

AN ABSTRACT OF THE THESIS OF

ROBERT ALEXANDER BIGSBY for the Ph. D.
(Name) (Degree)
in EDUCATION presented on August 4, 1969
(Major) (Date)

Title: ANALYSIS OF SELECTED FACTORS RELATING TO THE
NEIGHBORHOOD YOUTH CORPS PROGRAM IN RURAL
COUNTIES OF OREGON

Abstract approved: *Redacted for Privacy*
Dr. Pat H. Atteberry

Purpose of the Study

There were two major purposes of this study. The first was to determine which socio-economic and educational factors normally available to Neighborhood Youth Corps personnel were associated with success and failure in the out-of-school program. The second purpose was to utilize these available socio-economic and educational factors identified as success or failure determiners to construct a mathematical success-failure prediction equation.

Procedures

Data for 302 enrollees were obtained through a random sampling of terminated out-of-school enrollees. Socio-economic information was extracted from enrollee application forms and files. Educational

information was obtained from the last school attended.

Stepwise multiple linear regression and classification analyses were performed on data to identify variables contributing most significantly to success or failure. For these analyses, data for enrollees were grouped by marital status, sex, and age. Analyses were performed on separated groups. Variables contributing most significantly to success and failure were utilized to construct an equation for success-failure prediction.

Selected Findings

1. A higher proportion of females succeeded in the out-of-school program than did males. Forty-five and one tenth percent of the females succeeded compared to 26.9 percent of the males.
2. Factors affecting success or failure of male enrollees were:
 - (a) Enrollee age. Sixteen-year-old male enrollees failed in the program at a rate approximately four times that of older enrollees.
 - (b) Number of siblings in enrollee's family. Male enrollees coming from families with four or more children succeed at a higher rate than enrollees with one, two, or three children. "Only children" failed at a substantially higher rate than others.
 - (c) Highest school grade completed. There was a steady decrease

in the failure rate of male enrollees as school grade completed increased.

(d) Head of household employment. Single male enrollees living in homes in which the head of household worked part time succeeded at over twice the rate of those living in homes with the head of household working full time. This group also succeeded at a higher rate than those from homes in which the head of household was not working at all.

3. Factors affecting success or failure of female enrollees were:

(a) Language spoken in the home. Enrollees speaking Spanish in the home succeeded at a substantially higher rate than those speaking English.

(b) Social assistance. Single female enrollees whose families accepted cash welfare payments succeeded at a lower rate than those whose families did not accept welfare.

(c) Stated lifetime occupational goal. Single female enrollees stating a skilled lifetime occupational goal succeeded at a higher rate than those stating other lifetime goals. Those stating no lifetime goal or a professional goal failed at a substantially higher rate than others.

(d) Family living group. Single female enrollees living with their mothers only succeeded at less than one-half the rate of those living with both parents.

- (e) Reason for leaving school. Female enrollees who left school for disciplinary reasons failed at a very high rate.
 - (f) Enrollee age. Sixteen-year-old female enrollees tended not to succeed at as high a rate as 17, 18, 19, and 20 year-olds.
4. Accurate prediction of both success and failure was not possible for male enrollees and married or divorced females.
 5. It was possible to correctly predict success and failure in the program of single female enrollees approximately 75 percent of the time by employing five socio-economic factors.
 6. An equation was developed for predicting success or failure of single female enrollees. The following factors were employed in this prediction: (a) language spoken in home, (b) family living group, (c) reason for leaving school, (d) welfare, (e) life-time occupational goal.

Analysis of Selected Factors Relating
to the Neighborhood Youth Corps
Program in Rural Counties of Oregon

by

Robert Alexander Bigsby

A THESIS

submitted to

Oregon State University

in partial fulfillment of
the requirements for the
degree of

Doctor of Philosophy

June 1970

APPROVED:

Redacted for Privacy

Professor of Industrial Education
in charge of major

Redacted for Privacy

Head of Department of Industrial Education

Redacted for Privacy

Dean of Graduate School

Date thesis is presented August 4, 1969

Typed by Mary Jo Stratton for Robert Alexander Bigsby

ACKNOWLEDGEMENT

The writer is grateful to the United States Department of Labor, Manpower Administration, for underwriting this study and for allowing Neighborhood Youth Corps files to be examined. The writer is especially appreciative of the assistance rendered by Dr. Harry Clark and his fine staff who conduct the Neighborhood Youth Corps program in 27 rural counties of Oregon.

Appreciation is extended to Dr. P. H. Atteberry, Head, Department of Industrial Education, Oregon State University, Dr. E. E. Smith, Professor, Department of Industrial Education, Oregon State University, and K. B. McRae, consultant, Department of Statistics, Oregon State University, for counsel and encouragement during the research and preparation of this report.

Finally, a sincere thank-you is extended to my loving wife and family whose encouragement remained undiminished throughout.

TABLE OF CONTENTS

	<u>Page</u>
I. INTRODUCTION	1
Background to the Problem	1
The Problem	2
Importance of the Study	3
Limitations of the Study	4
Definition of Terms	6
Socio-Economic Factors	6
Educational Factors	6
Success in the Neighborhood Youth Corps Out-Of-School Program	7
Moderate Success in the Neighborhood Youth Corps Out-Of-School Program	7
Failure in the Neighborhood Youth Corps Out-Of-School Program	7
Drop-Out	8
Counseling	8
Work-Site Supervisor	8
Field Supervisors	9
Scholastic Record	9
Description of the Neighborhood Youth Corps Program	9
The Program	11
Enrollment	12
Employment	13
II. REVIEW OF RELATED LITERATURE	15
Disadvantaged Youth and Adults	15
School Dropouts	17
Studies in Sociology and Psychology	19
Studies in Training and Retraining	21
Studies Relating to Predicting Success or Failure	23
Summary of the Literature	26
III. PROCEDURES	29
Preliminary Examination of Records	29
Pilot Study	29
School Records	31
The Sample	32

	<u>Page</u>
Variables Employed	32
Coding of Data	34
Treatment of the Data	35
Construction of a Prediction Equation	38
Validating Prediction	38
 IV. PRESENTATION OF FINDINGS AND DISCUSSION	 40
Discussion	41
Uncontrolled Variables	41
Counseling	42
Work Assignment	42
Tables and Discussion of Variables	44
Sex	45
Stated Lifetime Occupational Goal	46
Language Spoken in Home	46
Age	48
Occupation of Head of Household	48
Living Group	48
Reason for Leaving School	53
Geographical Area	53
Welfare	56
Employment Status of Head of Household	56
Analyses	58
Classification Analysis	59
Linear Regression Analysis	60
Summary of Regression Analyses for Male Enrollees	61
Accuracy of Prediction for Males	64
Summary of Regression Analyses for Female Enrollees	66
Accuracy of Prediction for Females	71
Validation of Prediction	73
Prediction	77
Legend for Prediction Equation	78
Prediction Equation	78
 V. SUMMARY AND CONCLUSIONS	 81
The Problem	81
Procedures	81
Summary of Findings	81

	<u>Page</u>
Summary of General Findings	82
Summary of Factors Influencing Success and Failure of Enrollees	83
Summary of Prediction of Success and Failure	84
Conclusions	85
Recommendations for the Neighborhood Youth Corps Out-Of-School Program in Rural Oregon	87
Recommendations for Further Study	88

BIBLIOGRAPHY

APPENDICES

Appendix A	94
Appendix B	101
Appendix C	103
Appendix D	105
Appendix E	106
Appendix F	108
Appendix G	111

LIST OF TABLES

<u>Table</u>		<u>Page</u>
1	Summary of general information regarding out-of-school enrollees included in the sample populations.	40
2	Summary of success-failure of enrollees in the out-of-school program by counseling received in the program for males and females.	43
3	Summary of success-failure of enrollees in the out-of-school program by sex.	46
4	Summary of success-failure of enrollees in the out-of-school program by stated lifetime occupational goal for males and females.	47
5	Summary of success-failure of enrollees in the out-of-school program by language spoken in the home for males and females.	49
6	Summary of success-failure of enrollees in the out-of-school program by age for males and females.	50
7	Summary of success-failure of enrollees in the out-of-school program by father's occupation group for males and females.	51
8	Summary of success-failure of enrollees in the out-of-school program by living groups for males and females.	52
9	Summary of success-failure of enrollees in the out-of-school program by reason for leaving school for males and females.	54
10	Summary of success-failure of enrollees in the out-of-school program by geographical area for males and females.	55

<u>Table</u>		<u>Page</u>
11	Summary of success-failure of enrollees in the out-of-school program by welfare payments to the home for males and females.	57
12	Summary of success-failure of enrollees in the out-of-school program by head of household employment for males and females.	57
13	Summary of prediction accuracy for male and female enrollees using qualitative variables of age, highest grade of school completed, intelligence quotient and scholastic record.	60
14	Summary of variables entering stepwise multiple linear regression analysis for all males.	62
15	Summary of ten variables entering stepwise multiple linear regression analysis for single males with student's t values above the 75 percent confidence level.	63
16	Summary of prediction accuracy for single male enrollees employing ten variables from Table 15.	65
17	Summary of prediction accuracy for single male enrollees according to success and failure classifications only employing the four variables from Table 15 having the highest student's t values.	66
18	Summary of variables entering stepwise multiple linear regression analysis for all females.	68
19	Summary of five variables entering stepwise multiple linear regression analysis for single females with student's t values above the 90 percent level of confidence.	69
20	Summary of variables entering stepwise linear regression analysis for married plus divorced females.	70

<u>Table</u>		<u>Page</u>
21	Summary of prediction accuracy for single female enrollees employing five variables from Table 19.	71
22	Summary of prediction accuracy for single female enrollees according to success and failure classification only employing five variables from Table 19.	72
23	Summary of prediction accuracy for married and divorced female enrollees according to success and failure classification only employing three variables from Table 18.	73
24	Summary of prediction accuracy for new sample of single male enrollees according to success and failure classification employing four variables.	75
25	Summary of prediction accuracy for new sample of married and divorced female enrollees according to success and failure classification employing three variables.	76
26	Summary of prediction accuracy for new sample of single female enrollees according to success and failure classification employing five variables.	77

ANALYSIS OF SELECTED FACTORS RELATING
TO THE NEIGHBORHOOD YOUTH CORPS
PROGRAM IN RURAL COUNTIES OF OREGON

I. INTRODUCTION

Background to the Problem

During the early 1960's, attention focused on the plight of underprivileged persons in the United States. Considerable money and effort were expended in attempts to alleviate poverty and unemployment. Programs designed to provide educational and occupational opportunities for disadvantaged persons were implemented on a wide scale. These programs have been designed to provide a variety of services for persons who in some identifiable way have dropped from the mainstream of American life.

The Neighborhood Youth Corps Program is one of the programs implemented to aid disadvantaged persons. This program is designed to aid selected young persons in continuing and upgrading their education and in gaining on-the-job work experience. Opportunities are provided for enrollees to work on a job and to continue with their education. Two programs, the in-school program and the out-of-school program, operate to provide a flexible offering.

The Problem

The Neighborhood Youth Corps program has been in operation throughout the United States since 1964 and in Oregon since early 1965. To date, little formal evaluation of the program has been carried out. No formal evaluation has been carried out in the rural counties of Oregon.

In rural Oregon, out-of-school enrollees comprised the greatest number of persons in the program and received the largest proportion of the monies spent. The out-of-school enrollee was a school dropout, unemployed, and a potential expense to society. This initial research was directed to these out-of-school enrollees to determine (1) the degree of success of enrollees in the program, and (2) the educational and socio-economic characteristics of successful and unsuccessful enrollees.

In this study, selected data for 943 young people who were enrolled in, and terminated from, the out-of-school Neighborhood Youth Corps program were analyzed. Enrollees included in this study resided in rural Oregon and were in the program between 1966 and 1968. Data were analyzed to accomplish the following:

1. Categorize enrollees, using a random population sample, by available socio-economic and educational factors.
2. Test the hypothesis that socio-economic and educational

factors affecting success or failure of enrollees in the out-of-school program could be identified.

3. Test the hypothesis that a predictive model based on educational factors, socio-economic factors, and success in the out-of-school program could be developed.

Importance of the Study

Research pertaining to the Neighborhood Youth Corps program has been primarily concerned with compilations of data respecting enrollees' personal characteristics. Persons responsible for placing these young people in work-sites, supervising their work, counseling them, and placing them in permanent work situations following termination of enrollment had little except intuition to guide them in their placement and supervision. Enrollees were placed in work-sites and provided a work-site supervisor on the basis of an interview with a Neighborhood Youth Corps field supervisor. Field supervisors had no research evidence describing how well prior enrollees with similar backgrounds have performed. They did not have specific evidence regarding which factors in enrollees' backgrounds were important to consider when making judgements about acceptance, placement, and counseling.

There were three major aspects of this study which were important to those involved in providing the program for enrollees.

These were:

1. Information was made available to Neighborhood Youth Corps field supervisors and work-site supervisors regarding the backgrounds of enrollees who have succeeded and failed in the program.
2. Field supervisors and work-site supervisors were provided a model by which they could predict with some accuracy selected enrollees' potential for success or failure. An enrollee with high failure potential could be identified prior to beginning work and appropriate steps taken to optimize his chances of success.
3. Information such as average age, average grade completed, ratio of males to females, number from various geographical areas, income levels, and marital status was made available to those involved in administering the program. By identifying enrollees according to these factors, administrative personnel may gauge how well the program serves persons in various geographic areas and at various socio-economic levels.

Limitations of the Study

This study was limited to an investigation of enrollees in the out-of-school Neighborhood Youth Corps program sponsored by the State

Extension Service, Oregon State University. It was further limited to a study of enrollees in this program residing in non-metropolitan areas. Enrollees from the cities of Portland, Eugene, and Salem were not included in this study. The Neighborhood Youth Corps program in metropolitan areas was administrated by a separate organization and not under the sponsorship of the State Extension Service.

The study was also limited to information available regarding enrollees from the sources normally available to Neighborhood Youth Corps personnel. The following four sources of information were normally available:

1. enrollees' application forms,
2. enrollees' school records,
3. enrollees' termination form, and
4. subjective assessments of enrollees' progress made by work-site supervisors or Neighborhood Youth Corps supervisors in written form.

In addition, the study was limited to terminated out-of-school enrollees enrolled in the program between August 1, 1966 and July 28, 1968. The time limitation corresponds to a contract agreement period between the federal government and the Oregon State University Extension Service. This time limit ensured the greatest possible uniformity of administration.

Prediction of success-failure was limited to enrollees in the out-of school program. It was further limited to enrollees in the rural area considered, and to the program as it existed during the time interval considered in the study.

Definition of Terms

To facilitate the communication of precise meaning in this study, certain terms have been singled out for clarification. Terms relating to the Neighborhood Youth Corps program in this study are defined below.

Socio-Economic Factors

Refers to the factors associated with the economic status of the enrollees' families and the social factors relating to the enrollee and/or his family which were available from the enrollees' program application forms.

Educational Factors

Refers to the factors associated with enrollees' formal education and intelligence quotient prior to entering the program. These data were available from the enrollees' application forms and school records from last school attended.

Success in the Neighborhood Youth Corps Out-Of-School Program

Success was defined in terms of the enrollees' standing at time of termination from the program. An enrollee was considered to have been successful if he had taken a full-time job, was in attendance in an educational institution, or had received satisfactory progress reports from his work-site supervisor or from the Neighborhood Youth Corps field supervisor.

Moderate Success in the Neighborhood Youth Corps Out-Of-School Program

Moderate success was defined in terms of the enrollee's standing at time of termination from the program. An enrollee was judged to have been moderately successful if his records showed that he had derived some positive benefit such as social or manipulative skills from the program but was not in attendance at school nor working full time.

Positive benefit was judged by the investigator from anecdotal accounts in the enrollees' records. If the record indicated that the enrollee was progressing satisfactorily in his work assignment or furthering his education, but had not taken a job, completed his education, or gone on to full-time school, he was judged to be moderately successful.

Failure in the Neighborhood Youth Corps Out-Of-School Program

Failure was defined in terms of the enrollees' standing at time of

termination from the program. An enrollee was judged to have been a failure if at termination he had failed to report for work, was asked to leave the program involuntarily, or if the records showed that he failed to make sufficient progress in the program to be judged successful or moderately successful.

Drop-Out

A drop-out was any student who had withdrawn or had been terminated from a public or private school prior to high school graduation and who was not attending school at the time of assessment.

Counseling

Counseling was defined as the interaction between Neighborhood Youth Corps enrollees and their work-site supervisors or field supervisors. The period of counseling was that reported on enrollees' payroll time reports. Counseling in this situation was not the normal counselor-client relationship in which there is a professional counselor. Rather, the relationship was one in which the enrollee met the work-site supervisor or field supervisor to discuss a wide range of topics in a one-to-one relationship.

Work-Site Supervisor

Work-site supervisors were the persons to whom enrollees

were responsible. Work-site supervisors normally held positions of foreman or equivalent in the non-profit agencies or organizations to which enrollees were assigned.

Field Supervisors

Field supervisors were employees of the State Extension Service, Oregon State University. These persons were responsible for accepting enrollees into the program, placing them in suitable work-sites, counseling them, and checking on their progress in work assignments. The term "field supervisors" included County Extension Agents in cases where these persons administered the program directly.

Scholastic Record

Scholastic record was defined in terms of the enrollees' school grades acquired during the last year of school enrollment. School letter grades were converted to numerical values as follows: A = 4, B = 3, C = 2, D = 1, F = 0. The mean numerical value for all school subjects was calculated and used as the index of scholastic record.

Description of the Neighborhood Youth Corps Program

This brief description of the Neighborhood Youth Corps program is provided so that any reader not familiar with the program may more readily understand the program being studied in terms of its organization, objectives, and operation.

