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REPORT ON THE
VESTIBULE CLERICAL TRAINING PROGRAM
CONDUCTED BY
UCC NUCLEAR DIVISION

UNION CARBIDE CORPORATION
NUCLEAR DIVISION
OAK RIDGE GASEOUS DIFFUSION PLANT

operated for the ATOMIC ENERGY COMMISSION under U. S. GOVERNMENT Contract W-7405 eng 26

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OAK RIDGE GASEOUS DIFFUSION PLANT
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REPORT ON THE VESTIBULE CLERICAL TRAINING PROGRAM
CONDUCTED BY UCC NUCLEAR DIVISION

Lorene Friar
Industrial Relations Division

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UNION CARBIDE CORPORATION
NUCLEAR DIVISION
Oak Ridge Gaseous Diffusion Plant
Oak Ridge, Tennessee

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Report Number: K-1768

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Title: REPORT ON THE VESTIBULE CLERICAL
TRAINING PROGRAM CONDUCTED BY
UCC NUCLEAR DIVISON

Author: Lorene Friar

A B S T R A C T

The pilot vestibule clerical training program from its inception to conclusion and placement of the trainees is described. The selection criteria, purpose and objectives, and test evaluations are outlined.

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REPORT ON THE VESTIBULE CLERICAL TRAINING PROGRAM

CONDUCTED BY UCC NUCLEAR DIVISION

The following report describes the pilot vestibule clerical training program conducted by Union Carbide Corporation's Nuclear Division at the Oak Ridge Gaseous Diffusion Plant, Oak Ridge, Tennessee. The training was conducted to make clerical employment available to well-motivated, disadvantaged applicants.

SUMMARY

The vestibule clerical training program from inception to conclusion and placement of the trainees is described. The selection criteria, purpose and objectives, pre- and post-employment evaluations, and test results from the 8-hour-day, 12-weeks' training are described. The ten trainees completed the training successfully; and six were employed by the ORGDP, one by the Oak Ridge National Laboratory, and three by the Y-12 Plant. The results of the training are: 80% passed the Company's minimum employment requirements; 60% passed shorthand; typing speed improved 50%, error reduction, 74.6%; overall gain in net speed, 193.4%. Percentage gains in individual improvements in clerical skills ranged from 2.7% to 19%. Test results in English grammar and vocabulary showed a 37.8% improvement.

References to testing criteria, test scores, screening procedures, and minimum standards refer to UCC-ND's employment policy in effect at the time the program was initiated, some of which do not reflect our current standards, procedures, criteria, etc.

INTRODUCTION

An agreement of May 29, 1962, between Union Carbide Corporation and the President's Committee on Equal Employment Opportunity set forth an extension of the Corporation's employment policy. This agreement called "Plan for Progress" states:

It is the policy of the Corporation to afford individuals of all religions, races, colors, and national origins equal opportunity for employment, for advancement in employment, and for continuation of employment, with due regard for the relative qualifications of all involved.

The general objectives of the Corporation's employment policy and provisions of this agreement are to afford all individuals who have the necessary qualifications equal opportunity to compete for employment, for advancement in employment, and for continuation in employment in carrying out the competitive activities of Union Carbide Corporation. The general practice of the Corporation is to start employees in entry jobs and

to fill other requirements by advancement within the organization, except when special required skills are not available, and this will continue to apply to all employees including those in minority groups.

The specific objective of this "Plan for Progress" is to encourage members of minority groups to compete within the framework of this employment policy. Those individuals who wish to do so will be encouraged to seek opportunities for our informal on-the-job training and in any formal job-training programs undertaken by the Corporation.

Before outlining the purpose and objectives of UCC Nuclear Division's current vestibule training program, some explanation is necessary concerning the factors which led to the decision to attempt this type of training. First, over a period of several years, the Company's recruiting efforts to find qualified minority clerical applicants have been disappointing until recently. The second factor concerned the Youth Opportunity Program which was undertaken at the Oak Ridge Gaseous Diffusion Plant during the summer of 1967.

In May, 1965, President Johnson launched the Youth Opportunity Program (YOP) to provide work and training experience for boys and girls 16 through 21. He directed the Government departments and agencies "to make every effort to find meaningful work or training opportunities for one extra trainee for every 100 employees on their present payrolls." He added that "these opportunities will be given to those boys and girls who need them the most because of economic or educational disadvantages," and that the program will be worthwhile "only if it means extra work-training opportunities over and above those which would normally be offered."

In support of the YOP, the Oak Ridge Gaseous Diffusion Plant employed six candidates during the summer of 1965, five during 1966, and ten during 1967, bringing us to the second factor mentioned previously regarding vestibule training.

Youth Opportunity Program - 1967

Among the ten YOP's employed in the summer of 1967 were five young Negro girls who were employed for clerical jobs. Their pre-employment test scores and other background information showed them to be deficient in the skills required to carry out the clerical assignments. It was decided that in order for these girls to benefit from their summer jobs and for the Company to realize any productive gain from their employment, some clerical training would be necessary.

A ten-week, half-day training course was developed for the five girls. During the mornings, they were assigned to regular plant employees and received on-the-job training; the hours from 1:00 to 4:20 p.m. were devoted to classroom training in typing, English, math, and office procedures. Mrs. Evelyn Oswald, an ORGDP executive secretary, served as the YOP

instructor. At the end of the ten weeks, results of the half-day training showed a 73% average gain in typing speed, an 80% reduction in typing errors, and a 20% average increase in clerical aptitude scores.

Some problems were experienced in the program - problems which had not been anticipated, and others which were found to be greater than had been expected. Most noticeable was a general failure on the part of the trainees to recognize their own skills deficiencies. Also, attitudes were encountered regarding racial and other interpersonal relationships.

From these factors--lack of available, qualified minority candidates and the results of the half-day YOP training--the current pilot vestibule training program evolved.

VESTIBULE TRAINING PROGRAM

In a letter to Dr. C. E. Larson, President, UCC-ND, Mr. S. R. Sapirie, Manager, USAEC Oak Ridge Operations, stated:

The Nuclear Division will support the continuance of ORGDP's excellent program for training disadvantaged minority-group clerical applicants who are trainable but not fully qualified for company employment. ORNL and Y-12 will cooperate with ORGDP by employing some of these personnel as they qualify and become available for permanent assignment.

