyses already performed which relate to dropouts, follow-up interviews were obtained from as many dropouts as could be contacted. One of the primary concerns was to determine reasons for dropping out --since these might suggest means of prevention.

Table 12 which follows lists the reasons given for leaving the program, and the number of ex-trainees giving each. Associates and control trainees are combined in this table in order to obtain more stable estimates of the proportion of dropouts caused by various factors -- 15 control dropouts were contacted, and 21 Associates dropouts.

Table 12: Reasons Given by Trainees for Leaving Program

Reason	Number Reporting	Per Cent
Nerves; discouragement; lack of progress; boredom; no interest	11	31%
Health problems: child or parent	8	22%
Personal, family, financial problems	3	8%
Child care problems	5	14%
Pregnancy	7	19%
Work	2	6%
TOTAL	36	100%

Leaving the program to take a job is the least common reason given. One of the trainees was from Associates' first-year trainees; she obtained a clerical job which she still had at the time of her interview.

She attributed her ability to obtain the job to her training with Associates, and should perhaps be considered a success story rather than a dropout. She left the program early, however, without notifying staff, and obtained neither a GED nor a civil service rating; staff had been unable to contact her until the follow-up interview. The other trainee was from the control group and left to take a factory job, but was laid off and was not working at the time of the follow-up interview; she is legitimately considered a dropout.

Apart from these two, all other reasons given for leaving the program fall into two categories, from the point of view of developing strategies to prevent dropouts. Child-care problems and pregnancy are clear-cut, tangible problems; relative to the other reasons given, they are simple to deal with. The mechanics of the solution may be complex, but the basic solutions are relatively clear. If these percentages are truly representative, adequate child care provisions would prevent up to 15% of training program dropouts.

Preventing dropouts caused by pregnancy requires a two-pronged effort. Better dissemination of information about, and assistance with, family planning -- use of birth control and therapeutic abortion -- is one approach. In many areas this is already being done, and the situation has improved considerably just since Associates' program has been in operation.

The other approach lies in changing at least in one respect, response of trainees, labor and/or welfare counselors, and training program personnel toward pregnancy. Typically, pregnancy is considered a minor disaster and it is assumed by all concerned that the trainee has lost her chance at an education. Lip service is paid to the notion that of course the trainee should try to obtain training later, but no efforts are made to ensure this, and everyone involved usually ceases, for the time being at least, all efforts in the direction of training. There is no reason to do this; obviously, the trainee will have to take time off to have her baby, but the situation should be treated as a leave of absence. Working women who become pregnant frequently are able to arrange such leaves of absence and set approximate dates for leaving and returning. It is suggested that if this were standardly done in the case of training program enrollees, many dropouts could be prevented.

This was done with one trainee in Associates' program -- and much of the credit goes to the trainee. She stated emphatically that she wanted to return to training and Associates' staff encouraged her and together set up approximate dates for leaving and returning to the program. An Associates' staff member contacted the trainee's counselor and informed her of the plan and assured her of Associates' willingness to accept the trainee upon her return. The counselor expressed some surprise and skepticism at the arrangement. The arrangement was, however, successful. The trainee returned to the program, completed training, has been working for several months with the WIN program as a coach, has stated that she thoroughly enjoys her job, and is in the process of upgrading herself.

Admittedly, this is a single instance. It suggests. however, that other dropouts might have been prevented, had staff members made it clear at the outset that special leaves of absence would be granted for pregnancy, that assistance would be provided for finding child care and other problems, and that trainees who became pregnant should immediately contact a staff member to make arrangements for a leave of absence and discuss any potential child care problems. Simply treating the situation as one readily coped with, involving only a relatively brief delay in training might well prevent a number of dropouts.

The other categories of reasons for leaving are less specific, and include a much broader range of problems. An additional major difficulty is that it is less clear what the "real" problem is. Health problems, for example, may range from a severe disabling illness to a generalized complaint of not feeling well. In addition, a problem which results in one trainee's becoming a dropout, may be handled quite successfully without outside assistance by another. Specific directed solutions to the problems in the first three categories are much more difficult -- perhaps impossible -- to develop. Their solution lies in a re-structuring of society, the development of better schools, medical facilities, housing, job opportunities, etc. -- so that large segments of the population do not have discouraging early educational experiences and do not find themselves pushed into depressing, extremely limited-choice situations in which a relatively minor problem seems overwhelming.