The Neighborhood Youth Corps program is a work-training program organized under Title 1-B of the Economic Opportunity Act and administered by the United States Department of Labor. The portion of the Economic Opportunity Act pertaining to the Neighborhood Youth Corps program reads in part as follows:

The purpose of this part is to provide useful work experience opportunities for unemployed young men and young women, through participation in state and community work-training programs, so that their employability may be increased or their education resumed or continued and so that public agencies and private non-profit organizations (other than political parties) will be enabled to carry out programs which will permit or contribute to an undertaking or service in the public interest that would not otherwise be provided, or will contribute to the conservation and development of natural resources and recreational areas (Economic Opportunity Act, 1964, p. 5).

The objectives of the Neighborhood Youth Corps program developed under the terms of this section of the Economic Opportunity Act are as follows:

1. To provide youth who qualify for entry into the program occupational skills and experience.
2. To enable youth who qualify for entry into the program to continue or resume their education, and
3. To provide guidance and counseling services for youth in the program (Clark, 1968).

The program is administered at the local level through a non-profit organization or agency. In Oregon, many of the less populous counties were unable to secure a program sponsor. As a result, in 1965 the Cooperative Extension Service, Oregon State University,

undertook the responsibility to sponsor the program in rural counties. Today, the Extension Service coordinates the program in 27 of the rural counties.

The Program

Presently the Neighborhood Youth Corps Program is designed to serve economically disadvantaged youngsters between the ages of 16 and 22 who are unemployed or who might drift into underemployment or unemployment. The people served may fall into either of two categories.

The first category fits the youth who is in school but is economically disadvantaged and has dropout potential. This student is provided 15 hours of paid employment per week. He remains in school and carries a full or reduced school load, generally suited to his needs as dictated by his occupational requirements. There is a summer program which is a variation of the in-school program. In the summer program, enrollees who are normally full-time students and who meet the financial requirements for entrance are assigned to work stations. Students may remain employed in the in-school and summer programs until such time as they graduate from high school, achieve equivalent standing, or reach their 22nd birthday. These students are given the benefit of some counseling in addition to their work experience.

The second category fits the youth who has dropped out of school, but who for various reasons cannot find a job. Young people in this category work a maximum of 32 hours per week and are encouraged, but not required, to undertake some form of educational pursuit. Enrollees may stay in this program for six months. Extension beyond the six month period may be granted students who attend some form of educational program for six or more hours per week. Educational programs which enable these enrollees to remain in the program are ones which may be classed as required toward minimum requirements for high school diploma, required for meeting a specific educational deficiency, or required of a vocational or apprenticeship program.

Enrollment

Enrollment in the program comes about as the result of referral by any one of several agencies. Normally, potential enrollees are referred by the State Employment Service, Public Welfare case workers, juvenile counselors, and school officials. To qualify for enrollment, applicants must be from a home designated financially deprived. A family becomes eligible to have a youngster enrolled if they receive cash payment social assistance or if their income is below certain minimum "per member" allotments. This allowable allotment is set by the Department of Labor and periodically readjusted to maintain a balance with the cost of living. Responsibility for

acceptance and assignment of applicants in the program rests with the County Extension Agent and Neighborhood Youth Corps field supervisors.

Employment

Employment is at the heart of the program. Employment is provided for enrollees in both the in-school and out-of-school programs.

The in-school program employment is to help provide both needed spending money while attending regular school, and to provide experience needed to identify potential lifetime occupations or to gain work experience needed for job entry after leaving school. Further, since these disadvantaged students have strong drop-out potential, work experience may help provide the incentive to remain in school.

The out-of-school enrollee is to have the opportunity to earn money, to gain occupational experience, to learn job skills from his work experience, and provide insight into the need for further education. The enrollee's work must be in the public interest and must be for a non-profit agency or organization. The enrollees may work for libraries, schools, employment service, forest service, maintenance departments, and other local, state, or federal agencies. Each enrollee is assigned a work-site supervisor who undertakes to oversee his work training. This supervisor helps the enrollee in his work assignment and reports on his progress. In addition, field supervisors work directly with enrollees in placing them in work situations and

following their progress. Enrollees are signed onto a payroll and receive a regular check through the sponsoring agency. Monies paid to the enrollees come directly to the sponsoring agency from the United States Department of Labor.

An outline of administrative procedures employed by the State Extension Service, Oregon State University, is included in Appendix A.

II. REVIEW OF RELATED LITERATURE

In this study, it was necessary to satisfy two major concerns before the study could proceed. These concerns may be expressed in the form of questions: (1) Of data available to Neighborhood Youth Corps authorities, which are the best indicators of success or failure of enrollees in the program? (2) What is the feasibility of constructing a model for predicting success or failure of future enrollees in the Neighborhood Youth Corps program based upon the socio-economic and educational information available? This review of the literature summarizes the findings of the investigator with respect to these two major concerns. To obtain an indication of the variables considered important by other investigators and writers a review of research studies, books, and articles dealing with the problem under consideration was conducted. The references consulted generally dealt with disadvantaged youth and adults, school dropouts, work training and retraining programs, general socio-psychological information, and success-failure prediction.

Disadvantaged Youth and Adults

Much has been written, especially in recent years, regarding problems of disadvantaged persons. This study was primarily concerned with identifying critical factors affecting the lives of these persons. The literature search concentrated upon studies that tended

to identify critical factors in the lives of disadvantaged persons.

Ornstein (1966) conducted a review of related research and concluded that parental deprivation is one of the outstanding determining factors in a deprived youngster's life. Parental divorce, desertion, and unemployment were listed as the greatest determining factors in the life of a young person. Mosler (1967) substantiated Ornstein's findings and concluded that the home situation is a major determiner. He further concluded that children coming from disadvantaged homes needed to be placed in situations where there is a likelihood of stability in the home if they are to progress.

Conclusions similar to those of Ornstein and Mosler were reached in two further reviews (McClosky, 1967; Deutsch, 1963). Deutsch concluded that youth from urban slums come to school with failure almost inevitable. He identified sub-standard housing, unstable family life, and lack of opportunity for individual identity as determiners of this failure. McClosky identified lengthy unemployment of head of household and subsequent poverty conditions as being prime influences in a disadvantaged youth's life. She found that disadvantaged pupils do achieve at a significantly lower rate than their non-disadvantaged peers. She also cited family relationships as an important determiner of failure with children from homes lacking one or the other parent less likely to succeed.

Rabin (1967) studied disadvantaged elementary school pupils. In

this study seven elementary schools were rank-ordered according to criteria of social class, percentage of children on welfare, and percentage of children from broken homes. There was almost a perfect negative correlation with their ranking and performance on standard intelligence and achievement tests. It was, therefore, concluded that there is a strong tie between socio-economic status and academic success. In a study of disadvantaged urban adults by Hunter et al. (1967), the effectiveness of a university extension program was assessed. The authors concluded that such variables as age, sex, race, income, education, occupation, employment and marital status were important factors in the success of enrollees in their program. In Hunter's study, although the data are generally tabulated according to the variables outlined above, no statistical treatment is accorded them to ascertain the effect of each variable on success in the program.

School Dropouts

A review of literature associated with students' persistence in school was undertaken. An attempt was made to identify those factors which appear frequently in the histories of school dropouts. It is important to study dropouts in connection with the present study because Neighborhood Youth Corps enrollees are either dropouts or potential dropouts. The factors existing at the time of dropout from school may also be factors which will influence them to drop out of

work-training situations. This reasoning is advanced since the two situations demand much the same behavior in terms of punctuality, discipline, and conformity to regulations.

Several important characteristics of dropout students emerged from a review of the literature by Eggleston (1967). The following points were made in Eggleston's summary:

1. Parental occupation and social class both correlated well with student dropout.
2. Dropout students had more behavior problems than those who completed their schooling.
3. Families of dropouts tended to be larger.
4. The material environment in the home influenced dropouts.

Those who completed school tended to come from homes with more material goods.

Another summary has been published in book form as The Disadvantaged Child (Frost and Hawkes, 1966). Frost and Hawkes concluded that dropouts are (1) overage for their grade, (2) absent often, and (3) behind in academic achievement. The Dropouts by Solomon O. Lichter et al. supports the findings of the previous works cited. Lichter further concludes that dropouts also have a marked lack of interest in school, behavior problems serious enough to interfere with school progress, and aimless or unrealistic ideas about the work they could or would do after leaving school. (Lichter, 1962).

In recent years, increased attention has been focused upon persistence in school. Research into the factors influencing dropouts has increased. The findings of several of these studies which bear upon the present study are cited here.

Knudson (1964) concluded that the tenth and eleventh grades were the school grades during which most dropout took place and that most dropout occurred at age 16. In addition, he reported dropouts to have undesirable home backgrounds, poor school attendance, and low ability. A study by Graybeal (1964) substantiated Knudson's findings in reference to I. Q. He found that school dropouts' scores were slightly below normal. He also found almost 90 percent of the boys had failed at least one subject and 70 percent had failed to be promoted at least one year in their school careers. He cited the chief reasons given for dropping out as disciplinary, parental, and scholastic. Further studies (Stetler, 1959; Boyles, 1967; Takesian, 1968) have almost identical findings to Graybeal and Knudson in terms of the factors involved in school dropout. Boyles found in his study that female dropouts tended to be generally older than the male dropout.

Studies in Sociology and Psychology

Although all the studies considered in this review concern themselves with factors having psychological and sociological bases, several of these studies can best be categorized as being predominately

psychological or sociological in nature. These studies are considered in this section.

Barclay (1966) studied elementary and secondary school students to discover if these were distinctive patterns of interest among dropouts. He employed a sociometric choice criterion. Several factors which emerged from his study have implications for the present study. Barclay studied sex differences, age differences, and paternal occupations. In addition to the expected differences for age and sex, he found that children who dropped out of school four years after the study was initiated had few fathers in either clerical or professional occupations. He also found that dropouts tended not to be the oldest in the family. Boyles (1967) conducted a study in which psychological and sociological variables were associated with persisting in or dropping out of school. He reported that dropouts had lower occupational aspirations, lower fathers' occupation, and less ego strength than completers. A study designed specifically to determine the influence of the father on the occupational and social goals of youth was completed by Grinder (1967). He discovered that there were high correlations between the students' scholastic programs, and factors relating to their fathers. Fathers' presence and fathers' occupations as well as students' age, intelligence, and absence from school were found to correlate highly with whether students were pursuing an academic or non-academic school program, whether they had school dropout

tendencies, and whether they achieved well in school. Sewell and Shaw (1967) investigated the relationships between socio-economic status, intelligence, and the attainment of higher education. They discovered that, in addition to intelligence, socio-economic status had a considerable and direct effect on educational attainment. This effect of socio-economic status was further substantiated in a study by Lauterback (1968). Lauterback employed a predictive model of cultural and social factors. He was able to discriminate between dropouts and achievers at the higher grade levels employing criteria based on cultural and social factors.

Two studies dealing with sociological and psychological factors within minority groups (Takesian, 1968; Green and Farquhar, 1965) substantiate the conclusions cited above. Green and Farquhar determined, that for negro male dropouts there was a lack of correlation between aptitude and achievement in school. They found a high correlation between aptitude and achievement for Caucasians. This finding may indicate that the academic achievement of non-Caucasians or minority groups is not a predictor of possible future performance.

Studies in Training and Retraining

In spite of the considerable sums of money spent on training and retraining programs in recent years, there has been little research conducted into the factors affecting success or failure in the programs

offered. Most of the studies which do include a consideration of these factors are of recent date. This review therefore is concerned with recent studies.

A study centered in West Virginia conducted by Stromsdorfer (1968) undertook to examine a variety of factors affecting success in adult retraining programs. Among the questions in this study was: "What are the variables affecting the relative success or failure of retrained workers?" The following major factors were examined: age, sex, education, marital status, race, prior labor experience, and time spent in the program. As a result of analysis, Stromsdorfer concluded that age, sex, education, prior labor experience, and time spent in the program correlated highly with success. Race and marital status were found not to correlate highly.

Main (1969) studied Manpower Development and Training Act (M. D. T. A.) enrollees' success factors employing approximately the same variables as Stromsdorfer. Two conclusions reached by Main are of importance to this study. They were: (1) That sex was related to dropout from the program, with more female completers, and (2) that approximately three months of training were required before there was a noticeable increase in employability of trainees (M. D. T. A. program enrollees) over controls (non-program participants).

A follow-up investigation of out-of-school Neighborhood Youth Corps enrollees was conducted by Walther and Magnusson (1967).

They employed a paired-group approach in which an experimental and a control group were matched on variables of sex, age, race, welfare payments to home, highest grade completed, and type of housing. Among the significant findings of this study were both those of a general nature and those resulting from a comparison of the two groups. Results of special interest to this study were:(1) approximately 25 percent of the families were on welfare, (2) more than two-thirds of the enrollees lived with one parent only, (3) the average school grade completed was slightly below the tenth grade, (4) the average academic performance of the enrollees was poor, (5) the female enrollees rated the program to be more effective than the males, and (6) at interview time 38 percent of the ex-enrollees and 42 percent of the control group were unemployed. In a second study of in-school Neighborhood Youth Corps enrollees, only in-school enrollees were studied (Landrum, 1968). Two conclusions from Landrum's study bore citing. They were:(1) it was impossible to assess progress in the in-school Neighborhood Youth Corps program except over a long period of time, and (2) positive behavioral effects accompanied enrollees' participation in the program.

Studies Relating to Predicting Success or Failure

Due to the many factors involved, prediction of success or failure in human endeavors is a difficult and uncertain undertaking. In

spite of these difficulties and uncertainties, predictions are constantly made. Predictions range from such informal guesses like those made by school counselors regarding youngsters' probability of succeeding in educational endeavors, or to doctors' predictions of health or life expectancy based upon selected information regarding their patients.

This section reviews a number of research studies in which models designed to predict future educational or occupational behavior were developed. In the studies considered, prediction was based upon socio-economic and educational information;

Recently, a study was conducted to summarize statistically results of several related studies (Prediger and Wapple, 1967). This comprehensive study summarized investigations in which variables of manual and mental dexterity, achievement test scores, and grade point average had been correlated with occupational performance. Several of the conclusions reached in this study were relevant to the present study. The first was that the degree of correlation between a given variable and occupational accomplishment varies with the occupation. For example, Prediger and Wapple determined that the variable, verbal ability, correlated at the .16 level with carpentry but correlated at the .44 level with business education and bookkeeping. A second conclusion reached was academic grades are better predictors of vocational education success for girls than for boys. Another important conclusion reached is that intelligence quotient was not a

good predictor of vocational education success if used alone. Finally, they reached the conclusion that neither spatial perception nor manual dexterity were useful predictors of vocational program success.

Pucel (1968) conducted an investigation of programs operated under the Manpower Development and Training Act in Minnesota. He studied factors relating to personal information and General Aptitude Test Battery scores in developing a model for predicting success in training programs. The following variables were included in a step-wise linear regression analysis employed to isolate dependency: age, sex, physical handicaps, military status, whether primary wage earner in family, number of dependents, primary occupational goal, education level, high school curriculum, employment record, and General Aptitude Test Battery scores. As a result of the regression analysis Pucel was able to develop a model capable of predicting to a pre-stated criterion of success-failure at the .01 level of confidence. It is important to note that he was able to construct this prediction equation in spite of generally low correlations of individual variables with success-failure. His highest single-order correlation was .44. It is further important to note that no single prediction equation was able to predict well for all three of the categories of technician, sales, or skilled, but a separate equation employing different variables was required for each category. As a result of this study, Pucel concluded that skill and technical information gained while in the

program were the best predictors for skilled and technical work trainees. For sales and clerical groups, the best predictors were those socio-economic and experience variables related to the trainees' backgrounds prior to entering the program.

Two further studies which make predictions must be considered in this review (Lauterback, 1958; Grinder, 1967). Both of these studies attempted to predict persistence in school by a number of ability, cultural, and social factors. Lauterback found that he was able to predict school dropout for high school age youngsters given certain cultural and social factors. Grinder was able to predict whether students would pursue an academic or general program and whether they would drop out of school. He developed his prediction by grouping factors of school achievement, age, father's occupation, school absences, father's presence, and intelligence.

Summary of the Literature

Two conclusions of importance to the present study were drawn from this review of literature. The first was that a number of socio-economic and educational factors were consistently found to be important determiners in the lives of young people. These factors were repeated in several types of literature associated with the different groups of persons considered in the review. The second conclusion was that predictions of success and failure could be made with some degree

of success by employing certain socio-economic and educational variables.

Individual factors which were stressed in the literature as being important determiners in young persons' lives varied with the emphasis of the studies being reviewed. Studies concerning disadvantaged youth, general psychology, and sociology consistently stressed characteristics associated with the family unit, parental occupation and employment, social class and economic status. Studies associated with persistence in school and work found the four variables achievement, behavior, family stability, and absenteeism to far outrank others in the frequency with which they were reported to be important determiners. In studies of training and retraining programs, age, sex, education, marital status, prior work experience, and training period were found to be the most important factors of those considered.

Studies in which predictions of scholastic or occupational success were made employed factors similar to those identified as important in studies of educational or work-training success, but in which no predictions were made. That is, studies predicting success in work-training programs were able to do so by employing factors of age, sex, education, marital status, prior experience, and training period. Studies predicting persistence in school were able to employ factors of achievement, behavior, family stability, and socio-economic

status in making their predictions.

Thus, it has been demonstrated in this review of literature that there are selected, educational, and socio-economic variables which have important influences on individuals' educational and occupational success. Further, it has been demonstrated that not only is it possible to identify the factors associated with success and failure in educational and occupational endeavors, but it is possible to utilize the identified factors to predict with some accuracy potential for success or failure.

III. PROCEDURES

The following summary of procedures employed in this study is provided to outline the steps taken throughout the investigation.

Preliminary Examination of Records

Termination and anecdotal records of Neighborhood Youth Corps enrollees were examined to determine the feasibility of making judgments concerning success or failure of enrollees. Records were available for every person who had been a member of the program from its inception in 1965 to date.