Since the Oak Ridge Gaseous Diffusion Plant had the facilities and experience, the decision was made that ORGDP would perform the function for all three Oak Ridge plants--ORGDP, the Oak Ridge National Laboratory, and Y-12 Plant.

Program Responsibility

In October, 1967, the author was assigned the responsibility for the Vestibule Training Program and the duty as Clerical School instructor. Dr. Cabot L. Jaffee of the Organizational Psychology Program, The University of Tennessee, was engaged as consultant to assist in the development of the program. He devised simulated exercises involving problems encountered in actual work environments, consulted with the instructor during the course of the program, and assisted in evaluating program results.

Preliminary Planning

The first meeting of the three-plant representatives was held November 16, 1967, to outline the program for vestibule training. Those attending the meeting were:

<u>ORGDP</u>	<u>ORNL</u>	<u>Y-12</u>	<u>Univ. of Tenn.</u>
J. M. Bender	J. E. Sergeant	D. E. Anderton	Dr. C. L. Jaffee,
L. Friar		W. S. Porter	Consultant
R. L. Wilson			
J. C. Young			

The outline of the pilot training program which was adopted follows.

OUTLINE OF PILOT TRAINING PROGRAM CLERICAL TRAINING SCHOOL

Purpose

The purpose of the pilot training program is to conduct vestibule training to make clerical employment available to well-motivated, disadvantaged applicants.

Objectives

The objectives of the program are:

- a. to upgrade the skills and capabilities of disadvantaged and/or marginal applicants to help prepare them for job opportunities;
- b. to encourage trainees in a continuing program of self-improvement;
- c. to evaluate the feasibility of training disadvantaged applicants in terms of time, economics, and results.

Responsibilities

- a. A Clerical Training School has been established for the Oak Ridge Gaseous Diffusion Plant, Oak Ridge National Laboratory, and Y-12 Plant to carry out the objectives of the program. Courses will be offered in a series of 12-week training sessions. Instruction will be carried out at the ORGDP (Building K-1002-N) for the three plants.
- b. By mutual agreement, representatives of the three plants will select the trainees, follow their progress during the training sessions, and determine their placement at the end of the training periods.
- c. Costs incurred for books, supplies, salaries, etc., will be charged to a deferred cost account and distributed on a pro rata basis among the three plants at the conclusion of each training session.

- d. The Central Employment Office will assist in the program by screening applications and forwarding them to the ORGDP Employment Department for review by the three-plant representatives.
- e. Each plant will conduct its own preconditioning program with management personnel to sell the concept of the clerical training program and, in particular, utilization of minority-group employees.
- f. Actual openings must exist among ORGDP, ORNL, and Y-12 for the trainees enrolled in each training session.
- g. Each plant will tentatively obligate itself to employ from each training session its share of the trainees who have successfully completed the program.

Conditions of Employment

- a. The pilot group will consist of 10 applicants, predominately Negro.
- b. Trainees will be employed on a temporary basis and will be advised that their participation in the 12-week training program will not necessarily insure them a permanent job with UCC-ND at the end of the program.
- c. The starting salary will be in the range of the Youth Opportunity Program, an amount to be determined by the three plants.
- d. Central Employment Office will do the initial screening in accordance with the following criteria:
 - (1) Age - minimum 18
 - (2) Education - minimum high school
 - (3) I.Q. - minimum 90
 - (4) General Clerical Test - 120 (may consider lower if other qualifications are above minimum)
 - (5) Typing - minimum 30 wpm
 - (6) Shorthand - desired, but not required
 - (7) Physical Characteristics and Health - satisfactory
- e. Following the initial screening, the actual selection of candidates will be made collectively by the three-plant representatives.
- f. Total selection for the first training session is to be completed by December 15, 1967, in order that clearance proceedings for the trainees may be initiated.

- g. The tentative date to begin the first class is March 4, 1968.

Course Outline

- a. The following courses will be offered during a 12-week period of in-class training:
 - (1) Typing - develop speed, control; letter writing, tabulations
 - (2) Grammar - discussions, tests, programmed workbooks, composition
 - (3) Shorthand
 - (4) Mathematics Refresher
 - (5) Office Machines
 - (6) Company Orientation - UCC forms, supplies, reproduction facilities
 - (7) Office Procedures - filing, telephone, conduct, grooming
 - (8) Human Relations
- b. The overall conduct of the classroom would be that of a simulated office where the training and evaluation would take the form of actual work the trainee would be required to do in a real-work environment. This approach would eliminate the necessity of an on-the-job program in conjunction with the classroom program.

Measurements (Simulation)

This section will be developed by Dr. Jaffee who will concentrate his efforts toward the simulated work environment (section 5b), and from it develop the necessary measurement procedures.

Graduation

- a. Two weeks prior to the completion of each 12-week training session, the three-plant representatives will review the performance records of the trainees. Placement or nonplacement of the trainees will be determined by mutual agreement.
- b. Consideration will be given to the trainees' employment location preference.
- c. Follow-up evaluation forms will be prepared for completion by both trainees and supervisors after sufficient time has elapsed following job placement.

Funding

- a. A deferred cost account, 1092-M-35024-03, has been opened to receive costs incurred in the operation of the Clerical Training School. These costs for books, supplies, salaries, etc., will be distributed among ORGDP, ORNL, and Y-12 accounts on the basis of the number of trainees actually hired by each installation.

CLASSROOM FACILITY AND EQUIPMENT

The classroom, located in building K-1002-N at the Oak Ridge Gaseous Diffusion Plant, was 18 ft. x 38 ft. Figure 1 shows the facility before occupancy.

The classroom was equipped with the following: secretarial desks; typist chairs; electric typewriters (4 IBM, 4 Underwood, 2 Royal); tape recorder; Thermofax machine; supply cabinet (office supplies, stationery, notebooks, typewriter ribbons); textbooks, dictionaries and handbooks (on each desk); blackboard; bulletin board; large table for center aisle for group study; lectern and filing cabinet.

SELECTION AND EMPLOYMENT PROCEDURES

In selecting potential candidates for clerical training, it was decided that, first of all, a review should be made of those applicants who had already applied unsuccessfully for employment with UCC-ND. The application itself was an indication of a desire to work for the Company; also, the applicant's record of minimal skills was at hand for a comparison with our selection criteria.