Until this ideal society arrives, interim solutions probably lie in broader and more effective applications of the basic approach taken by Associates' program -- individualization of treatment, special attention to, and reinforcement of, efforts in the directions of self-help, and concerted, intensive efforts to remedy the inevitable problems and deficiences created in a less-than-ideal society.

Summary

Associates' trainees were comparable in age and number of children to the Philadelphia AFDC population at large; 84% had dropped out of school between the 9th and 11th grades, as have most Philadelphia AFDC mothers (55%). Seventy-eight trainees were enrolled, but only 69 remained long enough to actively partake of training. The "average" trainee was in her late 20's or early 30's, had 3-4 children, had dropped out of school around the 10th grade, and had an achievement level about equal to that of a beginning seventh grader.

A little more than half of Associates' trainees completed the program. Of those who did not, an estimated half found jobs, or eventually returned to training, for an effective dropout rate of about 25%. About one-third of dropouts reported pregnancy and/or lack of child care as reasons for leaving. Another third cited such reasons as nerves, boredom, discouragement, lack of interest, or lack of progress. The remainder cited personal or family problems, or health problems (either theirs, or their children's).

Of the 36 trainees who remained to the end of the program, 24, or two-thirds, obtained jobs -- the ultimate criterion of success. Many of the remaining 12 are still in training, and have received either a GED diploma or a civil service rating, or both.

One group of Associates' trainees was matched to a control group of the same size and of comparable age, family size, education, achievement level, and IQ. The control group received training in the same areas as Associates' trainees (basic and clerical skills) but through other sources available in the Philadelphia area. Associates' trainees did better than control trainees in obtaining jobs (by a factor of about 2), and in obtaining high school equivalency diplomas and civil service ratings (by a factor of about 3). Associates' trainees made greater gains in academic achievement than control trainees as measured by the California Achievement Test, although the differences in the groups final achievement levels were not statistically significant. Dropout rate was the same in both groups, and attendance was low in both groups (50 - 60%). Attendance in Associates' group was in fact lower than in the control group, indicating that Associates' trainees achieved their greater gains in less actual training time.

Estimated training costs for Associates' program, now that it is established and operating, are comparable to, or less than, those for the training received by control trainees.

APPENDIX A

Excerpt from Pilot Experiment on the Effect of Controlling Payment on Daily Attendance

Excerpt from Pilot Experiment on the Effect of Controlling Payment on Daily Attendance

We have begun compiling data comparing the attendance on the job of those students now working with their attendance while in school. At this writing, data is available on only three former students, but it is sufficiently impressive to warrant mentioning. All three students have been working for six to seven months. While in school, these students had attendance records of 71%, 74% and 84%; their attendance records on the job have been 95%, 100% and 94% respectively. Thus, work attendance has been greatly superior to school attendance. In fact, these students would not have been able to keep jobs had they maintained their old attendance records.

In all three instances, the students went directly from the school to a job, with a maximum of two or three days in between. It does not seem likely, then, that events occurring between school and the job effected any dramatic changes in their habits or attitudes. It seems that the consequences of taking time off from the job are sufficiently strong to maintain high attendance, but the consequences of taking time off from school are not.

In general one would expect that going to school would not be as strongly motivated as going to work because in work the powerful immediate consequences of missing a day's pay are strong motivators. School is usually maintained by long-range consequences (education will give you skills for a job, etc.) and the school work itself is many times not inherently motivating, but is a means to a long-range goal. We have instituted an incentive system, putting immediate consequences on work production, which has been very effective in increasing work output when students are in attendance, but which has done little to increase attendance itself. For AFDC mothers who have had many experiences of educational failure, the long-range goal of completing the program and obtaining a diploma, civil service rating, and job, may have little effect on the immediate everyday decisions she has to make. This would be magnified in the slow students. One of the biggest obstacles we had to overcome and still must was this lack of hope that hard educational practice would eventually pay off.

Specifically, we noted that many students would call and state that they had no carfare. We also conjectured that many students didn't have babysitting fees, having spent both the carfare and child care money as soon as they got their payment, instead of budgeting it. Secondly, the payment for baby-sitting and carfare is generally sent to the recipient bi-weekly. The average check is about $50.00. This whole sum is given regardless of the number of days in attendance. Only if the student leaves the program or is asked to leave is the contingent payment stopped. Not only is the babysitting and carfare sum not directly contingent on attendance, but the WIN check is also non-contingent on daily attendance. Regardless of attendance, except for extreme absences, the student receives both the WIN incentive check and the carfare and child care money in their entirely.