Approximately four out of every five out-of-school enrollees' records consulted contained sufficient information upon which to base a decision of success or failure to pre-stated criteria. Approximately three out of every four in-school enrollees' records contained insufficient evidence upon which to base a decision of success or failure. The result of this preliminary study was the deletion of the in-school enrollees from the study.

Pilot Study

A table of random digits was employed to draw a sample of 75 out-of-school enrollee records. These records were drawn from those available for 942 out-of-school enrollees who were enrolled in the program between August 11, 1966 and July 28, 1968.

The pilot study was conducted to determine the following:

- (1) the size of the final sample to be drawn;
- (2) if persons succeeding in the program differed from persons failing in the program with respect to specific socio-economic factors normally available to Neighborhood Youth Corps program personnel;
- (3) if sufficient evidence was available in the records to consistently estimate enrollees' success or failure in the program;
- (4) if available socio-economic factors appeared to have enough power of discrimination to warrant attempting construction of a model capable of predicting success or failure of enrollees in the out-of-school program.

As a result of the pilot sample, the following were determined:

- (1) the size of the final sample. Determination was made by placing the data into frequency tables in such a way that distributions could be more readily observed. Through this frequency distribution it was determined that the sample size should approximate 300. A sample size of 300 would result in a frequency distribution averaging five or more per cell.
- (2) persons succeeding in the program appeared to differ from those failing in the program with respect to nine socio-

economic factors.

- (3) there was sufficient information available from enrollees' files to justify proceeding with a complete sample.
- (4) an attempt to construct a model for predicting success or failure in the out-of-school program appeared feasible.
- (5) a three-level success-failure continuum scale was established rather than a two-level scale. The three levels allowed for acknowledgement of partial success. This acknowledgement was necessary where enrollees had not met any of the criteria of complete success, but had achieved a measure of success as indicated by anecdotal reports in their files. The levels selected were failure, moderate success, and success.

School Records

No information was available in enrollees' records regarding school performance and related information. To obtain information from the schools a letter was sent to each Neighborhood Youth Corps field supervisor and each County Extension Agent responsible for Neighborhood Youth Corps enrollees. In this letter information was requested regarding enrollees' scholastic record, school attendance record, and rated intelligence quotient. A copy of this letter and the form supplied for responding appear in Appendix C.

The Sample

A total of 942 enrollee records were available to compile the final sample. A table of random digits was utilized to draw a sample of 403 out-of-school enrollee folders. Three hundred and two of the folders contained sufficient information to be included in the final sample. Data were obtained from the folders and tabulated according to 21 factors.

Variables Employed

Data were tabulated for the sample population according to the following factors:

1. sex,
2. age at program entrance,
3. language spoken in the home,
4. marital status,
5. living group (single persons only),
6. parental occupation (single persons only),
7. head of household employment status (single persons only),
8. family income per member (single persons only),
9. highest grade of school completed,
10. reason for leaving school,
11. cash welfare payments to the home (yes, no),
12. number of siblings in the family,
13. previous work experience of 30 days or more,
14. stated lifetime occupational goal,
15. number of times enrolled in the project,
16. geographical area of program,
17. number of enrollees' own children,
18. counseling received in the program (yes, no),
19. reported intelligence quotient,
20. scholastic record,
21. degree of success in the program.

All factors except enrollees' stated lifetime occupational goal,

fathers' usual occupation, and geographical area were recorded directly as they appeared on the enrollees' Neighborhood Youth Corps program application form. The enrollees' stated lifetime occupational goal was divided according to five categories: undecided, unskilled, semi-skilled, skilled, or professional. These categories were adapted from The Psychology of Occupations (Roe, 1956), by combining the three top levels which Roe identified as professional and managerial; independent responsibility, professional and managerial, and semi-professional and small business. These three combined levels were termed professional. The fathers' occupations were also adapted from Roe's categories. These include five headings: unskilled, semi-skilled, skilled, disabled or retired, deceased or no father. No professional or managerial category was included in this study because there were no fathers whose occupations could be classed as managerial or professional.

The area served by the Neighborhood Youth Corps out-of-school program was divided into three main geographical regions. These regions were coast, valley, and eastern. Clatsop, Tillamook, Lincoln, Coos, and Curry counties were classed as coastal area. Columbia, Clackamas, Washington, Yamhill, Marion, Polk, Linn, Benton, Lane, Douglas, Josephine, and Jackson counties were included in valley area. All remaining counties were classed as eastern area. A figure in Appendix D illustrates this division of the state into regions.

Educational data were received in response to letters sent through Neighborhood Youth Corps personnel. Educational data were received for 76 of the 302 persons in the total sample. Data were not complete for all 76 enrollees. However, some portion of each record was usable. Usable records concerning intelligence quotient were available for 50 enrollees. Usable records of scholastic performance were obtained for 58 enrollees.

Coding of Data

The quantity of data appraised in this study required a coding scheme. Data representing quantitative variables of age, number of children, family income, grade point average, number of hours of counseling, highest grade completed, intelligence quotient, and success in the program were recorded for enrollees and used directly. All other variables were qualitative and required coding.

A system of coding was employed that allowed each portion of an overall qualitative variable to take on a value equal to every other portion. After coding, each portion of an overall variable stood independently and was capable of entering electronic computer analyses. The coding employed is outlined in Appendix E.

In addition to initial coding, a system of recoding was carried out as analyses of the data proceeded. Recoding was necessary to maintain a balance within overall qualitative variables. If an

independent variable was found not to contribute significantly to analyses, it was recoded. Recoding was accomplished by accumulating together variables found not to contribute significantly. Accumulated variables then entered subsequent analyses as one variable.

Treatment of the Data

Step 1.

The data were coded, tabulated, and placed on punch-cards for electronic computer analysis. Coded data were analysed initially for gross number and percentage distribution according to success, moderate success, and failure in the program for each of the 21 factors noted previously. Because of observed differences between male and female success or failure in the pilot study, tabulation was carried out separately for males and females.

Step 2.

A stepwise linear regression analysis was performed using the total sample to identify the factors having the strongest influence on the success and failure of enrollees. By this analysis 10 factors were identified as contributing sufficiently to success or failure to warrant further investigation. Factors showing a Student's *t* distribution above 1.15 (75 percent confidence level) were held for further analysis. The basic model employed in analysing data in this study is outlined in

Appendix F.

Step 3.

A classification analysis was performed to utilize the factors of intelligence quotient and scholastic achievement. The four qualitative factors, age, highest grade completed, intelligence quotient, and scholastic achievement, were employed in this analysis. Of the 302 in the total sample, intelligence quotients and scholastic achievement records were available concurrently for 41 enrollees. Intelligence quotients alone were utilized for 48 enrollees. Scholastic achievement records alone were utilized for 43 enrollees.

Step 4.

A second linear regression analysis was performed utilizing data for separated groups of male and female enrollees. This analysis was to further isolate those factors contributing to success or failure and to estimate the effect of marital status on success-failure within the two groups. In this analysis, factors from the first regression analysis (Step 2) with Student's *t* values above the 75 percent confidence level were included. In addition, factors showing evidence of male-female interaction were included for appraisal. The plausibility of interaction was discerned from the presence of opposing success-failure trends for males and females in initial tabulations (Step 1).

Step 5.

A fourth linear regression analysis was performed utilizing data for separated male and female groups of single enrollees. Factors

identified in the initial regression analysis (Step 2) as having Student's t scores above the 75 percent level of confidence were included in this analysis. All other variables were deleted.

Step 6.

A fifth linear regression analysis was performed utilizing data for female enrollees in various groups. Factors entering the linear regression analysis for all females (Step 3) with Student's t values above 1.64 (90 percent confidence level) were included in this analysis. In addition, the factor "number of youth's own children" was included. Analyses were performed with the following groups to determine a highest coefficient of correlation with the dependent variable, success in the program: (1) married females, (2) single and divorced females, and (3) married and divorced females.

Step 7.

A final linear regression analysis was performed using data for females. This analysis was to test the predictability by groups identified in Step 6. Those factors entering prior analyses with Student's t values above 1.96 (95 percent confidence level) were used in this analysis. Five factors were employed. Because of differences observed between groups in Step 6, this analysis was performed with single females held separate and married and divorced females grouped together.

Step 8.

A final linear regression analysis was also performed using data for males. This analysis was performed to further reduce the number of factors affecting success-failure prediction for males. In earlier analyses, a lower success rate for younger male enrollees was observed. Therefore, in this analysis 16 and 17 year-old enrollees were held as one group and 18 year-old and over were held as a separate group.

Construction of a Prediction Equation

A mathematical equation for predicting potential success or failure of single female enrollees in the program was constructed. Due to low predictive validity for males and married or divorced females, no equation was developed for these groups. The equation developed for single females employed socio-economic factors identified in previous analyses as contributing significantly to success or failure. The equation was constructed from the final linear regression analysis (treatment of data, Step 7).

Validating Prediction

In order to validate the accuracy of prediction of the equation, a second sample was selected from the data available. The data were drawn, tabulated, coded, and placed on punch-cards for computer

analysis in the same manner as was the original sample data. Data for 92 out-of-school enrollees were employed in this check. Forty-five of these enrollees were female and forty-seven were male.

IV. PRESENTATION OF FINDINGS AND DISCUSSION

The first task of the analysis was to determine the distribution of the data for the sample population. This distribution was carried out to provide both general information about enrollees, and specific information regarding success or failure in the program.

A total sample of 403 enrollee folders was drawn from the record files of past Neighborhood Youth Corps enrollees. Of this total number, 97 were rejected because they contained insufficient information upon which to base a decision of enrollee success or failure in the program. Four additional folders were rejected because they contained information indicating the enrollee was mentally retarded. Table 1 provides a summary of general information regarding enrollees included in the random sample.

Table 1. Summary of general information regarding out-of-school enrollees included in the sample population.

Total sample drawn from files	403
Total usable sample	302
Males	160 (52.98%)
Females	142 (47.02%)
Married males	12
Married females	37
Divorced or separated males	1
Divorced or separated females	27
Single males	147
Single females	78
Mean age of male enrollees	17.52 years
Mean age of female enrollees	18.22 years
Mean school grade completed by male enrollees	9.52
Mean school grade completed by female enrollees	9.73

Discussion

The factors which were available for study and the analyses which were performed on the data are recorded below. The following discussion of findings is divided into four main parts. The first part summarizes the relationship of two uncontrolled independent factors in the study. These independent factors were the counseling accorded enrollees while in the program and the work-site assignment received by enrollees. The second part includes tables and discussions summarizing the effect of 21 selected variables on success and failure in the program. The third part outlines the results of successive stepwise multiple linear regression analyses of variables in attempts to predict success or failure. The final part deals with the construction of an equation for predicting success-failure for single female enrollees.

Uncontrolled Variables

No factors concerning the program offered to enrollees were considered in this study. All internal factors such as inter-personal relationships and working conditions were assumed to be random throughout the study and therefore not favoring any one group. Two of these "in program" factors, however, require special consideration since they may well have influenced enrollee failure or success. The first is the counseling accorded enrollees by their work-site

supervisors and by field supervisors. The second is the work assignment which enrollees received.

Counseling

Some work-site supervisors and field supervisors reported counseling each time this service was rendered. Others reported enrollee counseling occasionally; still others, not at all. For this reason no consistent and accurate account of the numbers of hours of counseling received by enrollees was available. Notwithstanding this inconsistency a record of counseling reported for enrollees was kept throughout this investigation. This record was kept in an attempt to estimate the effects of counseling on success and failure. Table 2 summarizes the success-failure distribution of enrollees by counseling reported. Note in this table that the failure rate for both males and females was lower for enrollees reporting some counseling. Note particularly that the failure rate for males reporting counseling was approximately one-sixth that of males reporting no counseling (11.1 percent compared to 66.2 percent).

Work Assignment

The second major uncontrolled "in program" factor was work assignment. There was no guarantee that an enrollee would be assigned to a work-site that would be compatible with his needs. In some cases

Table 2. Summary of success-failure of enrollees in the out-of-school program by counseling received in the program for males and females.

	Failure	Moderate success	Success	Total
<u>Males (N = 160)*</u>				
No counseling reported	94 66.2%	17 12.0%	31 21.8%	142 100.0%
One or more hrs counseling reported	2 11.1%	4 22.2%	12 66.7%	18 100.0%
<u>Females (N = 142)**</u>				
No counseling reported	38 31.9%	31 26.1%	60 42.0%	119 100.0%
One or more hrs counseling reported	5 21.7%	5 21.7%	13 56.6%	23 100.0%

* $\chi^2 = 18.292$ (significant at the .005 level of confidence).

** $\chi^2 = 1.270$ (not significant above the .10 level of confidence).

work-sites could be found to match the enrollees' stated lifetime occupational goals. In other cases no such matching was possible. In cases where no matching was possible, enrollees were assigned to available work-sites. It is possible that the availability of work-sites affected the success or failure in the program of certain groups of enrollees. The effect of work-site assignment may have particularly influenced the success or failure of enrollees grouped by sex and age.

Tables and Discussion of Variables

In the following discussion, Tables 3 through 12 include all variables entering the first stepwise multiple linear regression analysis with a Student's t value above 1.15 (75 percent confidence level). Student's t scores were computer calculated and were available as an integral part of all linear regression analyses. Tables in this discussion appear in the same order in which constituent factors entered the first regression analysis. As noted in Chapter III, this analysis was performed using the total sample population and all variables. The exact order for all factors entering this first regression analysis is detailed in Table 1, Appendix G.

Tables representing the remainder of the variables to enter the first regression analysis are presented as Tables 2 through 10, Appendix G. Variables included in these tables received no further analysis in this investigation if evidence of interactions which could

affect success-failure prediction could not be discerned. Interactions were opposing trends of either success or failure between groups such as male-female, married-single, or age groups. The tabled information was graphed and if opposing trends were not discernable it was assumed that there was no interaction.

As noted in Chapter III, coding of the variables for linear regression analysis forced each qualitative response to enter the analysis separately. This means that not all responses listed in Tables 3 through 12 entered the linear regression analysis in the first ten steps. Whenever one qualitative variable entered the analysis the whole group to which the variable belonged was presented. For example, the first variable to enter the initial analysis was sex (Table 3). Sex entered as "male" with a Student's *t* value of -2.6. It follows that the student's *t* value associated with female was +2.6. Therefore, the distribution for both males and females was included in Table 3.

Sex. Table 3 illustrates the breakdown of success-failure in the program by sex. Note that almost twice as many males (58.7 percent) as females (29.6 percent) were judged to be failures. Since this large difference was noted and since male-female interactions with respect to variables of welfare payments to enrollees' homes, enrollees' stated lifetime occupational goal, geographical area, and head of household employment were noted, all analyses and tables were held

separate for males and females.

Table 3. Summary of success-failure of enrollees in the out-of-school program by sex (N = 302).

Sex	Failure	Moderate success	Success	Total
Males	94 58.7%	23 14.4%	43 26.9%	160 100.0%
Females	42 29.6%	36 25.3%	64 45.1%	142 100.0%

Stated Lifetime Occupational Goal. The second variable to enter the regression analysis was "no stated lifetime occupational goal." Table 4 illustrates the breakdown for all goals stated. Note that only 14 percent of the male enrollees stating no lifetime occupational goal succeeded and 68 percent of this group failed. This is a ratio in excess of four failures to one success. In contrast, the figures for males stating a professional goal were considerably different with 47.4 percent succeeding and 52.6 percent failing; a ratio approaching one-to-one.

For female enrollees, approximately three times as many stating no lifetime occupational goal failed (46.7 percent) as succeeded (16.7 percent). Contrasting, 16.4 percent of females stating a skilled occupational goal failed while 59.7 percent succeeded. This is a success-failure ratio considerably over three-to-one.

Language Spoken in Home. The third variable to enter the

Table 4. Summary of success-failure of enrollees in the out-of-school program by stated lifetime occupational goal for males and females.

Stated lifetime occupational goal	Failure	Moderate success	Success	Total
<u>Males (N = 160)</u>				
No goal	32 68.1%	8 17.1%	7 14.8%	47 100.0%
Unskilled goal	7 77.8%	- - - - - -	2 22.2%	9 100.0%
Semi-skilled goal	13 44.8%	4 13.8%	12 41.4%	29 100.0%
Skilled goal	34 60.7%	9 16.1%	13 23.2%	56 100.0%
Professional goal	10 52.6%	- - - - - -	9 47.4%	19 100.0%
<u>Females (N = 142)</u>				
No goal	14 46.7%	11 33.6%	5 16.7%	30 100.0%
Unskilled goal	- - - - - -	1 33.3%	2 66.7%	3 100.0%
Semi-skilled goal	9 39.1%	3 13.0%	11 47.9%	23 100.0%
Skilled goal	11 16.4%	16 23.9%	40 59.7%	67 100.0%
Professional goal	9 47.4%	5 26.3%	5 26.3%	19 100.0%

regression analysis was "English spoken in the home." Table 5 illustrates the distribution of success-failure by language spoken in the home. Note particularly that for females, a much higher percentage of Spanish speaking enrollees succeeded than did their English speaking counterparts.

Age. Enrollee's age was the fourth variable to enter the analysis. Table 6 summarizes the effect of age on success-failure. Note in this table that 68.4 percent of 16-year-old males and 55.0 percent of 16-year-old females failed. These rates represent a considerably higher proportion of failure than for all males (58.7 percent) and for all females (29.6 percent).

Occupation of Head of Household. Head of household stating an unskilled occupation was the fifth variable to enter the regression analysis. Table 7 provides the distribution of success-failure by occupational group of household heads. A household head stating an occupation classed as unskilled appears to have little effect on males, with 58.0 percent of this group failing. This failure rate is little different from the 58.7 percent failure rate for all males. However, only 16 percent of the females stating an unskilled occupation for the household head failed. This failure rate compares favorably to the overall female failure rate of 29.6 percent.