The three-plant representatives met in December, 1967, to review qualification records of applicants who had failed to qualify for employment. Approximately 48 applications were reviewed from which 13 were selected as potential candidates for clerical training.

Central Employment contacted the 13 applicants to determine their interest in participating in the training program. The candidates were told that employment would be on a temporary basis and that participation in the program would not insure them a permanent job with the Company upon completion of the program.

Eight applicants responded, and arrangements were made for them to be retested and interviewed. The retesting was necessary because of the time which had elapsed since their initial application for employment. Between December and January, an additional eight candidates were selected from the applications that had been screened but not chosen during the first review.

PHOTO NO. PH-68-591

CLERICAL TRAINING SCHOOL CLASSROOM

Figure 1

Representatives of the three plants were contacted that a date, January 5, 1968, had been set to test and interview the candidates. Those who participated in the testing and selecting of candidates were:

<u>ORGDP</u>	<u>Y-12</u>	<u>ORNL</u>
A. G. Burris	D. E. Anderton	None
C. B. Corn	(part-time)	
L. Friar		
J. C. Young		

The 16 applicants were given typing and clerical examinations, followed by in-depth interviews by Mr. Young, ORGDP. Six applicants were rejected--four because of questionable motivation, and two were eliminated from consideration following a second interview and medical examination. Ten candidates - six Negro and four Caucasian - were accepted and subsequently offered temporary employment for the clerical training.

TABLE 1
CANDIDATES SELECTED FOR CLERICAL TRAINING

Trainee [†]	Code [*]	Clerical Score	Typing Score ^{**}	I.Q.
1	2	167	41/5/31	103
2	1	126	28/2/24	95
3	2	141	45/5/35	109
4	2	85	44/5/34	101
5	2	106	36/7/22	99
6	1	124	58/10/38	101
7	1	133	53/13/27	104
8	2	142	35/10/15	107
9	1	127	37/5/27	107
10	2	166	48/4/40	112
† Testing Criteria:		120	30	90

(Determined by averaging scores shown on the 48 applications screened. UCC's minimum typing requirement was reduced 55% for participation in the program.)

[†]Average Age - 20

^{*}1 - Caucasian
2 - Negro

^{**}Gross - (errors x 2) = Net wpm

[†]References to testing criteria, test scores, screening procedures, and minimum standards refer to UCC-ND's employment policy in effect at the time the program was initiated, some of which do not reflect our current standards, procedures, criteria, etc.

The trainees resided within a 30-mile radius of the Oak Ridge Gaseous Diffusion Plant. Five lived in Knoxville, two in Oak Ridge, one in Lenoir City, one in Kingston, and one in Lake City. Three girls were single and seven were married. Six trainees had one child each. All of the trainees were high school graduates, two of whom had attended college for three and six months respectively.

In some instances, the applicant met the testing criteria with a good clerical score which offset a poor typing score. The in-depth interview indicated that the applicant, despite a poor showing on test scores, would probably be a good, trainable candidate.

The pre-employment tests consisted of a clerical examination, verbal and numerical comprehension, typing test, I.Q. examination, a medical examination, and an in-depth interview. After the preliminary screening by interviews and written tests, the candidates were requested to report to the ORGDP for additional interviews and the medical examinations.

Following the plant interview and upon receipt of the medical approvals, the ORGDP Employment Department made verbal offers of temporary employment to the candidates. Confirming letters of the offers were also sent to the candidates, and by January 22, all ten candidates had accepted the offers. The Employment Department then initiated security clearances. It was estimated that the clearances would be received within approximately six weeks and classes would begin on March 4, 1968.

Clearances were received the latter part of February, and the trainees were placed on the payroll March 1, 1968, as temporary employees. As a condition of participation in the clerical training program, the trainees signed an indenture agreement which outlined the positions and responsibilities of the Company and trainee during the period of training. A copy of the agreement is shown in figure 2.

DISCUSSION OF THE COURSES

The clerical training began March 4, 1968. Most of the day was spent getting settled, obtaining pre-training test scores (clerical, verbal, typing, and numerical), and outlining the work to be done during the twelve weeks. By midafternoon the tests were completed and classes were under way.

Typing

Typing class began with warm-up practice. An assignment was outlined on the blackboard and instructions were given regarding the number of copies. The minimum requirement was an original and one carbon; one copy was corrected and returned to the trainee, and the other copy was retained in the trainee's folder.

NOTICE TO APPLICANT FOR CLERICAL TRAINING SCHOOL

I, _____, request temporary employment for training in the Clerical Training School operated by Union Carbide Corporation, Nuclear Division, at the Oak Ridge Gaseous Diffusion Plant.

I understand that training in the Clerical Training School is for a period of 12 consecutive weeks. However, my training may be discontinued and my employment may be terminated at any time.

I also understand that upon completion of the clerical training program I may be considered for regular employment. However, I understand and agree that Union Carbide Corporation, Nuclear Division, is under no obligation to offer me regular employment.

Witness: _____

Date: _____

INDENTURE AGREEMENT

FIGURE 2

The typing assignments consisted of tabulations, preparation of correspondence, proper use of materials, rough draft typing, intercompany memoranda, UCC letterhead, preparation of tables, and divisional typing assignments. In addition to text assignments, typing material was received from the Engineering Division, Operations Analysis Division, Fabrication and Maintenance Division, and the Computing Technology Center.

There were four IBM, four Underwood, and two Royal typewriters in the classroom. These typewriters had been obtained from offices at the three plants; some of the machines had been in service for several years and required adjustments and repairs during the training course. The older machines will be replaced before the next class begins.

One of the typing difficulties noted involved "head-swing." Two trainees had considerable difficulty in keeping their eyes on the material being copied. The headswing of one trainee seemed to be word for word. During impromptu typing tests, it was noticed that headswing decreased if the class was cautioned beforehand to watch the copy, not the machine. But when the regular typing test was under way, the old habit was resumed. It was pointed out to the trainees that the shift in attention was resulting in inaccurate copies, increased errors, and low typing proficiency. Headswing was reduced considerably by the time the course ended.