It is our impression that such non-contingency between attendance and payment is inimical to productive work for about half the students.

POSSIBLE SOLUTIONS

1. Set up high standards for attendance, which, if not met, lead to expulsion from the program. Such a solution would be efficient in the short run, saving money by dropping students who didn't meet the criteria. However, the goal of the WIN Program is to train people and place them in the labor market. Setting up extremely high standards at the very beginning would probably eliminate at least 50% of the population, and leave a large part of the welfare problem still with us.

2. The allotments could be made contingent on daily attendance. Each day the student came into school she would receive her child care, carfare, and WIN alottment for that day. This solution offers the advantage of having an immediate consequence for coming or not coming to school and approximates the work situation where the effect of absences leads to a loss in pay.

In our experience, where students have attended regularly there has been little or no difficulty in placing the person on the job and keeping her there. Once the students sample the large payoff (money and personal rewards) of working the welfare merry-go-round problem is solved. The problem is to get her there. The second solution proposed would lead in that direction. It has the advantage of not requiring the immediate expulsion and loss of poor attenders; on the other hand, it is much more efficient than is the case now, when money is doled out regardless of quality of attendance.

PRELIMINARY EXPERIMENTATION

In order to test the feasibility of paying the child care, and carfare daily, we did a preliminary experiment in which four students were paid $5.00 for each day they attended, if they came in at 9:00 a.m. and left at 3:00 p.m. (school hours).

Procedure: Four students who had attendance of less than four days a week were chosen for the experiment. The experimental students won a lottery prize which entitled them to a $5 per day for each day they came in for a period of one week. (The program has lotteries once a week, in which a student's chances of winning -- number of tickets in the lottery -- depends on her work production, promptness and attendance.)

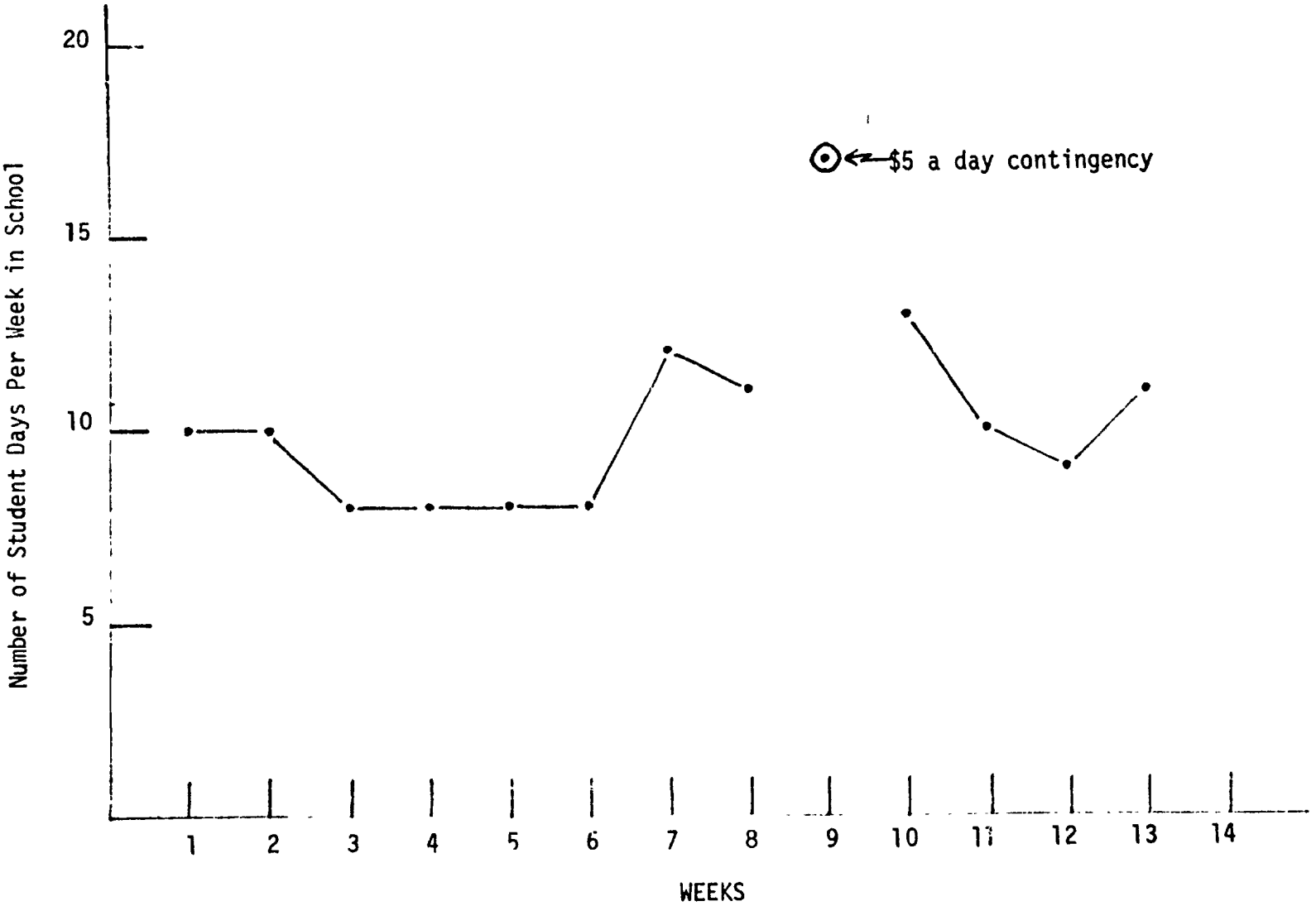
Results: Figure 1 shows the results. During the eight weeks prior to winning the lottery, these four students had a combined average attendance of 2.3 days per week or 47% of possible days in school; during the week in which the lottery was in effect, their combined attendance was an average of 4.25 days per week or 85% of possible days in school. This represents an 81% increase in attendance for the experimental week.