Living Group. Table 8 represents the distribution for success-failure according to enrollee living group. This was the sixth variable

Table 5. Summary of success-failure of enrollees in the out-of-school program by language spoken in the home for males and females.

Language spoken in home	Failure	Moderate success	Success	Total
<u>Males (N = 160)</u>				
English	92 61.8%	19 12.8%	38 25.4%	149 100.0%
Spanish	3 33.3%	2 22.2%	4 44.5%	9 100.0%
Other	1 50.0%	- - - - - -	1 50.0%	2 100.0%
<u>Females (N = 142)</u>				
English	42 33.6%	32 25.5%	51 40.8%	125 100.0%
Spanish	1 5.9%	4 23.5%	12 70.5%	17 100.0%
Other	- - - - - -	- - - - - -	- - - - - -	- - - - - -

Table 6. Summary of success-failure of enrollees in the out-of-school program by age for males and females.

Age	Failure	Moderate success	Success	Total
<u>Males (N = 160)</u>				
16	26 68.4%	9 23.7%	3 7.9%	38 100.0%
17	31 59.6%	5 9.6%	16 30.8%	52 100.0%
18	19 55.9%	2 5.9%	13 38.2%	34 100.0%
19	14 63.7%	1 4.5%	7 31.8%	22 100.0%
20	4 33.3%	4 33.3%	4 33.3%	12 100.0%
21	2 100.0%	- - - - - -	- - - - - -	2 100.0%
<u>Females (N = 142)</u>				
16	11 55.0%	3 15.0%	6 30.0%	20 100.0%
17	10 38.5%	4 15.4%	12 46.1%	26 100.0%
18	9 25.0%	11 30.6%	16 44.4%	36 100.0%
19	8 25.8%	9 29.0%	14 45.2%	31 100.0%
20	2 9.5%	6 28.5%	13 62.0%	21 100.0%
21	3 37.5%	3 37.5%	2 25.0%	8 100.0%

Table 7. Summary of success-failure of enrollees in the out-of-school program by fathers' occupation group for males and females.

Occupation of household head	Failure	Moderate success	Success	Total
<u>Males (N = 115)</u>				
Disabled or retired	6 54.5%	1 9.1%	4 36.4%	11 100.0%
Unskilled	23 54.8%	10 23.8%	9 21.4%	42 100.0%
Semi-skilled	7 36.9%	6 33.3%	5 27.8%	18 100.0%
Skilled	5 55.6%	- - - - - -	4 44.4%	9 100.0%
Deceased or none	22 62.9%	4 11.4%	9 25.7%	35 100.0%
<u>Females (N = 58)</u>				
Disabled or retired	- - - - - -	- - - - - -	1 100.0%	1 100.0%
Unskilled	4 16.0%	7 28.0%	14 56.0%	25 100.0%
Semi-skilled	2 20.0%	2 20.0%	6 60.0%	10 100.0%
Skilled	4 44.4%	1 11.2%	4 44.4%	9 100.0%
Deceased or none	5 36.4%	6 46.2%	2 15.4%	13 100.0%

Table 8. Summary of success-failure of enrollees in the out-of-school program by living groups for males and females.

	Failure	Moderate success	Success	Total
<u>Males (N = 160)</u>				
Living with both parents	39 52.0%	16 21.4%	20 26.6%	75 100.0%
Living with guardian	4 66.8%	1 16.7%	1 16.7%	6 100.0%
Living alone	14 73.7%	1 5.3%	4 21.0%	19 100.0%
Living with father only	1 50.0%	- - - - - -	1 50.0%	2 100.0%
Living with mother only	30 66.6%	3 6.7%	12 26.7%	45 100.0%
Living with grandparents	2 100.0%	- - - - - -	- - - - - -	2 100.0%
Not applicable (i. e. married, living with wife)	6 54.6%	- - - - - -	5 45.4%	11 100.0%
<u>Females (N = 142)</u>				
Living with both parents	8 24.3%	9 27.2%	16 48.5%	33 100.0%
Living with guardian	1 11.2%	4 44.4%	4 44.4%	9 100.0%
Living alone	19 36.6%	12 23.0%	21 40.4%	52 100.0%
Living with father only	- - - - - -	1 33.3%	2 66.7%	3 100.0%
Living with mother only	7 43.8%	6 37.5%	3 18.7%	16 100.0%
Living with grandparents	2 40.0%	- - - - - -	3 60.0%	5 100.0%
Not applicable (i. e. married, living with husband)	6 25.0%	4 16.7%	14 58.3%	24 100.0%

to enter the regression analysis. Two categories of living groups in particular should be noted. These two are "enrollees living alone" and "enrollees living with mother only." Note that 43.8 percent of the females living with mother only failed. Contrast this percentage with the percentage who lived with both parents and failed (24.3 percent). For males, living alone appears to be the most important factor to consider. Note that 73.0 percent of the males living alone failed. Married enrollees were not included in these calculations.

Reason for Leaving School. The seventh variable to enter the regression analysis was "graduation from high school." Table 9 includes this variable. Note that only four persons in the study left high school because of graduation. In view of the relatively small numbers of persons involved, graduation from high school did not appear to be an important variable. Subsequent analysis bore this out. However, note in this table that females leaving school for discipline failed at a high rate (60.0 percent compared to the overall failure rate of 29.6 percent for females).

Geographical Area. Geographical area entered the first regression analysis as "Eastern region" in the eighth step. The success-failure distribution by geographical area is summarized in Table 10. Note in this table that males from the Coast region maintained a better record than males from other regions. Their 42.1 percent failure rate and 47.4 percent success rate compare favorably with the overall

Table 9. Summary of success-failure of enrollees in the out-of-school program by reason for leaving school for males and females.

Stated reason for leaving school	Failure	Moderate success	Success	Total
<u>Males (N = 155)</u>				
Academic	32 60.3%	10 18.9%	11 20.8%	53 100.0%
Marriage	1 100.0%	- - - - - -	- - - - - -	1 100.0%
Graduate	- - - - - -	1 100.0%	- - - - - -	1 100.0%
Economic	18 64.3%	2 7.1%	8 28.6%	28 100.0%
Other	9 47.4%	3 15.8%	7 36.8%	19 100.0%
Discipline	31 60.8%	5 9.8%	15 29.4%	51 100.0%
Health	1 50.0%	- - - - - -	1 50.0%	2 100.0%
<u>Females (N = 137)</u>				
Academic	6 25.0%	7 29.2%	11 45.8%	24 100.0%
Marriage	11 25.6%	11 25.6%	21 48.8%	43 100.0%
Graduate	- - - - - -	1 33.3%	2 66.6%	3 100.0%
Economic	7 29.2%	9 37.5%	8 33.3%	24 100.0%
Other	6 33.3%	3 16.7%	9 50.0%	18 100.0%
Discipline	6 60.0%	3 30.0%	1 10.0%	10 100.0%
Health	6 40.0%	1 6.6%	9 53.4%	15 100.0%

Table 10. Summary of success-failure of enrollees in the out-of-school program by geographical area for males and females.

Geographical area	Failure	Moderate success	Success	Total
<u>Males (N = 160)</u>				
Coast region	8 42.1%	2 10.5%	9 47.4%	19 100.0%
Valley region	64 60.8%	15 14.5%	26 24.7%	105 100.0%
Eastern region	24 66.7%	4 11.1%	8 22.2%	36 100.0%
<u>Females (N = 142)</u>				
Coast region	2 40.0%	2 40.0%	1 20.0%	5 100.0%
Valley region	28 26.7%	28 26.7%	49 47.6%	105 100.0%
Eastern region	13 40.6%	6 8.4%	13 40.6%	32 100.0%

failure (58.7 percent) and success (29.6 percent) rate for males.

Both males and females from the Eastern region failed at a higher rate than the mean failure rate for these groups. Note that 66.7 percent of the males from this region failed. Compare this rate to a mean failure rate of 58.7 percent for males. Females from the Eastern region failed at a rate of 40.6 percent. This rate is in contrast to an average failure rate of 29.6 percent for females.

Welfare. Table 11 summarizes enrollee success-failure according to welfare payments to enrollees' homes. Welfare payments to enrollees' homes was the ninth variable to enter the initial regression analysis. Male enrollees whose families received cash welfare assistance showed little difference in the rates of either failure or success from those who received no welfare. Female enrollees, however, showed a marked difference. Note that only 25 percent of females with families accepting cash welfare assistance succeeded. More than twice as many (50.9 percent) with families receiving cash welfare failed.

Employment Status of Head of Household. The final variable to enter the first regression analysis with a student's t value above the 75 percent confidence level was "head of household working full time." Table 12 summarizes the success-failure distribution of enrollees according to head of household employment. Note from this table that for both male and female enrollees the failure rate was highest if the head

Table 11. Summary of success-failure of enrollees in the out-of-school program by welfare payments to the home for males and females.

	Failure	Moderate success	Success	Total
<u>Males (N = 160)</u>				
Welfare	32 64.0%	6 12.0%	12 24.0%	50 100.0%
No welfare	64 58.3%	5 4.5%	31 28.2%	110 100.0%
<u>Females (N = 142)</u>				
Welfare	13 36.1%	14 38.9%	9 25.0%	36 100.0%
No welfare	30 28.3%	22 20.8%	54 50.9%	106 100.0%

Table 12. Summary of success-failure of enrollees in the out-of-school program by head of household employment for males and females.

Employment status of household head	Failure	Moderate success	Success	Total
<u>Males (N = 115)</u>				
Not working	34 57.6%	8 13.6%	17 28.8%	59 100.0%
Working less than 35 hr /wk	7 38.9%	4 22.2%	7 38.9%	18 100.0%
Working 35 hr or more /wk	25 65.8%	7 18.4%	6 15.8%	38 100.0%
<u>Females (N = 55)</u>				
Not working	5 20.8%	9 37.5%	10 41.7%	24 100.0%
Working less than 35 hrs /wk	2 22.3%	3 33.3%	4 44.4%	9 100.0%
Working 35 hrs or more /wk	7 31.8%	5 22.8%	10 45.4%	22 100.0%

of household was employed more than 35 hours per week (65.8 percent and 31.8 percent failure for males and females, respectively).

Analyses

As noted in Chapter III, a successive analysis of information was required to yield the information sought in this study. Five multiple linear regression analyses and one classification analysis were performed on enrollee data. These successive analyses were necessary to accomplish three results. The first was to isolate the variables most closely associated with success and failure. The second was to determine which variables contributed to prediction of success and failure. The third was to ascertain which ways enrollees could be best grouped to provide optimum success-failure prediction values.

These analyses were performed in the order indicated in Chapter III. However, because results of analyses for male and female enrollees differed, they are reported separately for these two groups. Also, the results of the classification analysis performed are reported separately since this analysis utilized data for a sub-group of the total sample. This sub-group was comprised of those enrollees for whom data pertaining to educational factors of intelligence quotient and scholastic record were available.

Classification Analysis

A classification analysis was performed on a sub-group from the sample utilizing available qualitative variables. These qualitative variables were age, highest grade of school completed, intelligence quotient, and scholastic record. All other variables were quantitative and were not utilized in this particular analysis. Data of intelligence quotient and scholastic record were available for a limited number of enrollees. Intelligence quotient scores were available for 48 enrollees. Scholastic records were available for 43 enrollees. Both scholastic record and intelligence quotients were available for 40 enrollees. Because of the limited number of respondents, no separate analysis by sex was attempted.

Accurate classification of enrollees according to the categories failure, moderate success, and success was not possible by using only the four qualitative variables noted above. Table 13 summarizes the accuracy of prediction possible with these variables. Note from this table, that enrollees were correctly classified only approximately one-half the time.

Table 13. Summary of prediction accuracy for male and female enrollees using qualitative variables of age, highest grade of school completed, intelligence quotient and scholastic record.

	Failure*	Moderate success*	Success*
Predicted placement	8**	8***	6**
Actual placement	15	13	12
Percent accuracy of placement	53.3%	61.6%	50.0%

* Failure = 1, Moderate success = 2, Success = 3.

** Prediction within $\pm .66$ of actual placement.

*** Prediction within $\pm .34$ of actual placement.

Linear Regression Analysis

Stepwise multiple linear regression analyses were utilized to both identify factors contributing to success or failure and to predict success or failure using the factors identified.

The index of multiple correlation employed in the linear regression analyses was the R-square coefficient. The higher the R-square value, the stronger the relationship between independent variables and the dependent variable, success. An R-square value of one indicates a perfect correlation, while a value of zero indicates no correlation.

Variables entering the initial regression analysis with Student's t values above the 75 percent level of confidence, and variables showing evidence of interaction were held for a second multiple linear

regression analysis. This second analysis was performed on data for separated male and female enrollees.

Summary of Regression Analyses for Male Enrollees. Table 14 summarizes the regression analysis for all males. All variables employed in this analysis are included in the table. Nineteen variables contributing most significantly to success-failure in the original analysis for males and females were included in this second analysis. Note in this table that only six of the 19 variables were significant at the 90 percent level of confidence.

It was necessary to obtain an increased multiple correlation coefficient if accurate prediction was to be possible. From Table 8, Appendix G, it was determined that there was a difference in the success-failure ratio of single and married males. Also, it was noted that marital status entered the second regression analysis (Table 14) with a Student's t value significant above the 90 percent level of confidence. It was concluded that a separate analysis employing data for single males could result in a higher R-square value. Therefore, a regression analysis was performed utilizing data for single males.

Table 15 summarizes the results of this regression analysis for single males. Variables entering the analysis with a Student's t value above the 75 percent confidence level are included in this table. A comparison of Table 15 with Table 14 shows that the R-square coefficient of correlation increased only slightly when single males alone

Table 14. Summary of variables entering stepwise multiple linear regression analysis for all males.
 R-square coefficient with all variables entered = .1423
 Degrees of freedom = 140

Variable	Rank order entering analysis	Student's t value at end of analysis
Enrollee age	8	1.75**
English spoken in home	1	-2.56**
Single	7	1.69**
Married	13	.58
Living alone	5	-1.71**
Living with mother only	10	.82
Parents semi-skilled	11	.52
Parents skilled	19	-.12
Left school because of graduation	16	.57
Left school for economic reasons	15	-.64
Left school for disciplinary reasons	14	-.30
Enrollee's family receives welfare	12	.60
Enrollee stating no lifetime occupational goal	3	-2.10**
Enrollee stating semi-skilled occupational goal	4	1.60*
Enrollee stating skilled occupational goal	9	-1.19*
Eastern region	6	-1.00
Valley region	18	.17
Highest grade completed	2	1.81**
Number of own children	17	-.23

* Significant at the .25 level.

** Significant at the .10 level.

Table 15. Summary of ten variables entering stepwise multiple linear regression analysis for single males with student's t values above the 75 percent confidence level.

R-square coefficient with ten variables entered = .184

Degree of freedom = 136

Variable	Rank order entering analysis	Coefficient	Student's t value with 10 variables entered
Enrollee age	2	.1218	1.86*
English spoken in home	4	-.4186	-2.29*
Head of household working part time	9	.2275	-1.56
Head of household working full time	6	-.2643	-2.19*
Family income per member	10	.0316	1.41
Highest grade completed	5	.0705	1.35
Number of children in family	1	.0652	2.66**
Enrollee stating no lifetime occupational goal	8	-.1916	-1.84*
Enrollee stating semi-skilled occupational goal	7	.2847	2.37*
Eastern region	3	-.2319	-1.82*

* Significant at .10 level.

** Significant at .01 level.

were included in the analysis (from .142 to .184).

Age entered the linear regression analysis for single males as a variable in the second step (Table 15). In addition, age appeared to be a limiting factor in the success of males (Table 4). For these two reasons, another linear regression analysis was performed utilizing data for males. In this analysis, data for 16 and 17-year-old males were held as one group, and data for those 18 years old and over were held as a separate group. All variables in the previous analysis (Table 14) were included in this analysis by age group.

The R-square value obtained in separate analyses for data for 16 and 17-year-old males, and males 18 and older was little different from the one obtained using data for single males. An R-square value of .172 was obtained using data for males 18 and over. An R-square value of .193 was obtained using data for 16 and 17-year-olds.

Accuracy of Prediction for Males. Data for males were employed to check the accuracy with which their success and failure in the program could be predicted. Since there were relatively few married male enrollees (12) and since the R-square coefficient was lower when married enrollees were included in the analysis, prediction was tested utilizing data for single male enrollees only. Table 16 summarizes the accuracy of prediction for single males. The variables included in Table 15 were included in this prediction. The scale employed in classification was Failure = 1, Moderate Success =

Table 16. Summary of prediction accuracy for single male enrollees employing ten variables from Table 15.

	Failure [*]	Moderate success [*]	Success [*]
Predicted placement	54 ^{**}	11 ^{***}	3 ^{**}
Actual placement	87	21	36
Percent accuracy of prediction	62.1%	52.4%	8.3%

^{*} Failure = 1, Moderate success = 2, Success = 3

^{**} Prediction within $\pm .66$ of actual placement.

^{***} Prediction within $\pm .34$ of actual placement.

2, and Success = 3.

Table 16 indicates that the error in prediction was high for single males. Only 8.3 percent of those receiving a rating of success in the program were correctly classified within a deviation of .6. Note that prediction of failure appears to be more accurate (62.1 percent).

Notwithstanding the generally low multiple correlation coefficient for single males, a final analysis was performed utilizing data for this group. This final analysis was an attempt to maintain a degree of predictability while at the same time reducing the number of variables employed for prediction. The first four variables to enter the previous analysis for single males (Table 15) were employed.

Table 17 summarizes the accuracy of prediction possible for single males using four variables. In this table, the intermediate classification of "moderately successful" was deleted. Only failure

Table 17. Summary of prediction accuracy for single male enrollees according to success and failure classifications only employing the four variables from Table 15 having the highest student's t values.