Three five-minute typing tests were given every Friday for the first six weeks; thereafter, daily tests were given for the remainder of the course. The daily test was a more realistic evaluation of the trainee's progress. Often the practice tests given during the week would show very good scores, only to have the trainees "freeze" on Friday during the test which counted. The scores began to improve during the second six weeks when the trainees could see five grades posted instead of one weekly grade.

	<u>Began</u> <u>3/4/68</u>	<u>Final</u> <u>5/20/68</u>	<u>Difference</u>	<u>Change</u>
Typing - Gross				
Words - Avg.	42.6	63.9	21.3	50% improvement
Errors - Total				
Average	114	29	85	74.6% reduction

The trainees' typing scores are shown in table 7. The pre-employment typing test which was given March 4 was repeated May 20 for the final grade in the course. The minimum typing score required for UCC-ND employment was 55 wpm; eight of the ten trainees passed the test.

Shorthand

Seven of the trainees had received no shorthand training prior to enrollment in the clerical training program. Three girls had taken courses in shorthand while in high school but had not used it sufficiently to retain speed or recall the basic fundamentals. In essence, these three trainees could also be classified as beginners.

The first shorthand lesson was reviewed March 4; basic steps were reviewed, and shorthand characters were illustrated on the blackboard. The class participated in oral recitation, beginning with the s, f, v characters and word building. Phonetic spellings were repeated in unison; as groups of words were learned, the class moved on to the next group. Then, with several words at their command, the procedure was repeated, tying the new words with those learned previously. By the end of the first hour of shorthand instruction, the class read eight sentences at the end of lesson 1. On March 14, the trainees transcribed two letters from the textbook.

The original plan was to review two lessons each day. Each chapter consisted of six lessons which covered approximately 26 pages. At the beginning of the third week, it became necessary to reduce the daily assignment to one lesson each day because of the difficulties encountered in retaining shorthand characters. The trainees were instructed to copy each lesson twice and to turn in the material daily for grading. With less material to cover each day, the reading and writing improved. The time required for each lesson remained unchanged; one lesson was written twice instead of two lessons once.

The method of teaching was this: the material was covered carefully by outlining the shorthand characters and phrases on the blackboard. The procedure of discussion and dictation was repeated throughout the course. The difficult areas of each lesson were noted and repeated until learned. The trainees competed with each other in timed readings. Throughout the text were recall lessons, which contained timed readings, brief forms, and phrases covered in previous chapters. The trainees were always able to finish the readings in less time than that allowed by the textbook.

The trainees formed study groups to review the shorthand assignments. Each day the new words were reviewed first, after which letters were read aloud by each trainee. Dictation speeds varied: for example, when the trainees had progressed to 40 wpm, dictation began at 40 wpm, followed by spurt dictation at 60 wpm, then back to 40 wpm. When they had progressed to 60 wpm, the speed ranges would be 60/80/60 wpm.

During the spurt dictation exercises, the trainees were not expected to take shorthand at speed beyond their capabilities. They were encouraged, however, to record as much shorthand as they could, striving for smoother strokes while learning to relax. By relaxing, recall and writing would become almost automatic reflexes in taking dictation. There would be no wasted motion, no hesitancy in trying to remember the shorthand character, thereby breaking the continuity of concentration and performance.

Following the accelerated dictation, the same letters were dictated again at the starting speed. Often the trainees commented on the "slow" speed which followed the spurt dictation; in reality, the beginning and ending speeds were identical.

On two occasions, one of the men from the Industrial Relations Division dictated exercises at 40 and 60 wpm. The letters were dictated three times and transcribed. Over half of the class transcribed all the material correctly with only minor punctuation errors and word omissions.

In the final weeks, daily dictation exercises covering brief forms and review phrases were begun following the regular shorthand review. There was less reading by the trainees and more emphasis on dictation of letters, memoranda, and subsequent-page letters to be transcribed in the proper form. Samples of UCC-ND letters had been prepared for them to use as guidelines at the beginning of the course.

The final examination was given May 20; the taped dictation consisted of five letters at speeds of 55, 55, 66, 75, and 93 wpm. Each letter counted 20 quality points. The UCC-ND passing grade is 75/66 which means that the applicant must transcribe the 75 wpm letter and have an accumulated total of 66 quality points. Any grade below 66 quality points, regardless of speed, constitutes failure.

The trainees were instructed to produce mailable letters and were graded on typing, English, shorthand, spelling, and omissions. If a good word substitution did not change the meaning of the letter, it was allowed.

Following are the final examination grades summarized from table 8.

Speed/Quality Points

93/93

93/88

93/87

75/74

75/74

75/72

66/55

66/53

55/38

55/36

The Clerical Training School course in shorthand consisted of 60 hours (12 weeks, 5 hrs/week). Comparable courses given at the Oak Ridge High School are as follows:

- 10 wks (2 nights/wk, 2 hrs) - 40 hrs. - Shorthand I (to 60 wpm)
- 10 wks (2 nights/wk, 2 hrs) - 40 hrs. - Shorthand II (60-80 wpm)
- 10 wks (2 nights/wk, 2 hrs) - 40 hrs. - Shorthand III (80-100 wpm).

At the end of the eleventh week, dictation was given at 60-90 wpm speeds. The six who passed the examination transcribed letters in the 75-93 range.

Mathematics

The trainees' capabilities were much higher than anticipated and exceeded the challenge of the math books purchased for the program. The material was completed the first week; results of the final examination covering these texts are given below:

Mathematics Examination

March 13, 1968

<u>Trainee</u>	<u>Addition</u>	<u>Subtraction</u>	<u>Multiplication</u>	<u>Division</u>
1	98	100	96	94
2	100	98	92	94
3	98	90	82	80
4	92	100	86	74
5	98	100	90	88
6	100	100	94	88
7	96	98	98	98
8	94	98	86	90
9	98	100	96	90
10	100	98	98	92

The time allocated to math was absorbed temporarily into the English session (15 minutes) and the remainder of the time used as a study period. Additional math problems were offered in this time slot during the remaining six weeks after another text was chosen. During the fifth week, another math book was purchased (Stein, E. I., Refresher Mathematics, Allyn and Bacon, Inc., Boston, 1967); and inventory examinations were given on April 4 and 10. These tests contained 70 problems and the grades are reported in table 9.