As can be seen there is no overlap between any of the baseline weeks and the experimental week. In only one of the baseline weeks is the average per cent attendance over 50% (week 7). This week is still 26% less than attendance for the experimental week. The removal of the experimental contingency was followed by a return to baseline immediately as seen in weeks 10-13.

Discussion and Implications: The pre and post experimental attendance percentage of about 47% is similar to our overall attendance over the last two years in running the program and is also similar to completely different type of private school which we had used as a control group. The experimental contingency of $5 per day for attendance strongly suggests that such a contingency may be effective in dramatically improving attendance.

The experiment could be more definitive if the contingency was carried out for a few weeks to determine whether the higher attendance would stablize. However, this is an expensive operation and it could not be done with funds available.

These data do strongly suggest that attendance problems can be overcome. The probability of such an increase in attendance by chance as obtained in this study is close to zero. The results of the experiment do point to the feasibility of making the student's carfare and baby sitting money contingent on daily attendance and paid on a daily basis instead of the present system in which this money is given non-contingently. By utilizing the baby sitting and carfare money contingently we would expect to increase attendance and as a result increase the probability of future employment.



EFFECT OF A $5.00 A DAY CONTINGENCY FOR ATTENDANCE

N=4

APPENDIX B

Education Questionnaire: Pre and Post Means for Associates and Control Groups

Education Questionnaire: Pre and Post Means for Associates and Control Groups

Question #	GI Assoc. 1st yr.		GII Assoc. 2nd yr.		GIII Control 2nd yr.	
	Pre	Post	Pre	Post	Pre	Post
1	3.4	3.7	3.8	4.3	3.5	3.7
2	4.5	4.6	4.8	4.7	4.8	4.9
3	2.1	2.2	2.3	2.4	2.4	1.9
4	3.3	3.6	3.9	4.1	3.7	3.6
5	2.0	1.7	2.1	2.4	2.4	2.4
6	4.1	3.8	4.4	4.0	4.3	4.1
7	4.8	4.4	4.8	4.4	4.6	4.9
8	1.5	1.3	1.3	1.6	1.4	1.3
9	1.6	1.7	2.0	2.2	1.9	2.2
10	2.7	2.5	2.5	2.7	2.7	2.7
11	2.9	3.0	3.8	3.6	3.2	3.7
12	2.8	3.0	2.7	3.4	2.3	3.1
13	2.5	2.6	2.5	2.9	2.4	2.5
14	4.8	4.5	4.8	4.6	4.8	4.8
15	1.9	1.9	1.8	2.1	1.9	1.8
16	3.2	3.2	3.4	3.4	3.4	3.3
17	4.0	4.1	4.3	4.2	4.4	4.0
18	3.5	3.4	3.9	3.6	3.5	3.3
19	1.8	1.5	2.3	1.8	2.0	1.9
20	1.5	1.3	1.6	1.8	1.5	1.8
21	3.3	3.2	3.5	3.4	3.3	3.4
22	2.1	2.9	2.3	2.9	2.2	2.7