	Failure*	Success*
Predicted placement	80**	6**
Actual placement	88	38
Percent accuracy of prediction	89.9%	15.8%

* Failure = 1, Success = 3. Predicted classification from one to two classified failure, two and above classed success.

** Placement considered accurate if deviation less than 1.

and success categories were included in this table in an attempt to increase the apparent accuracy of prediction. The scale employed in classification was Failure = 1, Success = 3. An enrollee was considered to be correctly classified as a failure if he received a rating of from one to two and correctly classified as a success if he received a rating of from two to three.

Note in Table 17 that only 15 percent of those who actually succeeded in the program were correctly classified. However, note also that almost 90 percent of those failing in the program were correctly classified.

Summary of Regression Analyses for Female Enrollees. The results of stepwise multiple linear regression analyses for female enrollees follows.

Table 18 summarizes the linear regression analysis for the total female sample. All variables entering this regression analysis are included. Note in Table 18 that for females the R-square value is higher than in the corresponding analysis for males. This correlation was .316 for females (Table 18) compared to .142 for males (Table 14). Note also that variables entering the regression analysis for females differed from those entering for males (Table 14).

As in analyses for males, a separate analysis was performed using data for single females only. This separate analysis was intended to control any interaction between married and single groups.

Table 19 shows the variables which entered the analysis for single females. All variables listed in Table 18 were used in this analysis. Only those variables entering the regression analysis with a Student's t value above the 75 percent confidence level were included in Table 17. Note in Table 19 that only five variables contributed significantly to increasing the R-square coefficient. Note particularly that this correlation coefficient for single females (.435) was higher than for all females (.316) and much higher than for all males (.142). All five variables in Table 19 have Student's t value above the .99 level of confidence. No other variables in this analysis had Student's t values above the .90 level.

An attempt was made to further increase the correlation coefficient for females. In this attempt enrollees were grouped by

Table 18. Summary of variables entering stepwise multiple linear regression analysis for all females.
 R-square coefficient with all variables entered = .316
 Degrees of freedom = 122

Variable	Rank order entering analysis	Coefficient	Student t value at end of analysis
Enrollee age	8	.1070	1.92*
English spoken in home	3	-.2521	-1.87*
Single	12	.1392	1.17
Married	13	-.1017	-.88
Living alone	18	-.0097	-.08
Living with mother only	6	-.1769	-1.12
Parents semi-skilled	17	.0411	.20
Parents skilled	19	-.0083	-.04
Left school because of graduation	10	.6348	1.77*
Left school for economic reasons	11	-.2880	-1.45
Left school for disciplinary reasons	7	-.3768	-1.56
Enrollee's family receives welfare	5	-.1960	-2.43*
Enrollee stating no lifetime occupational goal	2	-.3594	-2.69*
Enrollee stating semi-skilled occupational goal	9	.1685	1.16
Enrollee stating skilled occupational goal	1	.3260	2.98*
Eastern region	15	-.3933	-.98
Valley region	14	.2480	1.16
Highest grade completed	16	.0331	-.55
Number of own children	4	.2553	2.01*

* Significant at the .10 level.

Table 19. Summary of five variables entering stepwise multiple linear regression analysis for single females with student's t values above the 90 percent level of confidence.
 R-square coefficient with five variables entered = .435
 Degrees of freedom = 72

Variable	Rank order entering analysis	Coefficient	Student's t value at step five
English spoken in home	4	-.3300	-3.09*
Living with mother only	2	-.3284	-3.26*
Left school for disciplinary reasons	3	-.3297	-3.42*
Enrollee's family receives welfare	5	-.2172	-2.71*
Enrollee stating no lifetime occupational goal	1	-.3397	-3.17*

*Significant at the .01 level.

marital status in various combinations. Data were analyzed by grouping enrollees as married, married plus divorced, and single plus divorced. Ten variables having the highest Student's *t* value for females were employed in these analyses. Maximum R-square coefficients of .312 for married females, .339 for single plus divorced females, and .347 for married plus divorced females were obtained.

Table 20 summarizes the variables entering the linear regression analysis for married plus divorced females at significant levels. Note that only three variables appeared to contribute significantly to prediction for this group. Note also that the R-square coefficient is lower for this group (.248) than for single females (.435).

Table 20. Summary of variables entering stepwise linear regression analysis for married plus divorced females.
R-square coefficient with three variables entered = .248
Degree of freedom = 60

Variable	Order entering analysis	Coefficients	Student's <i>t</i> value at step 3
No lifetime occupational goal	3	-.2386	-1.44
Number of own children	2	.5854	2.27*
Skilled lifetime occupational goal	1	.2870	4.11**

* Significant at the .05 level.

** Significant at the .01 level.

Since the highest R-square coefficients were obtained through analyses of data when single females were held as one group and married plus divorced as a separate group, a final analysis employing data for these groups was performed.

Accuracy of Prediction for Females. The five variables from Table 19 were the ones employed in analysis for single females. Table 21 summarizes the accuracy of prediction for single females when these five variables were employed.

Table 21. Summary of prediction accuracy for single female enrollees employing five variables from Table 19.

	Failure*	Moderate success*	Success*
Predicted placement	11**	9***	27**
Actual placement	24	20	34
Percent accuracy of placement	46.7%	45.0%	79.4%

* Failure = 1, Moderate success = 3, Success = 3.

** Prediction within $\pm .66$ of actual placement.

*** Prediction within $\pm .34$ of actual placement.

Table 22 summarizes the accuracy of prediction for single females when the intermediate classification "moderately successful" was deleted. In the analyses, failure was assigned a value of one, success, a value of three. When "moderate success" was deleted, the deviation allowed between predicted and actual classification was increased to one.

Table 22. Summary of prediction accuracy for single female enrollees according to success and failure classification only employing five variables from Table 19.

	Failure*	Success*
Predicted placement	18**	31***
Actual placement	24	34
Percent accuracy of prediction	75.0%	91.2%

* Failure = 1, Success = 3.

** Predicted classification of one to two classed failure.

*** Predicted classification of two and above classed success.

Note from Table 22 that those who were successful in the program were correctly classified by this method in 91.2 percent of the cases. Those who failed were correctly classified 75 percent of the time. This means that 8.8 percent of the enrollees who succeeded were classed as failures. One-fourth of those who failed were classified as successful.

Three variables were employed in a separate prediction analysis for married plus divorced females. The three variables employed were those entering the linear regression analysis for married plus divorced females in the first three steps of that analysis (Table 20). The error of prediction was high when the three categories of failure, moderate success, and success were employed. In the failure category, only 21.1 percent were correctly predicted as failures. In

the moderately successful 44.7 percent were correctly predicted as moderately successful. In the successful category 72.4 percent were correctly predicted as successful.

Table 23 summarizes the accuracy of prediction possible for married plus divorced females if the moderately successful category was deleted. Note in this table that only 58.9 percent of those who actually failed in the program were classified as failures in the prediction. Prediction for those succeeding in the program was more accurate. Eighty-nine and seven tenths percent of those succeeding were correctly classified.

Table 23. Summary of prediction accuracy for married and divorced female enrollees according to success and failure classification only employing three variables from Table 18.

	Failure*	Success*
Predicted placement	11**	26***
Actual placement	19	29
Percent accuracy of prediction	58.9%	89.7%

* Failure = 1, Success = 3.

** Predicted classification of one to two classed failure.

*** Predicted classification of two and above classed success.

Validation of Prediction

A new sample of enrollee folders was drawn from the out-of-

school population. This new sample was drawn to validate prediction based upon the final variables employed in previous analyses. A table of random digits was employed to draw this new sample. One hundred fifty enrollee folders were drawn from the files. Ninety-two of these folders contained sufficient evidence upon which to base decisions of success-failure.

The same procedures of tabulating and coding employed in the original sample were employed for the new sample. Of the new sample drawn, 45 represented female enrollees and 47 male enrollees. Predictions were tested utilizing data for separated groups of single females, single males, and married plus divorced females. Data for five married males were not utilized.

The variables employed for single males were the first four entering the regression analysis for single males (Table 15, page 62). The variables employed for single females were those shown in Table 19, page 68. The variables employed in analyzing data for divorced females were those shown in Table 20, page 69.

When employing a multiple correlation model for prediction, one of the indices employed to gauge validity is the R-square coefficient. If the R-square coefficient is high, the predictive validity is high. If, in predicting with a new sample, the R-square value remains high it may be assumed that the predictive validity also remains high.

Accurate prediction of success of single male enrollees in the new

sample was not possible. Fifty-four and five-tenths percent of the single males in this sample who had succeeded were predicted as failures. However, only 3.4 percent of those who had failed were predicted as successes. The R-square coefficient obtained for the new sample remained low (.191). This compares to a value of .184 obtained in the original sample (Table 15). Table 24 summarizes the the accuracy of prediction for single males.

Table 24. Summary of prediction accuracy for new sample of single male enrollees according to success and failure classification employing four variables.

	Failure*	Success*
Predicted placement	28**	5***
Actual placement	29	11
Percent accuracy of prediction	96.6%	44.5%

* Failure = 1, Success = 3.

** Predicted classification from one to two classed failure.

*** Predicted classification of two and above classed success.

It was not possible to predict accurately either success or failure for the married and divorced group of females. Table 25 summarizes the accuracy of prediction for this group. Note in this table that 25 percent of those who failed and 50 percent of those who succeeded were improperly classified. The R-square value of .128 was obtained. A value of .248 was obtained using data from the original sample (Table

20).

Table 25. Summary of prediction accuracy for new sample of married and divorced female enrollees according to success and failure classification employing three variables.

	Failure*	Success*
Predicted placement	6**	4***
Actual placement	8	8
Percent accuracy of prediction	75.0%	50.0%

* Failure = 1, Success = 3.

** Predicted classification from one to two classed failure.

*** Predicted classification of two and above classed success.

Table 26 summarizes the accuracy of prediction for single females. Note from this table that only five from this group were classed as successful. One from this group (20 percent) was predicted as a failure. Note also that the accuracy of failure prediction was high (93.7 percent). The R-square coefficient obtained in the new sample for this group remained relatively high. However, it did drop slightly from the original. An R-square value of .351 was obtained. This value compares to a value of .435 obtained in the original sample (Table 18).

Table 26. Summary of prediction accuracy for new sample of single female enrollees according to success and failure classification employing five variables.

	Failure*	Success*
Predicted placement	15**	4***
Actual placement	16	5
Percent accuracy of prediction	93.7%	80.0%

* Failure = 1, Success = 3

** Predicted classification from one to two classed failure.

*** Predicted classification of two and above classed success.

Prediction

It was possible to utilize the coefficients obtained in the step-wise linear regression analysis to construct a "prediction equation." This equation allowed pertinent data to be employed directly in predicting enrollees' potential for failure or success in the program. It is important to note that the equation developed was the same as the equation generated by the computer in making the computer based predictions. This means that the accuracy of prediction corresponds to that obtained through prior analyses.

Due to the relatively large errors encountered in attempting to predict success and failure for single males and married or divorced females, no prediction equation was developed for these groups. The equation developed for single females follows.

Legend for Prediction Equation

1. language - English spoken in home	=	1
other than English spoken in home	=	-1
2. living group - living with mother only	=	1
living with other than mother	=	-1
3. reason for leaving school - discipline	=	1
other reasons	=	-1
4. social assistance - family receives welfare	=	1
family receives no welfare	=	-1
5. lifetime occupational goal - no lifetime goal	=	1
a stated goal	=	-1
6. y = estimate of failure-success where failure = 1, moderate success = 2, success = 3.		

The coefficients employed in this prediction vary slightly from those shown in Table 17. The ones employed in the prediction equation were obtained in the final analysis using only five variables. Those in Table 17 were obtained from an analysis in which more than five variables were employed.

Prediction Equation

$$y = -.312 [\text{language}] - .339 [\text{living group}] - .374 [\text{reason for leaving school}] - .21 [\text{social assistance}] - .339 [\text{occupational goal}] + 1.944.$$

A 90 percent confidence interval was calculated for the value of y as follows.

$$y \pm t_{.05}^{(72)} \cdot S$$

$$y \pm 1.67 (.677)$$

$$y \pm 1.13$$

The 90 percent confidence interval is given as an approximation in this equation since S was employed in place of variance (y). This approximation will remain accurate as long as the distribution of the five independent variables in any new sample approximates the mean used in the present study.

Note that the 90 percent confidence interval for y is greater than one. This means that 90 percent of the time one would expect to find enrollees correctly classified with respect to their true potential for success or failure in the program. It further means that enrollees with either very high success potential or very high failure potential will be improperly classified as failures or successes respectively approximately 13 percent of the time.

It was possible to employ the prediction equation directly for predicting potential success or failure of individual enrollees. That is, an individual's potential in the out-of-school program may be estimated by employing the five pertinent variables to the prediction equation. An example will serve to illustrate this point. If the following single female enrollee had applied for admission to the program her potential for success could be estimated. The potential enrollee speaks English at home, lives with her mother only, left

school to be married, receives welfare, and states no lifetime occupational goal. The equation for this enrollee would be:

$$y = .321 (1) - .339 (1) - .374 (-1) - .21 (1) - .339 (1) + 1.944$$
$$y = 1.209$$

If a 90 percent confidence interval is applied to the enrollee's estimated score, a maximum score of 2.33 is obtained. One could infer from the values obtained that this enrollee would have strong failure potential.

It is important to note that any predictions based on the above equation are valid only for a program similar to the one existing during the period representing the development of the prediction equation. Predictions may not be accurate for programs that differ greatly from the one upon which the prediction equation was based.

V. SUMMARY AND CONCLUSIONS

The Problem

There were two major objectives of this study. The first was to test the hypothesis that socio-economic and educational factors associated with success and failure in the out-of-school program and normally available to Neighborhood Youth Corps personnel could be identified. The second purpose was to test the hypothesis that a model employing available socio-economic and educational factors could be developed to predict success and failure in the out-of-school program.

Procedures

Stepwise multiple linear regression and classification analyses were employed to identify variables contributing most significantly to success or failure. For these analyses, data for enrollees were grouped by marital status, sex, and age. Analyses were performed on separated groups. Variables contributing most significantly to success and failure were utilized to construct an equation for success-failure prediction.

Summary of Findings

The following summary of findings of this study respecting Neighborhood Youth Corps out-of-school program enrollees is

presented in three parts. The first part summarizes general findings of the study. The second part identifies factors influencing success and failure of enrollees in the program. The third part summarizes the results of successive tests employed in constructing a model for predicting success and failure in the program.

Summary of General Findings

1. A higher proportion of females succeeded in the out-of-school program than did males. Forty-five and one-tenth percent of the females succeeded compared to 26.9 percent of the males.
2. Based upon the limited information available, neither intelligence quotient nor scholastic achievement were predictors of success or failure of enrollees in the program. However, both those with higher intelligence quotients and higher scholastic records had better success rates.
3. Although the effect of enrollee counseling was not an integral part of this study, it appears that counseling had some beneficial influence on enrollees' success. Male enrollees reported to have received counseling in the program from work-site supervisors or Neighborhood Youth Corps field supervisors failed at a significantly lower rate than those for whom such counseling was not reported.

Summary of Factors Influencing Success and Failure of Enrollees

Of the 43 variables investigated in this study the following were important in the success or failure of male enrollees.

1. Enrollee age. Sixteen-year-old male enrollees failed in the program at a rate approximately four times that of older enrollees.
2. Number of siblings in enrollee's family. Male enrollees coming from families with four or more children succeeded at a higher rate than enrollees from families with one, two, or three children. "Only children" failed at a substantially higher rate than others.
3. Geographical area. Male enrollees from the coastal area of the state succeeded at a higher rate than those from either the valley or eastern areas.
4. Highest grade completed. There was a steady decrease in the failure rate of male enrollees as school grade completed increased.
5. Head of household employment. Single male enrollees living in homes in which the head of household worked part time succeeded over twice the rate of those living in homes with the head of household working full time. This group also succeeded at a higher rate than those from homes in which the head of household

was not working at all.

Of the 43 variables investigated in this study the following were important in the success or failure of female enrollees.

1. Language spoken in the home. Enrollees speaking Spanish in the home succeeded at a substantially higher rate than those speaking English.
2. Social assistance. Female enrollees whose families accepted cash welfare payments succeeded at a lower rate than those whose families did not accept welfare.
3. Stated lifetime occupational goal. Female enrollees stating a skilled lifetime goal succeeded at a higher rate than those stating other lifetime goals. Those stating no lifetime goal or a professional goal failed at a substantially higher rate than others.
4. Family living group. Single female enrollees living with their mothers only succeeded at less than one-half the rate of those living with both parents.
5. Reason for leaving school. Female enrollees who left school for disciplinary reasons failed at a very high rate.
6. Enrollee age. Sixteen-year-old enrollees tended not to succeed at as high a rate as 17, 18, 19, and 20-year olds.

Summary of Prediction of Success and Failure

1. Accurate prediction of both success and failure was not possible

- for either male enrollees or married and divorced females.
2. It was possible to correctly predict success and failure in the program of single female enrollees approximately 75 percent of the time by employing five socio-economic factors.
 3. An equation was developed for predicting success and failure of single female enrollees. The following variables were employed in this prediction: (a) language spoken in home, (b) living group, (c) reason for leaving school, (d) welfare, (e) lifetime occupational goal.

Conclusions

Specific categorizing of persons and prediction of human behavior based on psycho-sociological factors are uncertain undertakings. Accurate and reliable decisions of right or wrong, good or bad, success or failure are seldom possible. Notwithstanding these uncertainties, several conclusions with respect to the present study appeared warranted. The following conclusions were drawn from this study:

1. The Neighborhood Youth Corps out-of-school program was not equally effective for all enrollees. Two groups in particular did not succeed at a high rate. When compared with other groups, neither male enrollees nor 16-year-old enrollees achieved satisfactory success.