There was insufficient time remaining in the school term to order individual books; instead, problems were chosen at random from the instructor's text. These problems covered addition, subtraction, multiplication, division, fractions, powers and roots, words-into-numbers problems (narrative). The class enjoyed the diversified drills more than the straight text work. They were given speed problems in addition, subtraction, multiplication, and division to see who could come up with the answer first. Ten to twenty problems were assigned during a class session, and each girl was assigned one or two of the problems to be worked on the blackboard. There was never any indication of embarrassment about being singled out in this manner to participate in a lesson. Before each test, samples of difficult problems which had been noted from previous tests or class discussions were outlined on the blackboard.

English

The text, "College English for Business," (234 pages) was completed during the training period. The material covered included basic fundamentals, parts of speech, sentence structure, punctuation, forming plurals and possessives, choosing the right word, word divisions, and writing numbers.

The text contained two pages of instructions, definitions, and examples, followed by several work sheets for completion. An assignment was given each day, along with an assignment in "College Vocabulary Studies."

Often the trainees completed the next day's assignment in class during the study period. They consulted each other, studied in groups, argued among themselves about a particular ruling, and relied upon each other for assistance during a difficult assignment. The instructions and definitions were discussed; and when a particular point was raised, the question was often turned back to the trainee to see if she could recall the rule and find the solution herself. If she didn't find the answer within the lesson, she was referred to the handbook (Hutchinson's "Standard Handbook for Secretaries") and her question became a joint question as the entire class participated in the problem. Sentences were outlined on the blackboard and examples of the problem were repeated until understood.

The following information is summarized from table 10.

March 4	Avg. grade: 51.6
March 28	Avg. grade: 62.9
April 1	Avg. grade: 75.3
May 2	Avg. grade: 56.2
May 13	Avg. grade: 71.1

Comparison: 3/4 grade (51.6); 5/13 grade (71.1) 37.8% improvement

Vocabulary Studies. The text "College Vocabulary Studies" covered word endings, vocabulary building, troublesome words, and sound-alike words. The text contained introductory samples and instructions, followed by work sheets. The lessons were read aloud in class; each girl was assigned two or three sentences from each lesson, depending on the length of the lesson. The text included sentences such as:

The speaker is the leader of the farm (bloc/block).

The (compliment/complement) of the office is

A stretch of (baron/barren) land

How the time (flew/flu/flue)!

On April 9, the class finished the text (160 pages). During the remaining weeks, highlights of the text were reviewed in short tests.

Spelling. Thirty-word spelling tests were given two or three times weekly. The girls exchanged papers and each spelled three words. A list of misspelled words was kept, and these words were repeated in subsequent tests until the word was removed from the list.

Some days when the English lesson ran over the allotted time, the girls would ask, "Aren't we having a spelling test today?" If they wanted the test, it was given; and the time "borrowed" from the next class period was made up later in the day.

Speech Patterns. The following speech patterns were noted. These were pronunciation traits of both races, the most noticeable of which were the following: Regardless of vowel or consonant, the was always thuh (thuh apple, thuh orange or "arange"; thuh only way that ...; thuh interest that...thuh usual time that...). Of was pronounced uhv (thuh man spoke uhv thuh amount...). Mrs. was pronounced mizz-rizz (Mizz-rizz Jones lives near...); tired (The man worked hard and was tard); fire (thuh far went out...); was (they wuz...!); far became "how for is it to..."

No attention was brought to the particular word at the time it was said. At an appropriate time later, the words were interwoven with a lesson and pronunciation was discussed. This was done to avoid embarrassment to the trainee who had mispronounced the word.

Office Procedures and Practices

The time allocated to office procedures was not confined to a rigid schedule. It was a lecture period covering reviews of secretarial traits and skills, organizing and planning work, organization rules and orientation, proper dress and etiquette, human relations, attitudes, mechanics of running an office, and developing filing skills. Often subjects overlapped; for example, if the discussion covered proper materials in preparing letters, this was reviewed in the typing session (8:00 - 9:00 a.m.).

Use of Telephones. A film on telephone usage was shown which emphasized the proper use of telephones, maintaining telephone coverage in offices at all times, answering the telephone, and recording messages. In subsequent class discussions on telephone usage, some of the topics discussed were:

- a. Messages - When taking a message, read it back to the caller if uncertain about your notes.
- b. Handwriting - Develop good handwriting; write the caller's name legibly and, whenever possible, list his telephone number as well.
- c. Pet peeves - Some people resent being asked their telephone numbers repeatedly, especially if the same secretary asks the caller his number every time he calls.
- d. Promptness - Don't hold a caller on the line too long; don't remove the receiver and keep the caller waiting while you continue your conversation with someone at your desk.
- e. Information - Watch the innocent statements; you haven't given the purpose of your boss's trip out of town, but you may confirm a rumor or give a hint unintentionally when you say your boss is "...in Baltimore...or Washington until..."

Classified Information. Sections of the plant's Classified Information Manual were reviewed in the event that some of the trainees, upon completion of training, would be assigned to areas where classified documents would be handled. The areas discussed were proper safeguarding of documents; mailing documents within and outside the plant; proper mail envelopes for internal and external mail; disposal of classified shorthand notes, drafts, carbon, and typewriter ribbons; handling of special documents and business-confidential material. It was pointed out that certain information, while unclassified, must be handled with discretion. Particular emphasis was placed on proper storage and disposal of carbon typewriter ribbons. For example, if classified information was typed during the day, destroy or store the carbon typewriter ribbon at the end of the day. The carbon ribbon is a one-impression ribbon and, held up to the light, can be read. The trainees were cautioned that, although they have accounted for all their drafts and shorthand notes and deposited the shredded

material in the proper receptacle, they have left a complete, unattended "document" in the typewriter on the carbon ribbon. Other information--unclassified but business confidential or personal--should also be handled with discretion.

Filing. Programmed texts were used in developing filing skills. The text covered indexing, alphabetizing, arrangement of address cards, and class drills in indexing practice cards (20) which were a part of the text. Each card contained from ten to twenty names and the trainees were instructed to index and alphabetize the names under a given number.