Question #	GI Assoc. 1st yr.		GII Assoc. 2nd yr.		GIII Control 2nd yr.	
	Pre	Post	Pre	Post	Pre	Post
23	3.7	3.4	3.8	3.0	3.2	3.2
24	3.1	3.0	3.6	3.0	2.7	2.6
25	1.9	1.7	1.8	1.9	1.8	1.7
26	1.3	1.3	1.1	1.3	1.1	1.2
27	1.4	1.4	1.7	1.9	1.3	1.5
28	1.6	2.2	1.8	1.6	1.6	1.8
29	1.7	1.7	1.7	2.0	1.9	1.9
30	3.2	3.6	2.9	3.2	3.1	3.0
31	3.1	3.8	3.2	3.4	3.1	3.1
32	3.3	3.6	3.8	3.8	4.0	3.6
33	1.6	1.4	1.3	1.2	1.2	1.5
34	2.7	2.8	2.4	3.0	2.4	2.7
35	1.9	2.0	1.9	1.6	1.7	1.6
36	2.6	2.5	2.8	2.2	2.6	2.5
37	4.1	4.1	4.5	4.4	4.1	3.9
38	3.9	3.4	4.1	4.0	3.8	3.7
39	4.4	4.0	4.1	4.1	4.1	4.0
40	2.4	2.3	2.3	2.6	2.5	2.4
41	1.8	1.6	1.7	2.0	1.8	1.7
42	4.0	4.0	4.4	4.4	4.2	3.9
43	2.5	2.5	2.3	2.6	2.5	2.4
44	1.6	1.4	1.6	1.8	1.8	1.7
45	139	191	140	132	160	186

Question #	GI Assoc. 1st yr.		GII Assoc. 2nd yr.		GIII Control 2nd yr.	
	Pre	Post	Pre	Post	Pre	Post
46	3.2	2.4	2.6	2.8	2.7	3.0
47	2.0	2.0	1.8	2.0	1.8	2.0
48	2.6	2.3	2.6	2.9	2.8	2.6
49	1.6	2.1	1.6	2.3	1.6	1.8

NOTE: Direction of scale is given in the accompanying questionnaire.

The reader should be cautioned in comparing these means to the change scores given in the discussion of the Education Questionnaire. "Pre" means above were derived from all students who initially responded to the questionnaire. Change scores were derived from only those students who responded to the questionnaire both prior to and following the program -- a smaller subset of the "pre" group. Original pre means for this subset can, of course, be derived by subtracting the change score from the post means.

APPENDIX C

Education Questionnaire

cc 3
1 2 3 4 5

EDUCATION QUESTIONNAIRE

This set of questions will be used to tell us some of your ideas about education--how much people should get, how they should be taught, why people go to school, get training, get jobs, how people learn in general, and so on. The more we know about people's feelings about education and similar things, the better chance we have to run a good school.

After each of the sentences below, put an X in front of the words that describe best how much you agree or disagree with the sentence.

Here is an example of how you would give an answer. Supposing the sentence was:

People should learn all their lives	cc 6
Agree very much	_____1
Agree somewhat	_____2
Neither agree nor disagree	_____3
Disagree somewhat	_____4
Disagree very much	_____5

If you felt that you like this idea very much, you would put an X on the first line which says Agree very much.

If you felt that you liked the idea but you were not wild about it you would put an X on the second line which says Agree somewhat.

If you didn't have much of a feeling at all about the idea you would put an X on the third line which says Neither agree nor disagree.

If you didn't like the idea but felt it wasn't too bad you would put an X on the fourth line which says Disagree somewhat.

If you felt strongly that the idea was a bad one you would put an X on the fifth line which says Disagree very much.

Please put only one mark for each sentence.

NAME_____

* Unnumbered questions were not used in the analysis because of the difficulty of qualifying open-end responses.

** All scales run from 1 = Agree very much to, 5 = Disagree very much except when another scale is given with the question.