2. Counseling in the program had beneficial effects on male enrollees.
3. The hypothesis that certain socio-economic and educational factors affecting success or failure in the program could be identified was affirmed. Several of the socio-economic factors investigated in this study were found to be closely associated with success in the out-of-school program; others were closely associated with failure.
4. The hypothesis that a predictive model based on socio-economic factors, educational factors, and success in the out-of-school program could be developed was partially confirmed. It was determined that socio-economic information normally available to Neighborhood Youth Corps personnel could be employed to predict potential success and failure in the out-of-school program for single girls. Accurate prediction was not possible for male enrollees or married and divorced female enrollees.

It may be hypothesized that:

- (a) different socio-economic and educational information may be utilized to obtain predictive indices for male and/or married or divorced females, or
- (b) if male enrollees were provided a program in which they achieved a much improved success ratio, the factors investigated in this study may become predictors.

Recommendations for the Neighborhood Youth Corps
Out-Of-School Program in Rural Oregon

The following recommendations were made to those responsible for administering the out-of-school program in the rural counties of Oregon which were included in this study. These recommendations were made so that certain future enrollees may receive increased benefit from the program.

1. A modified out-of-school program for male enrollees was recommended. The failure rate for male enrollees was over twice that for females. Possibly work-sites and work-site supervisors carefully chosen so that individual enrollee needs are more nearly met would result in an increased success rate for males.
2. A modified out-of-school program was recommended for 16-year-old enrollees. The failure rate for both 16-year-old males and females was high. It is possible that for these younger enrollees a program that included vastly increased individual and/or group counseling could result in an increased success rate for these enrollees.
3. It was recommended that future enrollees' potential for success or failure be assessed upon entry into the program. Potential enrollees having many failure-oriented factors in their backgrounds should be provided a program which was modified in such a way as to optimize their chances of success.

Recommendations for Further Study

The following recommendations for further study into the Neighborhood Youth Corps program were outcomes of the present study. Further study may yield additional information useful to persons providing the program for youngsters and thereby increase the effectiveness of the program.

1. It was recommended that additional research be conducted into the effectiveness of enrollee counseling in the program.
2. A study was recommended to assess the effect of work-site assignment on enrollee progress. This study should assess the effect of work-site assignments which are compatible with enrollees' stated lifetime occupational goal.
3. It was recommended that a study be conducted to assess the effectiveness of the Neighborhood Youth Corps in-school program.
4. It was recommended that an in-depth study be conducted to ascertain why males and 16-year-old enrollees fail.

BIBLIOGRAPHY

- Amble, Bruce R. 1967. Teacher evaluation of student behavior and school dropouts. *The Journal of Educational Research* 60:408-410.
- Barclay, James R. 1966. Interest patterns associated with measures of social desirability. *Personnel and Guidance Journal* 45:56-60.
- Benjamin, Judith G., Seymore Lesh and Marcia K. Freedman. 1965. Youth employment programs in perspective. Washington, D. C., U. S. Government Printing Office. 121 p.
- Boyles, Gary E. 1967. Psycho-social variables related to four categories of school persistence in a rural county: graduates and potential graduates, and dropouts and potential dropouts. Ph. D. thesis. Grand Forks, University of North Dakota. 252 numb. leaves. (Abstracted in *Dissertation Abstracts* 28:1673A. 1967)
- Clark, Harry E. 1968. Information and instructions: Neighborhood Youth Corps program. Corvallis, Cooperative Extension Service, Oregon State University. 8 numb. leaves. (Mimeographed)
- Cohen, Eli E. and Louise Kapp. 1966. Manpower policies for youth. New York, Columbia University. 152 p.
- Deutsch, Martin. 1963. The disadvantaged child and the learning process. New York, Columbia University, Teacher's College. 19 p. (Educational Resources Information Center no. ED 012 721) (Microfiche)
- Draper, N. R. and H. Smith. 1967. Applied regression analysis. New York, Wiley. 407 p.
- Economic Opportunity Act. 1964. Public law no. 452, 88th Congress. (Aug. 20, 1964)
- Eggleston, S. J. 1967. Social factors associated with decisions to "stay on" in non-selective secondary schools. *Educational Research* 9:163-174.
- Frost, Joe L. and Glenn R. Hawkes (eds.). 1966. The disadvantaged child. Boston, Houghton Mifflin. 445 p.

- Graybeal, William S. 1964. Virginia secondary school dropouts, 1963-64. Richmond, Virginia, State Department of Education. 44 p. (Educational Resources Information Center no. ED 018 506) (Microfiche)
- Green, Robert L. and W. W. Farguhar. 1965. Negro academic motivation and scholastic achievement. *Journal of Educational Psychology* 56:241-243.
- Grinder, Robert E. 1967. A study of the influences of the father's job and social status on the occupational and social goals of youth. Madison, Wisconsin University. 146 p. (Educational Resources Information Center no. ED 016 849) (Microfiche)
- Herman, Melvin and Stanly Sadofsky. 1966. Youth-work programs. Problems of planning and operation. New York, New York University. 208 p.
- Howard, Jack. 1967. Neighborhood Youth Corps: Washington views the record. *American Child* 49:2-10.
- Hunter, Starley M. *et al.* 1967. The families and their learning situations. Amherst, Massachusetts University, Cooperative Extension Service. 71 p. (Educational Resources Information Center no. ED 017 820) (Microfiche)
- Kerlinger, Fred N. 1964. Foundations of behavioral research. New York, Holt, Rinehart and Winston. 759 p.
- Knudson, Clinton H. 1964. A study of dropouts in Texas and Minnesota. Austin, Texas Study of Secondary Education. 35 p. (Educational Information Resources Center no. ED 018 572) (Microfiche)
- Landrum, John W. 1968. The effects of the Los Angeles county Neighborhood Youth Corps program on the performance of enrollees in school. Ph. D. thesis. Los Angeles, University of Southern California. 234 numb. leaves. (Abstracted in *Dissertation Abstracts* 28:2900A. 1968)
- Lauterback, Walter L. 1967. Alienation, anomie, and dropouts. Ph. D. thesis. Claremont, Claremont Graduate School and University Center. 110 numb. leaves. (Abstracted in *Dissertation Abstracts* 29:482A. 1968)

- Lichter, Solomon O. et al. 1962. The drop outs. New York, Free Press of Glencoe. 302 p.
- Main, Earl D. 1968. A nationwide evaluation of M. D. T. A. institutional job training. The Journal of Human Resources 3:159-170.
- McCloskey, Elinor F. 1967. Urban disadvantaged pupils; a synthesis of 99 research reports. Portland, Northwest Regional Educational Laboratory. 59 p. (Educational Resources Information Center no. ED 015 228) (Microfiche)
- Mosler, David. 1967. The culturally different child in American schools. Santa Clara, Santa Clara County Supplementary Education Center. 32 p. (Educational Resources Information Center no. ED 018 471) (Microfiche)
- Nash, Ruth C. (ed.). 1965. Rural youth in a changing environment. Washington, D. C., National Committee for Children and Youth. 121 p.
- National Committee on Employment of Youth. 1965. Getting hired, getting fired. Washington, D. C., U. S. Department of Health, Education, and Welfare. U. S. Government Printing Office. 112 p.
- Natrella, Mary Gibbons (ed.). 1963. Experimental statistics. Various paging. (U. S. National Bureau of Standards. Handbook 91)
- Ornstein, Allan C. 1966. Who are the educationally disadvantaged? Journal of Secondary Education 41:154-164.
- Prediger, Dale J., Charles C. Wapple and Gerald R. Nusbaum. 1967. Predictors of success in high school level vocational education programs: a review. Washington, D. C., U. S. Department of Health, Education, and Welfare. 32 p. (Educational Resources Information Center no. ED 022 046) (Microfiche)
- Pucel, David J. 1968. Variables related to M. D. T. A. trainee employment success in Minnesota. Minneapolis, Minnesota Research Coordinating Unit in Occupational Education. 36 p. (Educational Resources Information Center no. ED 022 043) (Microfiche)

- Quinn, Benjamin Richard. 1967. An examination of certain variables associated with personal and social adjustment change in school dropouts enrolled in a retraining program. Ed. D. thesis. Stillwater, Oklahoma State University. 149 numb. leaves. (Abstracted in Dissertation Abstracts 28:505A. 1967)
- Radin, Norma. 1967. Factors impeding the education of lower class children. Ypsilanti, Michigan, Ypsilanti Public Schools. 25 p. (Educational Resources Information Center no. ED 019 335) (Microfiche)
- Ratchick, Irving. 1965. Identification of the educationally disadvantaged. Albany, University of New York, State Education Department. 19 p. (Educational Resources Information Center no. ED 021 906) (Microfiche)
- Roe, Anne. 1956. The psychology of occupations. New York, Wiley. 340 p.
- Sewell, William H. and Vimal P. Shah. 1967. Socioeconomic status, intelligence, and the attainment of higher education. Washington, D. C., American Sociological Association. 21 p. (Educational Resources Information Center no. ED 018 213) (Microfiche)
- Simpson, John W. 1967. Educating the disadvantaged child in Clallam and Jefferson counties. [Port Angeles] Clallam-Jefferson County Community Action Council. 52 p. (Educational Resources Information Center no. ED 019 349) (Microfiche)
- Stetler, Henry G. 1959. Comparative study of negro and white dropouts in selected Connecticut high schools. [Hartford] Educational Research Information Center; Connecticut Commission on Civil Rights. 55 p. (Educational Resources Information Center no. ED 020 211) (Microfiche)
- Stromsdorfer, Ernest W. 1968. Determinants of economic success in retraining the unemployed: the West Virginia experience. *The Journal of Human Resources* 3:139-158.
- Takesian, Sarkis A. 1968. A comparative study of the Mexican-American graduate and dropout. Ed. D. thesis. Los Angeles, University of Southern California. 304 numb. leaves. (Abstracted in Dissertation Abstracts 28:2503A. 1968)

- U. S. Department of Agriculture. 1967. Rural youth in a changing society. Washington, D. C. 41 p. (Supplement to Agriculture Handbook no. 347)
- U. S. President's Committee on Juvenile Delinquency and Youth Crime. 1965. Training for new careers. Washington, D. C., U. S. Government Printing Office. 107 p.
- U. S. President's Committee on Youth Employment. 1963. Reports. Washington, D. C., U. S. Government Printing Office. 94 p.
- Walther, Regis H. and Margaret L. Magnusson. 1967. A retrospective study of the effectiveness of the out-of-school Neighborhood Youth Corps programs in four urban sites. Washington, D. C., George Washington University. 157 p. (Educational Resources Information Center no. ED 020 407) (Microfiche)
- Yates, Thomas L. (ed.). 1968. Oregon state statistical analysis. Corvallis, Oregon State University, Department of Statistics. Various paging.

APPENDICES

APPENDIX A

INFORMATION AND INSTRUCTIONS
NEIGHBORHOOD YOUTH CORPS PROGRAM

sponsored by

Cooperative Extension Service
Oregon State University
Corvallis, OregonHarry E. Clark
Project DirectorGENERAL INFORMATION

The Cooperative Extension Service, Oregon State University, Corvallis, Oregon, is the sponsor of a Neighborhood Youth Corps Out-Of-School project in 27 counties and for an In-School project in 24 counties of Oregon. The NYC program is under the direction of the local County Extension Office.

The Neighborhood Youth Corps (NYC) is a work-training program established under Title I-B of the Economic Opportunity Act. The program places special emphasis on encouraging young people to stay in school or to complete their high school education or the equivalent. Those for whom school is not a realistic choice may also enroll in NYC to gain the work experience and basic training that will increase their employability. For these young men and women NYC projects are expected to place emphasis on the attitudes, habits, and behaviour necessary for regular employment and to help them secure the basic training or education necessary to take the first step up the job ladder.

The Neighborhood Youth Corps provides opportunities for enrollees to perform useful services in the areas of our social and economic life where urgent public needs and community services are neglected or unmet.

Work assignments for enrollees include work as aides in schools, hospitals, playgrounds, parks, libraries, and in offices of federal, state, county and city agencies and departments. All work assignments shall be either on publicly owned and operated facilities or projects, or local projects sponsored by private nonprofit organizations. The employment must be designed to keep an enrollee occupied and give meaningful and useful work experience during his assignment, must be adequately supervised, and must not violate any collective bargaining

agreement.

All enrollees must work where all safety regulations are complied with, must have work permits if required, and all child labor laws must be complied with.

Appropriate understanding, guidance, and counseling can be vital to youth who are disadvantaged. Encouraging and assisting youth to finish or improve their education can be a major step into the world of work. For many, this will be their first work experience where proper supervision can help them form desirable social and work habits.

Those cooperating agencies which have demonstrated an interest and ability to give NYC enrollees appropriate counseling, on-the-job training, and supervision will be given preference in the placement of NYC enrollees.

RULES AND REGULATIONS OF SPONSOR

1. Enrollees will be given the maximum amount of counseling that time will permit to develop acceptable work habits and to have a meaningful work experience.
2. Supervision will be provided by the work supervisor on the job to which the enrollee is assigned.
3. Enrollees will not be dismissed from the program unless there is serious gross neglect of duties or responsibilities beyond that which can reasonably be expected.
4. Enrollees in In-School projects are to complete a full class schedule as agreed with the school for each day or not be allowed to work.
5. Enrollees will be expected to report to work promptly and on time. If circumstances beyond their control prevent it, the enrollee is to notify the work supervisor as soon as possible.
6. Enrollees will inform their immediate work supervisor in the event of illness or other valid reasons for not reporting for work.
7. As much as possible, enrollees will be assisted in learning about career possibilities and related job opportunities.
8. Values of good conduct, safety and educational opportunities will be stressed as time and opportunity permits.
9. Disciplinary problems will be handled by the Sponsor's local representative in cooperation with other locally available school counselors, probation officers, or other appropriate officials. The project director has authority to render a decision in all

cases and may terminate the enrollee for continued infraction of the Sponsor's Rules and Regulations.

ELIGIBILITY

In-School Project

- permanent resident of the United States
- a member of a low-income family
 - Note: Applicants from families receiving cash welfare payments will automatically be considered low-income.
- attending school full time
- 16 years of age
 - Note: 10% of the enrollees may be 14-16 years of age.
- in need of a paid work experience in order to continue in school

Out-Of-School Project

- permanent resident of the United States
- unemployed
- 16 through 21 years of age
- school dropout
 - Note: If for less than three months, investigation should indicate there is no reasonable expectation that the youth will return to school.
- a member of a low-income family

High School graduates and youth who have secured a GED certificate by passing the GED tests are not eligible for enrollment in the NYC program.

For those students who have received a special type of diploma, but are not capable of the functional educational level as average high school graduates, there is an alternative. These youth are to be given the Stanford Binet Achievement Test or a similar test which measures their functional educational level. If the tests indicate that they are below the 8th grade level they may be considered eligible for NYC work-training experience. The test results are to be attached to the enrollee record.

ENROLLMENT

Enrollment in the NYC program is based upon the completion of Form NYC-16 Enrollee Record and final review by the Project Director.

The offices of the Oregon State Employment Service may serve as a place where application for NYC enrollment may be made. Here the applicant may receive information pertaining to job opportunities and receive job counseling. Referrals from Public Welfare case-workers, Juvenile Counselors, school officials and others are to be

considered as potential applicants. The completed application form and the applicant are next referred to the local County Extension Office for enrollment.

Assignment and transfer of enrollees is the responsibility of the Sponsor. County Extension Agents and NYC Field Supervisors are designated representatives of the Sponsor and shall perform such functions.

Enrollment in the combined In-School and Summer project may continue as long as the enrollee is attending school full time (except during periods of vacation), has not graduated from high school, and meets other eligibility criteria.

Enrollment in the Out-Of-School project is limited to six months unless an extension of enrollment is granted.

EXTENSION OF ENROLLMENT

Enrollment in the Out-Of-School project is limited to six months unless an extension is approved by the Project Director.

An extension of enrollment may be granted provided the following Bureau of Work-Training Programs policy is met and provided funds are available. The Sponsor reserves the authority to not extend any enrollment at his discretion.

"Enrollment shall not exceed six months for school dropouts unless they attend and maintain satisfactory progress for a minimum of six hours a week in any one, or a combination of the following types of programs:

- a. A night school course leading to a high school diploma or high school equivalency certificate.
- b. A special remedial program designed to correct educational deficiencies.
- c. A pre-vocational or enrichment program intended to prepare enrollees for entry into specific types of work-training experience projects.
- d. A vocational training program involving either institutional instruction or joint enrollment in another training program."

By the third month of enrollment, each out-of-school enrollee should have a plan for complying with the policy. Enrollees should be encouraged and assisted with the development of such plans.

Continuation of enrollment beyond the six months will be contingent upon the submission of a written plan by the enrollee outlining how he plans to comply with the policy.

The Sponsor is aware of the limited opportunities available to

youth in the rural areas; however, there are a number of activities in which Enrollees may participate that will enable them to meet these requirements. For example, Enrollees might:

1. Attend one or two selected classes at the high school
2. Enroll in a continuing education course
3. Participate in special educational classes being conducted by Community Action Agencies
4. Participate in a special tutorial program
5. Have an individualized training program under the supervision of a work-site supervisor

Requests for extension of enrollment in the NYC out-of-school project must be submitted by the cooperating agency to the County Extension Office at least thirty (30) days prior to the end of the six (6) month enrollment period.

In requests for extension, information is necessary as to:

- (a) Whether enrollee is enrolled in a school and attending classes towards securing a GED Certificate or
- (b) whether the enrollee has successfully completed the GED tests
- (c) or meeting other criteria indicated in the requirements to be met for extensions.
- (d) Other reasons for request for extension of enrollment.

HOURS AND WAGES

In-School enrollees are currently limited to ten (10) hours per week because of budgetary limitations.

Summer enrollees are limited to eight (8) hours per day and 32 hours per week.