Human Relations. The topics discussed included relationships with fellow workers; problems involving conflicts with peers; conflicts between boss and secretary; getting the job done; multiple-choice problems in human relations and discussions concerning the solutions; and role-playing problems. Each trainee discussed ways of handling the problems and the approaches to the problems.

General Discussions. Sometimes the discussions led to topics such as budgeting, purchases, and installment buying. Business law was discussed briefly in the areas of knowing rights and obligations in personal and business transactions.

GRADUATION AND PLACEMENT

A luncheon was held May 24, 1968, at which time the Achievement Awards, shown in figure 3, were presented to the trainees. Although only eight of the trainees passed UCC-ND's minimum typing speed requirements and only six met the shorthand minimum requirements, all ten trainees were employed. The employment situation resulted from the fact that at the conclusion of the training program, openings were available in jobs not requiring stenographic skills and for which the trainees qualified.

Six of the trainees were placed at ORGDP, three at the Y-12 Plant, and one at the Oak Ridge National Laboratory. The jobs filled at the ORGDP were in the Computing Technology Center (two), the Mail Department (one), and the Industrial Relations Assignment Pool (three). Upon completion of duties in the Assignment Pool, the trainees were transferred to clerical positions in the Finance and Materials, Shift Operations and Security, and Operations Divisions.

Achievement Award

K-25

This is to certify that

has completed the Union Carbide Corporation, Nuclear Division
Clerical Training School

May 24, 1968

DIVISION SUPERINTENDENT

PLANT SUPERINTENDENT

Figure 3

APPENDIX A

SIMULATED TRAINING (MEASUREMENTS)

Prepared by
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INTRODUCTION

Some very important aspects of a secretarial job fall outside the areas of typing and shorthand. Needless to say then, in considering the question of secretarial training, these areas must be considered. This section of the report deals with secretarial development from the standpoint of the skills any good secretary needs but which may exist independently of typing and shorthand ability.

The first step in the development of this aspect of the program was to attempt to specify exactly which behavioral dimensions or skill areas were of greatest importance. After a good deal of speculation on this question, a straightforward approach was considered to be the most feasible. Some twenty secretaries and a similar number of individuals having secretaries were asked: "What are the skills a good secretary needs?" Typing and shorthand were included on every respondent's list; but eleven additional qualities which were mentioned twenty-five times or more were included in the final list:

1. Energy - ability to sustain an acceptable level of activity in order to get a job done.
2. Perception - ability to discriminate the essential aspects of a given situation.
3. Attitude toward others - display an acceptable attitude toward other workers, the boss, and the public. Be firm but not overbearing.
4. Decision-making ability - ability to make appropriate decisions in light of existing limitations and information.
5. Organizing and planning - ability to organize and plan work so as to accomplish a maximum amount within a given period of time.
6. Written communication skills - ability to communicate effectively in writing.
7. Oral communication skills - ability to speak effectively.
8. Forcefulness - ability to push one's point of view when necessary.

9. Inner work standards - desire to do the best job possible under the existing conditions.
10. Technical ability - knowledge of office forms and procedures.
11. Personal attire - appropriate dress for office work.

SELECTION OF INSTRUMENTS

After the list of important skills had been developed, the problem of selecting the appropriate measuring instruments became of paramount importance. The question of how the listed skills were to be measured in these participants became essential to the success of the program. Furthermore, it was felt that if at all possible, these instruments could best serve two very different purposes, the first being to measure, and the second being as an aid in the development of the qualities or as part of the training program itself. The number of instruments lending themselves to this dual role was somewhat limited, and it was decided that perhaps the simulation of the essential aspects of the secretarial job in a controlled setting would provide the most appropriate means of dealing with the problems inherent in using selection instruments as developmental tools.

In terms of available time, the afternoons were set aside for the administration and general discussions of these measuring tools. It might be added that a good deal of flexibility was built into the program to allow opportunities to shape the overall structure to the needs of the girls as much as possible. Adhering to this, a fairly stable program was developed; and the following schedule of exercises was followed during the program.

TABLE 2

SCHEDULE FOR SIMULATION EXERCISES

March 5 - May 17, 1968

Tuesday, March 5	- In-basket exercise
Wednesday, March 6	- Leaderless group discussions (2)
Thursday, March 7	- Wired music
Friday, March 8	- Self-description questionnaire (repeated 4/5/68)
Monday, March 11	- Feedback discussion on in-basket (Group)
Tuesday, March 12	- Leaderless group discussion (1)
Wednesday, March 13	- Discussion of leaderless group discussions
Thursday, March 14	- Discussion of traits of an effective secretary
Friday, March 15	- Individual feedbacks based on traits
Monday, March 18	- Divisional typing (dictionary)
Tuesday, March 19	- Role-playing exercises (conflict-peers)
Wednesday, March 20	- Discussion of role-playing (human relations)
Thursday, March 21	- Telephone
Friday, March 22	- Discussion of telephone manners and behavior
Monday, March 25	- Discussion of proper materials, etc.
Tuesday, March 26	- Divisional typing (inner work standards)
Wednesday, March 27	- Dictation exercise (individuals)
Thursday, March 28	- Description of ideal job (written exercise)
Friday, March 29	- Individual feedback
Monday, April 1	- Sociometric questionnaire (class rank)
Tuesday, April 2	- Role-playing (conflict-boss)
Wednesday, April 3	- Case discussion (attitude of secretary)
Thursday, April 4	- Dictation exercise (individuals)
Friday, April 5	- Self-description questionnaire (3/8/68 exercise)
Monday, April 8	- Description of ideal boss (written exercise)
Tuesday, April 9	- Case discussion
Wednesday, April 10	- Group discussion (benefits and modification of training)
Thursday, April 11	- Group discussion of human relations
Friday, April 12	- Individual feedback (Plant holiday; postponed.)
Monday, April 15	- Office procedures (1 hr.); remainder, study period
Tuesday, April 16	- In-basket (2d)
Wednesday, April 17	- Filing Drills (30 min.) - remainder, study period
Thursday, April 18	- Practice drills: typing and shorthand
Friday, April 19	- Study period

TABLE 2 (Continued)