1. Most of the education people get is only used to get a job; you don't really use it after you start working.

2. Teachers should spend most of their time with the best students.

3. To get ahead on a job people sometimes have to do work for which they don't get paid.

4. Children have a mind of their own and only threatening punishment can control them.

5. The school system should adjust the kinds of things it teaches and the way it teaches to fit the students.

6. As long as the work gets done, employers shouldn't care about when and how an employee does it.

7. Teachers should not waste time on students who cannot keep up with the rest of the class.

8. Sometimes a person has to be nice to people he doesn't like.

9. Parents are mostly responsible for the way a child behaves.

10. Most students who fail or drop out have no one but themselves to blame.

11. A good job would be one where you could do the same kinds of things each day.

12. Students should spend most of their time in school reading and listening to teachers; they can practice working and doing things themselves later.

13. Getting along with other people takes a lot of work.

14. A person should learn only enough so that he can make a living.

15. Students should spend most of their time working on their own, so that the teacher can spend time with each student helping him where he needs it.

16. No one works at any kind of job unless he has to.

17. To be really successful, you have to be lucky.

18. It's hard to know how to behave when meeting strangers.

19. Everyone learns at different speeds, and students should be allowed to work as slowly or as quickly as they want.

20. The best kind of job is one that has regular hours, and definite rules, so that you always know what to do and when to do it.

21. Most people do things because they are afraid of what will happen if they don't.

22. Students should be able to decide for themselves what things they want to learn.

23. A person should take less money in order to work at a job that he really likes.

24. If someone really thinks things out he can usually get other people to do what he wants them to do.

25. Students should always see the results of their work or tests right away.

26. If a person sets his mind to getting something done he can usually get it done.

27. Students should always be told ahead of time exactly what kind of work is expected of them.

28. Hard work always pays off.

29. Students should be tested very often.

30. Children who do not want to do what their parents want them to do should always be punished.

31. People who know a lot should always be respected.

32. Students should not be told what kind of grading system a teacher is using.

33. Learning a skill gives a person as good a chance as anybody else to get a good job.

34. Getting along with people you meet for the first time is usually easy.

35. Schools should spend more time teaching special skills that will be used in jobs later on.

36. New jobs are usually hard on the nerves.

37. The best place for children to learn how to behave is the school.

38. Almost everyone can get a high school education; if someone fails, it is usually the fault of the school system, the teachers, or something else the student has no control over.

39. If you had a daughter of normal intelligence, starting school now, how much education would you <u>like</u> her to get?

40. What do you think her chances would really be of getting this much education?

41. How would you feel if she couldn't get the amount of education that you would like her to get?

42. If you had a son of normal intelligence, starting school now, how much education would you like him to get?

	cc 52
Complete elementary school education	1
Complete vocational school training	2
Complete high school education	3
Complete college education	4
Graduate-Professional education	5

43. What do you think his chances would really be of getting this much education?

	cc 53
Absolutely certain (100%)	1
Very high (75%)	2
Moderately high (50%)	3
Slight (25%)	4
Amost none (5%)	5

44. How would you feel if he couldn't get the amount of education that you would like him to get?

	cc 54
Very disappointed	1
Fairly disappointed	2
Slightly disappointed	3
Not disappointed at all	4

45. Two years from now, how much money would you like to make a week if you were working? _____ 59 60 61 62

_____

46. What do you think your chances really are of making this amount of money?

cc 63

Absolutely certain (100%)	_____ 1
Very high (75%)	_____ 2
Moderately high (50%)	_____ 3
Slight (25%)	_____ 4
Almost none	_____ 5

47. How disappointed would you be if you were not able to make at least this amount of money?

cc 64

Very disappointed	_____ 1
Fairly disappointed	_____ 2
Slightly disappointed	_____ 3
Not disappointed at all	_____ 4

Two years from now what kind of job would you most like to have?
* Not used in the analysis.

65 66

_____

48. What do you think your chances really are of getting this type of job?

	cc 67
Absolutely certain(100%)	_____1
Very high (75%)	_____2
Moderately high (50%)	_____3
Slight (25%)	_____4
Almost none (5%)	_____5

49. How disappointed would you be if you were not able to get this type of job?

	cc 68
Very disapointed	_____1
Fairly disapointed	_____2
Slightly disappointed	_____3
Not disapointed at all	_____4

DATE

69 70 71 72 73 74

1 = Test
2 = Retest

75