Out-Of-School enrollees are limited to eight (8) hours per day and 32 hours per week. Wages paid enrollees will be as directed by the Sponsor in accordance with the provisions of the contract. The rate of pay is determined by the Bureau of Work-Training Programs, U. S. Department of Labor.

Payment for overtime work is not authorized.

Enrollees are to be paid on the 10th and 25th of each month.

Time Report periods (10th through the 24th and 25th through the 9th) will overlap more than one month. For example:

Time Report period:	October 25 through November 9
Check will be available:	November 25
Time Report period:	November 10 through November 24
Check will be available:	December 10

Checks received on the 25th will be equal to 70% of the gross earnings.

Checks received on the 10th will be the balance remaining from the previous check and the balance remaining from the current payroll period minus authorized deductions.

Monies paid NYC enrollees are from Federal funds and are subject to audit by an agency of the Federal Government.

Work-site supervisors and enrollees are advised that the payroll report is a legal document, and care should be taken to substantiate its accuracy before signing it.

Payment of wages for travel from home to the designated place of work-training or return to home is not authorized.

Time Reports should be submitted to the local County Extension Office at the close of business on the 9th and 24th of the month. Delays may result in checks being delayed until the following date of issuance for checks.

WORKMENS COMPENSATION

NYC enrollees are considered to be employees of Oregon State University, therefore, coverage providing State Compensation for on-the-job injuries or occupational diseases suffered by enrollees while engaged in duties assigned is carried by OSU.

If an injury should occur while an enrollee is on a job assignment and he goes to a doctor or hospital, the enrollee or work-site supervisor should advise the doctor or hospital that the enrollee is covered by State Industrial Accident Insurance.

When an injury does occur (a) the County Extension Office should be notified immediately; (b) Part I, State Compensation Department Form 801, Rev 10/66 should be completed by the enrollee with the assistance of the work-site supervisor, NYC Field Supervisor, or County Extension Agent. Other portions of Form 801 will be completed by the County Extension Office and promptly forwarded to Corvallis for further processing.

SICK, VACATION AND HOLIDAY LEAVE

No provision has been made in the NYC contract for sick, vacation or holiday leave. Though many NYC work assignment agencies will be closed on official holidays no provision has been made for payment to trainees on days which they do not work. When an enrollee misses a day of work, either because of a holiday or because of illness, he may, with the approval of his work supervisor, work on his regular

day off. Leave taken for any reason must be without pay.

TERMINATION OF ENROLLMENT

NYC enrollees who have received a high school diploma, or a certificate or letter indicating that they have passed the GED tests are no longer eligible for enrollment in the NYC program. These enrollees are to be terminated unless the Project Director has granted written authorization for the enrollment to be continued.

In cases where the enrollee cannot adjust to the hours, or the work assignment, or is having transportation difficulties which prevent regular attendance at work, the County Extension Agent or NYC Field Supervisor will be advised as soon as possible.

Continued failure to report to work assignment without the enrollee notifying the work-site supervisor will be considered just cause for dismissal.

Enrollees will be terminated without delay when they are convicted by the courts of an offense involving moral turpitude and where there is a holding penalty.

Enrollees reaching age 23 will be terminated without exception.

Enrollees in the Out-Of-School project who have completed the six-month enrollment period will be terminated unless an extension of their enrollment has been approved by the Project Director.

**U.S. DEPARTMENT OF LABOR, MANPOWER ADMINISTRATION
NEIGHBORHOOD YOUTH CORPS
ENROLLEE RECORD**

BUDGET BUREAU NO. 44-R 1275.1
APPROVAL EXPIRES JANUARY 1, 1967

PART I PERSONAL DATA TO BE COMPLETED BY INTERVIEWING OFFICE			3. DATE OF INTERVIEW		4. TYPE OF PROJECT		5. SOCIAL SECURITY NUMBER			
1. INTERVIEWING OFFICE SPONSOR <input type="checkbox"/> ES <input type="checkbox"/> OTHER <input type="checkbox"/>			NO. DAY YEAR		IN SCHOOL <input type="checkbox"/> 1 OUT OF SCHOOL <input type="checkbox"/> 2					
2. SPONSOR NAME _____ ADDRESS _____ CITY _____ STATE _____			6. NAME OF YOUTH LAST _____ FIRST _____ M.I. _____							
13. SEX MALE <input type="checkbox"/> 1 FEMALE <input type="checkbox"/> 2			14. BIRTH (PLACE AND DATE) CITY _____ STATE OR COUNTRY _____ DATE MO. DAY YEAR		7. ADDRESS NUMBER OR RFD _____ STREET _____			10. STATE NAME (ABBREV) _____ CODE _____		
15. RACE W <input type="checkbox"/> 1 N <input type="checkbox"/> 2 OTHER <input type="checkbox"/> 3 SPECIFY _____ A.I. <input type="checkbox"/> 3 O <input type="checkbox"/> 4			16. ETHNIC ORIGIN M-A <input type="checkbox"/> 1 PR <input type="checkbox"/> 2 OTHER <input type="checkbox"/> 3 SPECIFY _____		8. CITY OR TOWN _____			11. ZIP CODE _____		
17. LANGUAGE SPOKEN IN HOUSEHOLD ENGLISH <input type="checkbox"/> 1 OTHER <input type="checkbox"/> 3 (SPECIFY) _____ SPANISH <input type="checkbox"/> 2			18. HIGHEST SCHOOL GRADE COMPLETED		19. EVER LEFT HIGH SCHOOL BEFORE GRADUATING YES <input type="checkbox"/> 1 NO <input type="checkbox"/> 2		20. MARITAL STATUS SINGLE <input type="checkbox"/> 1 SEPARATED OR DIVORCED <input type="checkbox"/> 3 MARRIED <input type="checkbox"/> 2 WIDOWED <input type="checkbox"/> 4			
21. NUMBER OF PERSONS A. LIVING IN HOUSEHOLD _____ B. IN FAMILY _____			22. NUMBER OF YOUTH'S OWN CHILDREN IN HOUSEHOLD		23. YOUTH LIVES WITH BOTH PARENTS <input type="checkbox"/> 1 FATHER ONLY <input type="checkbox"/> 2 MOTHER ONLY <input type="checkbox"/> 3 GUARDIAN <input type="checkbox"/> 4 OTHER <input type="checkbox"/> 5 (SPECIFY) _____					
24. HEAD OF HOUSEHOLD IS FATHER <input type="checkbox"/> 1 MOTHER <input type="checkbox"/> 2 MALE GUARDIAN <input type="checkbox"/> 3 FEMALE GUARDIAN <input type="checkbox"/> 4 APPLICANT <input type="checkbox"/> 5 OTHER <input type="checkbox"/> 6 (SPECIFY) _____			25. DURING LAST WEEK, HEAD OF HOUSEHOLD WORKED 35 HOURS OR MORE <input type="checkbox"/> 1 WORKED LESS THAN 35 HOURS <input type="checkbox"/> 2 WAS NOT WORKING <input type="checkbox"/> 3		26. OTHER HOUSEHOLD MEMBERS EMPLOYED 35 HOURS OR MORE PER WEEK: FATHER <input type="checkbox"/> 1 BROTHERS/SISTERS <input type="checkbox"/> 3 MOTHER <input type="checkbox"/> 2 OTHER <input type="checkbox"/> 4					
27. USUAL OCCUPATION OF FATHER _____ MOTHER _____			28. ESTIMATED ANNUAL FAMILY INCOME BELOW \$1000 <input type="checkbox"/> 1 FROM 1000 TO 2000 <input type="checkbox"/> 2 FROM 2000 TO 3000 <input type="checkbox"/> 3 FROM 3000 TO 4000 <input type="checkbox"/> 4 FROM 4000 TO 5000 <input type="checkbox"/> 5 ABOVE \$5000 <input type="checkbox"/> 6			29. YOUTH CONTRIBUTES TO SUPPORT OF FAMILY YES <input type="checkbox"/> 1 NO <input type="checkbox"/> 2				
30. YOUTH RESIDES IN PUBLIC HOUSING YES <input type="checkbox"/> 1 NO <input type="checkbox"/> 2		31. FAMILY RECEIVES WELFARE ASSISTANCE YES <input type="checkbox"/> 1 NO <input type="checkbox"/> 2		32. HAVE YOU HELD A JOB FOR WHICH YOU HAVE RECEIVED WAGES YES <input type="checkbox"/> 1 IF "NO" SKIP TO NO. 39 NO <input type="checkbox"/> 2		33. ARE YOU CURRENTLY WORKING YES <input type="checkbox"/> 1 NO <input type="checkbox"/> 2		34. HOURS WORKED PER WEEK ON CURRENT OR LAST JOB		
36. EVER HELD A JOB OF 30 DAYS OR MORE YES <input type="checkbox"/> 1 NO <input type="checkbox"/> 2 IF "NO" SKIP TO NO. 39		37. NO. OF WEEKS SINCE LAST JOB HELD 30 DAYS OR MORE		38. OCCUPATION (S) OF JOBS LASTING 30 DAYS OR MORE CLERICAL <input type="checkbox"/> 1 SERVICE <input type="checkbox"/> 2 SEMI-SKILLED <input type="checkbox"/> 3 SALES <input type="checkbox"/> 4 AGRICULTURE <input type="checkbox"/> 5 OTHER (SPECIFY) <input type="checkbox"/> 6						
IF APPLICANT IS TO BE REFERRED TO IN-SCHOOL PROJECTS SKIP TO BOX 44										
39. REASONS FOR LEAVING SCHOOL ACADEMIC <input type="checkbox"/> 1 DISCIPLINE <input type="checkbox"/> 3 GRADUATION <input type="checkbox"/> 5 ECONOMIC <input type="checkbox"/> 2 HEALTH <input type="checkbox"/> 4 OTHER <input type="checkbox"/> 6			40. NO. OF MONTHS SINCE LEAVING SCHOOL		41. DRAFT CLASSIFICATION 1A <input type="checkbox"/> 1 OTHER <input type="checkbox"/> 4 1Y <input type="checkbox"/> 2 NONK <input type="checkbox"/> 5 4F <input type="checkbox"/> 3		42. EVER HAD ARMED FORCES PHYSICAL YES <input type="checkbox"/> 1 NO <input type="checkbox"/> 2		43. EVER BEEN IN ARMED FORCES YES <input type="checkbox"/> 1 NO <input type="checkbox"/> 2	
44. YOUTH'S LIFETIME OCCUPATIONAL GOALS: _____			45. THE PURPOSES OF THE NEIGHBORHOOD YOUTH CORPS HAVE BEEN EXPLAINED TO ME AND I HEREBY MAKE APPLICATION FOR ENROLLMENT SIGNATURE OF APPLICANT _____							
PART II ENROLLMENT REPORT TO BE COMPLETED BY SPONSOR			47. DATE REPORTED TO WORK NO. DAY YEAR		48. WORK ASSIGNMENT					
46. ENROLLMENT ACTION THE ABOVE YOUTH WAS: ACCEPTED AND REPORTED TO WORK <input type="checkbox"/> 1 ACCEPTED BUT DID NOT REPORT TO WORK <input type="checkbox"/> 2 NOT ENROLLED <input type="checkbox"/> 3 REASON NOT ENROLLED _____			49. (SPONSOR USE ONLY)		50. (SPONSOR USE ONLY)					

INDIVIDUAL TRAINEE TERMINATION TRAINING OR SERVICES				FORM APPROVED BUDGET BUREAU NO. 44-R1204.1	
PROGRAM: PROJECT: TRNG. PHASE:					
MDTA —1	INST. —1	OCCUPATIONAL —0			
RAR —2	OJT —2	BASIC ED. —1			
OTHER —3	E&D —4	PRE-VOC. —2			
NYC —4	OTHER —4				
A. 1. NAME - LAST, FIRST, MIDDLE INITIAL		2. SOCIAL SECURITY NO.		3. SEX (CHECK ONE)	
ADDRESS - STREET, CITY, STATE		[] [] [] [] [] [] [] [] [] []		M [] F []	
B. 1. STATE (NAME AND CODE)	2. PROJECT NUMBER	3. SECTION (MOTA & RAR NUMBER ONLY)	4. OCCUP. GOAL OR SERVICE FURNISHED		
5. FIRST DAY ATTENDED MONTH DAY YEAR	6. LAST DAY ATTENDED MONTH DAY YEAR	7. NO. DAYS ATTENDED	8. NO. DAYS ABSENT	9. CLOCK HOURS ATTENDED	
[] [] []	[] [] []				
C. 1. NATURE OF TERMINATION			C. 2. TRANSFERRED TO: (NYC ONLY)		
COMPLETED FULL COURSE —00	DID NOT COMPLETE		VOCATIONAL TRAINING —11	OTHER SCHOOL —14	
EARLY COMPLETION —01	COURSE:		APPRENTICESHIP TRNG —12	OTHER NYC PROJECT —15	
ACHIEVED TRAINING OBJECTIVE	INVOLUNTARY —03		REGULAR SCHOOL —13	UNKNOWN —16	
PRIOR TO END OF COURSE —02	VOLUNTARY —04				
D. EXISTING CONDITIONS AT TIME OF TERMINATION					
1. IF TRAINEE DID NOT COMPLETE, INDICATE CONDITION BY CHECK. IF MORE THAN ONE CONDITION PRESENT, CHECK ALL APPLICABLE CONDITIONS AND CIRCLE ONE MOST IMPORTANT CONDITION.					
POOR ATTENDANCE —30	Moved FROM AREA —36	TRANSPORTATION PROBLEMS —42	DISLIKED COUNSELOR —54		
LACK OF PROGRESS —31	CARE FOR FAMILY —37	ENTERED ARMED FORCES —43	AGREEMENT TERM —55		
MISCONDUCT —32	PREGNANCY OF TRNEE. —38	COULDN'T ADJ. TO TRNG/WRK —50	UNKNOWN —56		
ALCOHOLISM —33	ILLNESS OF TRAINEE —39	LOST INTEREST —51	OTHER (SPECIFY) —57		
COMMITTED TO INST. —34	FULL-TIME SCHOOL —40	DION'T ATT. REMED'L CLASS —52			
POOR HOURS OR LOC. —35	INSUF. PAY OR ALLOW. —41	DISLIKED INSTRUCTOR —53			
2. WAS TRAINEE INTERVIEWED BEFORE THIS SECTION WAS COMPLETED? YES —1. NO —2.					
E. STATUS AT TIME OF TERMINATION (COMPLETE FOR ALL TRAINEES; CHECK ONE)					
WORKING OR SCHEDULED TO REPORT TO:			NOT SCHEDULED TO REPORT TO A JOB BUT:		
TRAINING RELATED JOB —01	LOOKING FOR WORK —03	SCHEDULED FOR FURTHER TRNG. —05			
NON-TRAINING RELATED JOB —02	NOT LOOKING FOR WORK —04	NOT KNOWN —06			
F. FOR THE TRAINING FACILITY (COMPLETE FOR MOTA TRAINEES ONLY; CHECK ONE)					
THIS IS TO CERTIFY THAT THE CIRCUMSTANCES OF TERMINATION FOR THE TRAINEE TO WHOM THIS REPORT REFERS ARE:					DATE: _____
FOR GOOD CAUSE —1.		NOT FOR GOOD CAUSE —2.			
NAME: (SIGNATURE) _____		(FACILITY NAME) _____			
(TYPED OR PRINTED) _____		ADDRESS _____			
TITLE _____					
G. FACILITY OR DEPT. HEAD REVIEW (COMPLETE FOR NYC. FOR MOTA COMPLETE IF TERMINATION WAS NOT FOR GOOD CAUSE)					
I HAVE REVIEWED THE CIRCUMSTANCES SURROUNDING THE TERMINATION OF THE TRAINEE TO WHICH THIS REPORT REFERS AND HAVE FOUND THEM TO BE ACCURATELY DESCRIBED.					
NAME: (SIGNATURE) _____		TITLE: (AGENCY HEAD) _____			
(TYPED OR PRINTED) _____		AGENCY NAME _____			
H. FOR USE BY SELECTION OR REFERRAL OFFICE (CHECK APPLICABLE ITEMS)					
1. ALL PHASES OF TRAINING OR SERVICES TERMINATED: YES —1 NO —2					
2A. IF NO, ADDITIONAL OR CONTINUING ACTIVITY SCHEDULED:		B. PROJECT NO. _____		C. SECTION NO. _____	
MDTA —1	INST. —1	OCCUPATIONAL —0	D. OCCUPATION _____		DOT CODE _____
RAR —2	OJT —2	BASIC ED. —1	E. TRAINEE ENROLLED IN ADDITIONAL ACTIVITY;		
OTHER —3	E&D —4	PRE-VOC. —2	YES —1 NO —2		
NYC —4	OTHER —4		F. IF NOT ENROLLED, ENTER COND. CODE (SEC. D.1.) _____		
			G. GOOD CAUSE: YES —1 NO —2		
STATE NAME AND CODE _____		OFFICE OR AGREEMENT NO. _____		DATE _____	

Cooperative Extension Service
Oregon State University

Corvallis, Oregon 97331

NEIGHBORHOOD YOUTH CORPS EVALUATION

March 5, 1969

In order to conduct meaningful research into certain aspects of the Neighborhood Youth Corps Program in Oregon it is required that the researchers have accurate data concerning the enrollees. Some of this information can only be obtained through contact with individual schools. It is in this regard that we ask your assistance in gathering the information on the individuals listed on the enclosed form.