Monday, April 22	- Case #1 (boss retiring)
Tuesday, April 23	- Review; study period
Wednesday, April 24	- Math review - blackboard problems; study period
Thursday, April 25	- Shorthand/typing drills; study period
Friday, April 26	- Math problems; typing/shorthand drills; study period
Monday, April 29	- Case #2 (attitude of new girl); remainder, typing drills
Tuesday, April 30	- Shorthand transcriptions; filing drill (duplimat preparation)
Wednesday, May 1	- Shorthand/typing; study period
Thursday, May 2	- Spelling/filing skills
Friday, May 3	- Instructor absent; courses conducted by Industrial Relations personnel
Monday, May 6	- Typing speed tests (rescheduled from morning)
Tuesday, May 7	- Typing speed tests: filing job for Time-keeping Department
Wednesday, May 8	- Filing job for Timekeeping Dept. completed; typing tests
Thursday, May 9	- Speed tests; study period
Friday, May 10	- Speed tests; study period
Monday, May 13	- Final English test
Tuesday, May 14	- Typing drills; study period
Wednesday, May 15	- Repeated pre-employment Clerical Test
Thursday, May 16	- Typing/shorthand drills: study period
Friday, May 17	- Study period
Monday, May 20	- Final typing test; final shorthand test
Tuesday, May 21	- Plant interviews with ORGDP/ORNL/Y-12 representatives
Wednesday, May 22	- Consultation with Dr. Jaffee; trainees discussed program
Thursday, May 23	- Course work completed; open schedule
Friday, May 24	- Graduation: luncheon; presentation of certificates: placement of trainees at ORGDP, ORNL, and Y-12

More complete descriptions of the exercises will follow, but it suffices to say at this point that they generally represented an attempt to evaluate the present level of development of the girls and provide a vehicle for their further development. Whenever possible, action-type instruments were chosen to allow maximum participation and "doing-type" experiences. The general reaction to the "real-laboratory" exercises was a favorable one, and a more complete evaluation conducted four months after the program was completed will be included in appendix B, tables 12 and 13.

INSTRUMENTS

The primary evaluative tool was an in-basket exercise. This type of instrument has been used successfully in both managerial evaluation and development, and more complete descriptions may be found in a number of recent publications (1). Basically, the in-basket consisted of several items that might be found in a typical work situation for a secretary holding the job described. In the exercise the girl was new, had a limited time to work, needed information, and had time pressures and priorities. She was told to play the role of the fictitious individual and to perform in the job as her own. Her ability to handle a basically unstructured task provided opportunities to measure the skills considered important for a secretary and allowed the girls to learn from their mistakes. Different in-baskets were administered during the first and seventh week of the program. Following are the actual instructions for the first 48-page in-basket exercise:

In this exercise, you are to assume the role of Fran Whittaker, a secretary for Aerospace Propulsion Systems, Inc. You have been working for Roy Sims, training director in the Personnel Department for three years.

At 12:00 today (Friday), you were called in by Mr. Sims who informed you that Betty Black, executive secretary to Dr. George Fry (Vice President, Nuclear Research) was rushed to the hospital today. She will not be able to return to work soon. Mr. Sims informed you that you were chosen to fill the vacancy--temporarily, and perhaps, even permanently. You are to go to Dr. Fry's office at 2:00 p.m. today to complete some work for Dr. Fry before the weekend. The entire plant is closed from 5:00 p.m. Friday until 8:00 a.m. Monday, and no one is permitted on the premises during the weekend. You have three hours to attend to the matters of business at hand.

You report to Dr. Fry's office before 2:00 and find a stack of materials in Betty's in-basket which requires attention. Dr. Fry, however, is in conference for the rest of the afternoon and cannot be disturbed except for extremely urgent matters. He left you a note to that effect, along with a brief description of your job and a sketch of the organization structure.

There is no one else in the office except you, and you will not be able to see Dr. Fry except for a few minutes at the end of the day when his conference ends at 4:45 p.m. At 5:00 p.m., the plant closes.

If Dr. Fry has phone calls, visitors, or messages, deal with them as you think you should; write whatever notes you think should be made and indicate (on paper) what you intend to do with them.

Insofar as the in-basket is concerned, go through the items and write on each one what action you will take in regard to it. Sign whatever papers for Dr. Fry that you think you should, mark those items that should be given to him directly, write down whatever phone calls you would like to make, etc. Besides the mail which has just been delivered to your desk, Dr. Fry has left some materials for you to work on while he is in conference, and other materials that were already in Betty's in-basket when she became ill and had to leave.

Unfortunately, Betty's keys to the filing cabinet were in her purse, so you will not have access to the files until Monday.

It is now 2:00 p.m. and you have three hours to complete your work. Write down all your communications and decisions, make notes of any conversations (telephone, visitors, etc.), and type the materials that are indicated by Dr. Fry's instructions.

The group discussions were designed to measure forcefulness and communication skills, and the topics were selected so that they would lend themselves to meaningful discussions about job related things. For example, the girls were evaluated during the discussion period of the "traits-of-an-effective-secretary" exercise but the material generated by them led to a good deal of important developmental information. Included in the group discussion categories were role-playing exercises to allow the girls an opportunity to discuss conflict, black-white relations, and boss-secretary problems. These exercises were considered an integral part of the overall program and were well liked by the participants. The overall performance of the girls during the exercises was one of high-activity level, and they seemed to develop the involvement they were designed to elicit.

A number of additional instruments were used including a self-report questionnaire, a sociometric questionnaire and several written exercises. The self-report questionnaire contained 60 descriptive statements from which the girls chose 15 statements most closely describing themselves and 15 statements which were least descriptive. In the sociometric questionnaire, the girls selected other girls in the group with whom they would like to be friendly, would like as co-workers, etc. Written

exercises involved composition of letters or reports on a variety of topics. The general quality of the work was evaluated and the information was given to the girls.

RESULTS

The in-basket exercise was scored independently for all traits by two raters. Those traits which could not be measured consistently by the two raters were given to a third rater; if the results were still not satisfactory, the trait was considered unratable based on the in-basket exercise. The first in-basket was administered at the start of the program and was discussed as to proper handling of items and the important aspects of the situation to consider by all the girls. The results of the second in-basket which was administered toward the end of the program were not fed back to the girls because of lack of time. The results of each girl's performance in the two in-basket exercises, rating each trait on a one-through-four scale* are given in tables 3 and 4.