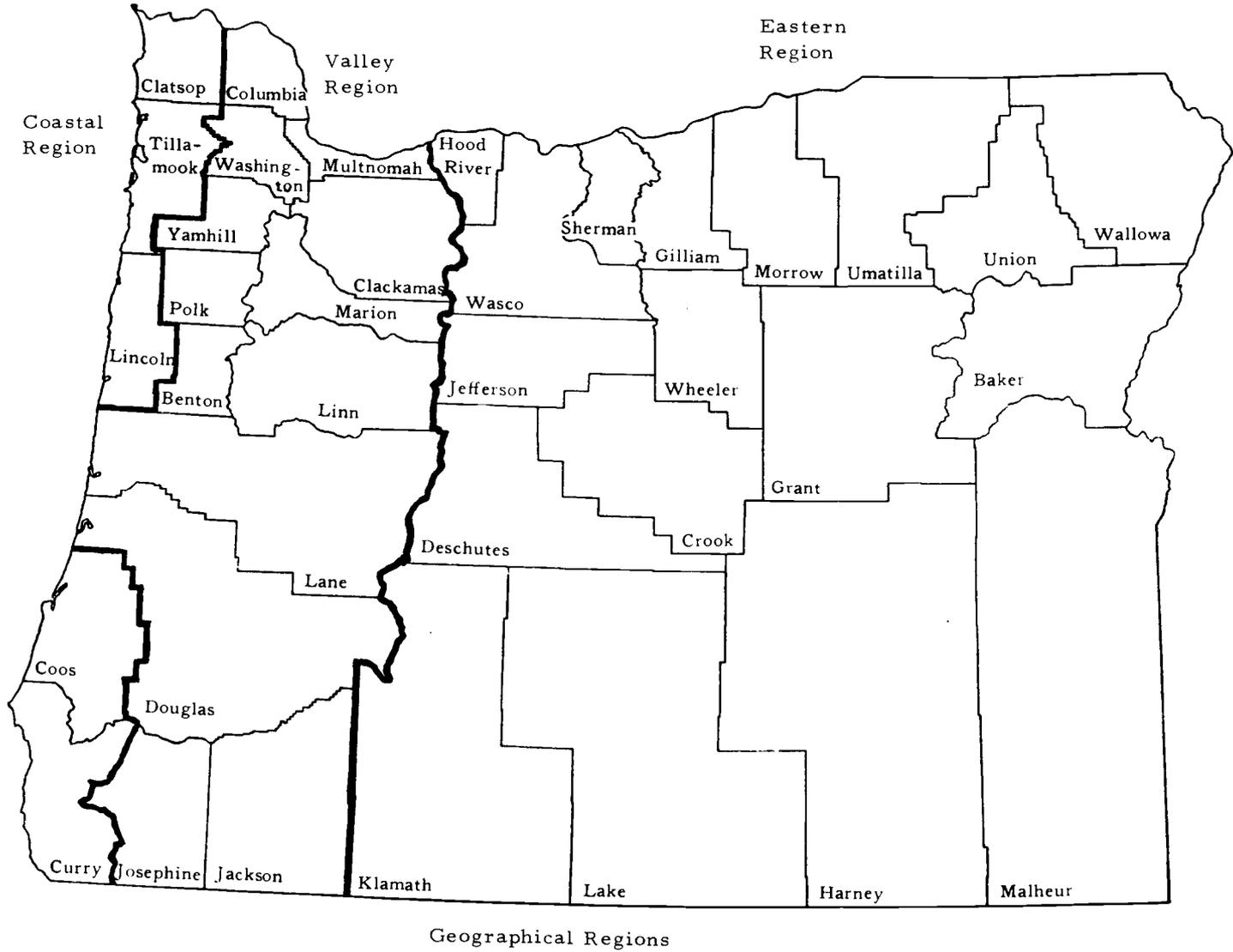
The information sought will be used solely for the purpose of conducting research. Under no circumstances will the records of individuals be used in any way other than simple compilations of totals. No individuals will be dealt with in any way whatsoever except in matching NYC records with school records; and under no circumstances will individuals be named, nor the records of these students released.

Thank you.

R. A. Bigsby
Research Assistant

NYC Supervisor

APPENDIX D.



APPENDIX E

CODED VARIABLES EMPLOYED IN STEPWISE
MULTIPLE LINEAR REGRESSION ANALYSES

Sex-

- Male
- Female

Age

Language spoken in home -

- English
- Spanish
- Other

Marital status -

- Single
- Married
- Divorced

Living group -

- Living with both parents
- Living with guardian
- Living alone
- Living with father only
- Living with mother only
- Living with grandparents

Parental occupation -

- Parent disabled or retired
- Parent unskilled
- Parent semi-skilled
- Parent skilled
- No parental occupation stated

Head of household employment status -

- Not working
- Working part time
- Working full time

Family income per member

Appendix E. (Continued).

Highest school grade completed

Reason for leaving school -

Academic reasons

Marriage

Graduation

Economic reasons

Unstated reasons

Discipline

Health

Cash welfare payments to the home -

Yes

No

Number of siblings in the family

Previous work experience of 30 days of more -

Yes

No

Stated lifetime occupational goal -

No stated lifetime goal

Unskilled goal

Semi-skilled goal

Skilled goal

Professional goal

Number of times enrolled in the program

Geographical area of program -

Eastern area

Valley area

Coastal area

Number of enrollee's own children

Counseling received in the program -

Yes

No

Reported intelligence quotient

Reported scholastic record

Degree of success in the program -

Failure

Moderate success

Success

APPENDIX F

MODEL OF MULTIPLE LINEAR REGRESSION ANALYSIS

The following model of the multiple linear regression analysis employed in this study is provided so that duplication of this study may be facilitated. The matrix equation employed was $\underline{Y} = X\underline{\beta} + \underline{\epsilon}$

$$\underline{Y} = \begin{bmatrix} y_1 \\ y_2 \\ y_3 \\ \vdots \\ \vdots \\ y_n \end{bmatrix} \quad \text{where } y_i = \text{success rating of the } i^{\text{th}} \text{ observation.}$$

$$\underline{\beta} = \begin{bmatrix} \beta_0 \\ \beta_1 \\ \beta_2 \\ \vdots \\ \vdots \\ \beta_k \end{bmatrix} \quad \text{where } \beta_j = \text{true value of the } j^{\text{th}} \text{ parameter.}$$

$$X = \begin{bmatrix} 1 & x_{11} & \dots & x_{1m} & \dots \\ 1 & x_{21} & \dots & x_{2m} & \dots \\ 1 & x_{31} & \dots & x_{3m} & \dots \\ 1 & \cdot & \dots & \cdot & \dots \\ 1 & \cdot & \dots & \cdot & \dots \\ 1 & \cdot & \dots & \cdot & \dots \\ 1 & x_n & \dots & x_{nm} & \dots \end{bmatrix} \quad \begin{array}{l} \text{variable } m \\ \downarrow \\ \leftarrow \text{rows = observations on individuals.} \end{array}$$

x_{im} = observed value of the m^{th} independent variable for individual i in the study.

$$\underline{\epsilon} = \begin{bmatrix} \epsilon_1 \\ \epsilon_2 \\ \epsilon_3 \\ \vdots \\ \vdots \\ \epsilon_n \end{bmatrix} \quad \text{error terms } \epsilon_i \sim N(0, \sigma^2)$$

Appendix F. (Continued).

$$Y_i = (1, x_{i1}, \dots, x_{ik}) \begin{bmatrix} \beta_0 \\ \beta_1 \\ \beta_2 \\ \vdots \\ \beta_k \end{bmatrix} + \epsilon_i$$

$$Y_i = 1 \cdot \beta_0 + x_{i1} \cdot \beta_1 + x_{i2} \cdot \beta_2 + \dots + x_{ik} \cdot \beta_k + \epsilon_i \quad (1)$$

In general terms the regression program sought out estimates of the parameter β_i such that $\underline{e}' \underline{e} = e_1^2 + e_2^2 + \dots + e_n^2$ was minimized. This was done by solving the matrix equation $X'X\underline{\beta} = X'\underline{Y}$ where $\hat{\underline{\beta}}$ was the least squares estimator of $\underline{\beta}$. Then the predicted values of y_i , say \hat{y}_i , may be written as

$$\hat{y}_i = 1 \cdot \hat{\beta}_0 + x_i \cdot \hat{\beta}_1 + \dots + x_{ik} \cdot \hat{\beta}_k \quad (2)$$

Hence, the principal task of the regression program was to find the least squares estimators for β_i in equation (1) so that the prediction equation (2) may be written.

For this problem two types of x variables were used, namely, quantitative variables and qualitative variables. In the quantitative case the observed value of x_{ij} was written into the X matrix. In the prediction equation $\hat{\beta}_j$ was the coefficient corresponding to x_{ij} . In the qualitative case it seemed appropriate to use indicator variables defined by

$$x_{ij} = \begin{cases} 1 & \text{- if the } i^{\text{th}} \text{ individual was in the group associated with} \\ & \text{independent variable } j; \\ 0 & \text{- if the } i^{\text{th}} \text{ individual was not in the group associated with} \\ & \text{independent variable } j. \end{cases}$$

For example, if the j^{th} independent variable was "living in eastern area," then x_{ij} would equal one or zero in the case of the i^{th} individual residing or not residing in the eastern region respectively.

Appendix F. (Continued).

Since many of the qualitative variables were linearly dependent it was appropriate to reduce the number of independent variables until all dependency was removed. Hence, the $X'X$ matrix was of full rank, which implies that $\hat{\beta}$ is the unique least squares solution to the matrix $X'X \underline{\beta} = X'Y$.

The stepwise program computed and provided basic statistical information including the correlation matrix. On the first step of the stepwise algorithm the independent variable x_n which had the highest correlation with the dependent variable (success-failure) was chosen to be contained in the first prediction equation $y = \hat{\beta}_0 + \hat{\beta}_1 x_n$. Succeeding variables were placed into the equation by stepwise algorithm which was an analysis of variance to select the variable which most significantly reduced the variance on a single iteration. The procedure continued until all independent variables were brought into the equation.

It must be pointed out that the method employed did not guarantee that the total explained variance attained for a particular subset of the independent variables was the largest attainable for any subset of the same size. However, the method has been used satisfactorily as a feasible substitute for the much longer procedure of computing the total explained variance for every possible subset.

APPENDIX G

Table 1. Summary of variables entering the first stepwise multiple linear regression analysis for all enrollees.

Variable	Electronic computer assigned students' t value	Order entering regression analysis
R-square coefficient = .2287		
Degrees of freedom = 266		
Sex (male)	-2.608	1
Age	2.347	4
English spoken in home	-2.584	3
Single	1.088	23
Divorced	.632	27
Living with both parents	-1.448	20
Living with guardian	-.870	26
Living alone	-1.525	6
Living with father only	-.447	29
Living with mother only	-1.193	25
Living with grandparents	-1.489	12
Parent disabled or retired	.852	19
Parent unskilled	1.167	14
Parent semi-skilled	1.693	5
Parent skilled	1.105	16
No parental occupation stated	.549	24
Household head not working	.594	30
Household head working part time	.510	31
Household head working full time	-.658	10
Highest school grade completed	.781	15
Left school for academic reasons	-.296	28
Left school for marriage	.473	22
Left school because of graduation	1.281	7
Left school for economic reasons	-.711	11
Left school for unstated reasons	-.109	33
Left school because of discipline	-.467	17
Left school for health reasons	-.105	34
Family receives cash welfare	-1.455	9
Enrollee held previous job	-.427	18
Enrollee stating no occupational goal	-1.559	2
Enrollee stating unskilled goal	-.059	32
Enrollee stating semi-skilled goal	.995	13
Enrollee stating skilled goal	.353	21
Eastern area	-.914	8
Valley area	.116	35

Table 2. Summary of success-failure of enrollees in the out-of-school program by number of siblings in enrollees' family for males and females.

Number of siblings	Failure	Moderate Success	Success	Total
<u>Males (N = 119)</u>				
1 - 3	26 63.5%	6 14.6%	9 21.9%	41 100.0%
4 - 6	25 54.4%	7 15.2%	14 30.4%	46 100.0%
7 - 9	14 58.4%	5 20.8%	5 20.8%	24 100.0%
10 and over	3 37.5%	1 12.5%	4 50.0%	8 100.0%
<u>Females (N = 56)</u>				
1 - 3	7 70.0%	1 10.0%	2 20.0%	10 100.0%
4 - 6	5 17.9%	9 32.1%	14 50.0%	28 100.0%
7 - 9	3 23.2%	5 38.4%	5 38.4%	13 100.0%
10 and over	1 20.0%	1 20.0%	3 60.0%	5 100.0%

Table 3. Summary of success-failure of enrollees in the out-of-school program by intelligence quotient for males and females (N = 41).

Intelligence Quotient	Failure	Moderate Success	Success	Total
I. Q. below 100	12 46.2%	7 26.9%	7 26.9%	26 100.0%
I. Q. above 100	4 26.7%	6 40.0%	5 33.3%	15 100.0%

Table 4. Summary of success-failure of enrollees in the out-of-school program by scholastic record for males and females (N = 58).

Scholastic record	Failure	Moderate Success	Success	Total
A				
B			1 100.0%	1 100.0%
C	3 27.3%	2 18.2%	6 54.5%	11 100.0%
D	15 44.1%	10 29.4%	9 26.5%	34 100.0%
F	5 41.7%	4 33.3%	3 25.0%	12 100.0%

Table 5. Summary of success-failure in the out-of-school program by highest grade completed for males and females.

Highest grade completed	Failure	Moderate Success	Success	Total
<u>Males (N = 160)</u>				
No school	1 100.0%			1 100.0%
5	2 100.0%			2 100.0%
6	1 50.0%		1 50.0%	2 100.0%
7	1 100.0%			1 100.0%
8	13 68.5%		6 31.5%	19 100.0%
9	26 63.4%	8 19.5%	7 17.1%	41 100.0%
10	32 62.8%	7 13.7%	12 23.5%	51 100.0%
11	20 46.5%	6 14.0%	17 39.5%	43 100.0%
<u>Females (N = 142)</u>				
2			1 100.0%	1 100.0%
5			1 100.0%	1 100.0%
6		3 100.0%		3 100.0%
7		1 50.0%	1 50.0%	2 100.0%
8	1 11.2%	3 33.3%	5 55.5%	9 100.0%
9	15 46.8%	3 9.4%	14 43.8%	32 100.0%
10	16 30.8%	16 30.8%	20 38.4%	52 100.0%
11	11 29.7%	8 21.6%	18 48.7%	37 100.0%
12		2 40.0%	3 60.0%	5 100.0%

Table 6. Summary of success-failure in the out-of-school program by previous work experience for males and females.

	Failure	Moderate Success	Success	Total
<u>Males (N = 160)</u>				
Held job 30 days or more	66 61.7%	11 10.3%	30 28.0%	107 100.0%
Never held job	30 56.6%	10 18.8%	13 24.6%	53 100.0%
<u>Females (N = 142)</u>				
Held job 30 days or more	27 31.4%	20 23.3%	39 45.3%	86 100.0%
Never held job	16 28.6%	16 28.6%	24 42.8%	56 100.0%

Table 7. Summary of success-failure in the out-of-school program by income for males and females.

Income in 100's of dollars per family member	Failure	Moderate success	Success	Total
<u>Males (N = 118)</u>				
1 - 2	1 33.3%	1 33.3%	1 33.3%	3 100.0%
2 - 3	4 57.1%	1 14.3%	2 28.6%	7 100.0%
3 - 4	4 66.7%	2 33.3%	0	6 100.0%
4 - 5	8 57.2%	3 21.4%	3 21.4%	14 100.0%
5 - 6	9 52.9%	1 5.9%	7 41.2%	17 100.0%
6 - 7	9 56.3%	1 6.2%	6 37.5%	16 100.0%
7 - 8	10 50.0%	4 20.0%	6 30.0%	20 100.0%
8 - 9	8 53.4%	4 26.6%	3 20.0%	15 100.0%
9 and over	13 65.0%	3 15.0%	4 20.0%	20 100.0%
<u>Females (N = 59)</u>				
1 - 2	0	0	0	0
2 - 3	1 25.0%	1 25.0%	2 50.0%	4 100.0%
3 - 4	2 20.0%	4 40.0%	4 40.0%	10 100.0%
4 - 5	3 23.0%	4 30.8%	6 46.2%	13 100.0%
5 - 6	2 25.0%	2 25.0%	4 50.0%	8 100.0%
6 - 7	1 25.0%	1 25.0%	2 5.0%	4 100.0%
7 - 8	2 33.3%	1 16.7%	3 50.0%	6 100.0%
8 - 9	2 22.2%	2 22.2%	5 55.6%	9 100.0%
9 and over	3 60.0%	1 20.0%	1 20.0%	5 100.0%

Table 8. Summary of success-failure in the out-of-school program by marital status.

	Failure	Moderate success	Success	Total
<u>Males (N = 160)</u>				
Single	88 59.9%	21 14.3%	38 25.8%	147 100.0%
Married	7 58.3%		5 41.7%	12 100.0%
Divorced	1 100.0%			1 100.0%
<u>Females (N = 142)</u>				
Single	24 30.8%	20 25.6%	34 43.6%	78 100.0%
Married	10 27.0%	9 24.4%	18 48.6%	37 100.0%
Divorced	9 33.4%	7 25.9%	11 40.7%	27 100.0%

Table 9. Summary of success-failure in the out-of-school program by number of own children for males and females.

	Failure	Moderate success	Success	Total
<u>Males (N = 2)</u>				
1	1 50.0%		1 50.0%	2 100.0%
2				
3				
<u>Females (N = 34)</u>				
1	5 20.8%	6 25.0%	13 54.2%	24 100.0%
2	2 25.0%	3 37.5%	3 37.5%	8 100.0%
3			2 100.0%	2 100.0%

Table 10. Summary of success-failure in the out-of-school program by number of times enrolled for males and females.

	Failure	Moderate success	Success	Total
<u>Males (N = 160)</u>				
1	90 62.9%	18 12.6%	35 24.5%	143 100.0%
2	5 41.7%	2 16.6%	5 41.7%	12 100.0%
3	1 25.8%	1 25.0%	2 50.0%	4 100.0%
<u>Females (N = 142)</u>				
1	41 31.0%	32 24.2%	59 44.8%	132 100.0%
2	2 20.0%	4 40.0%	4 40.0%	10 100.0%
3				