In comparing the two in-basket exercises, the most interesting finding appears to be the general increase in efficiency and quality of performance. With the exception of three girls, significant increases in performance were noted across all traits. Of the three girls that showed no change, trainee #3 performed at a relatively strong level. The in-basket skills went from an average rating in the "questionable" area to one in the "satisfactory" area. This change in rating was dramatic considering the short period of time and the relative difficulty in rated movement considering the restricted scale. The first in-basket averaged somewhat better than a rated 3 over all traits while the second ratings averaged 2.3. The rank-order correlation among the ten girls on the two in-baskets was only .35 representing differential gain on behalf of the girls from the first administration to the second.

A number of other statistical measures were taken to evaluate the relationship among some of the other instruments. An almost identical gain in performance was noted on the two written exercises with the overall rating dropping from "questionable" to "satisfactory" with an overall rank-order correlation of .73, indicating greater stability and improvement on this measure than on the in-basket.

*The numbers represent 1-best or above average; 2-satisfactory; 3-questionable; and 4-poor.

TABLE 3
FIRST IN-BASKET EXERCISE

March 5, 1968

Trainee	1	2	3	4	5	6	7	8	9	10
<u>Trait</u>										
Energy	2.5	3	2	4	4	3	1.5	4	1.5	4
Perception	4	2.5	2	3.5	4	3.5	2.5	4	2	3
Attitude/Work	2	2	1	2	1	1	2	?	2	3
Decision Ability	3	2	2.5	3	4	3	2.5	3	2	4
Organization and Planning	3	2.5	3.5	3	4	3	2	4	2.5	4
Written	2	3	2	4	4	1.5	2.5	2.5	2.5	2
Inner Work Stds.	3	3	2.5	3	3	2.5	2.5	3	3	2
TOTAL	19.5	18.0	15.5	22.5	24	17.5	15.5	20.5	15.5	22

Rating Scale - Low score = better grade:

- 1 - above average
- 2 - satisfactory
- 3 - questionable
- 4 - poor

High-to-low Scores:

Rank	Trainee	Grade
1	3	15.5
	7	15.5
	9	15.5
2	6	17.5
3	2	18.0
4	1	19.5
5	8	20.5
6	10	22.0
7	4	22.5
8	5	24.0

TABLE 4
SECOND IN-BASKET EXERCISE

April 16, 1968

Trainee	1	2	3	4	5	6	7	8	9	10
<u>Trait</u>										
Energy	2	2	3	1	4	3	1	2.5	1.5	1.5
Perception	2	2.5	2.5	1	4	3.5	1	2.5	1.5	2
Attitude/Work	-	2	1	- -	-	1	1	- -	2	- -
Decision Ability	2	2	3	1.5	4	4	1	2.5	1.5	2
Organization and Planning	2	2	2.5	1	4	3.5	1	2.5	1.5	2
Written	1	3	2.5	3	4	4	1	2	1	2
Inner Work Standards	2	3	2.5	1	3	3	1	2	1	1.5
TOTAL	11	16.5	17	8.5	23	22	7	14	10	11

Rating Scale - Low score = better grade

- 1 - above average
- 2 - satisfactory
- 3 - questionable
- 4 - poor

<u>March In-basket</u>			<u>April In-basket</u>	
<u>Trainee</u>	<u>Grade</u>	<u>Rank</u>	<u>Grade</u>	<u>Rank</u>
1	19.5	4	11.0	4
2	18.0	3	16.5	6
3	15.5	1	17.0	7
4	22.5	7	8.5	2
5	24.0	8	23.0	9
6	17.5	2	22.0	8
7	15.5	1	7.0	1
8	20.5	5	14.0	5
9	15.5	1	10.0	3
10	22.0	6	11.0	4

Nothing of significance was gleaned from the self-description questionnaires when comparing the first and second responses. A great degree of similarity was noted on many items; but the generally fatiguing aspects of this exercise plus the short time period for effecting changes in somewhat stable behavioral factors led to no significant changes. It was concluded that any further evaluation activities on this program or similar programs would exclude this exercise.

A rank-order correlation of .48 between rankings of the girls' typing and shorthand skills at the conclusion of the program and their first in-basket performance showed some degree of compatibility between the traditional secretarial skills and the more complex human relations skills measured by the in-basket.

A rank-order correlation of .97 was found in comparing the rankings of the girls themselves on typing and shorthand skills with the instructor's rankings. For better or for worse, the girls themselves were accurate in their evaluation of the other girls, at least when using the instructor as a criterion.

Two additional questions were asked based on the results of the afternoon's exercises, one being the relationship between skills and the sociometric questionnaire, and the other, the black-white evaluations of each other. It might be stated at this point that the issue of black-white relationships in a business organization never became an important issue to the girls, and they seemed to accept one another with no problems noted. The rank-order correlation between typing and shorthand skills and how well a particular girl was liked was .20, indicating a low, non-significant relationship. A chi square test evaluating how many Negroes placed other Negroes in the top half of the group based on skills versus how the white girls did the same indicated a significant coefficient which related to how skilled the girls actually were based on the instructor's ratings. A similar test run on sociometric choice indicated Negroes preferred Negroes and whites preferred whites significantly more often in response to questions such as "the girl with whom I would most like to be friendly with is..." These data provided some interesting results and might be interpreted as being indicative of a racial bias affecting one's choice of friends but not affecting the accuracy of one's evaluation of skills. This lack of bias supports the suggestion of harmony mentioned earlier which existed among all the girls.

No relationship was found between the performance of the girls in the group discussion exercises and any other measures, but the inclusion of these types of activities may well be justified as a function of their worth as developmental tools. The girls, the instructor, and the researcher all expressed this without the benefit of hard data; perhaps a more thorough evaluation of these instruments might be undertaken.

DISCUSSION OF RESULTS

At best the results are tenuous. The difficulties involved in utilizing developmental and selection instruments together are vast, and the statistical evaluation of these kinds of data leaves much to be desired. The instruments themselves were designed specifically for this program, and a blend of training and measuring was demanded. The time period was short and the training, although intense, was subject to a good deal of lack of experimental control that the purist would find very discomfiting in a research study. Many of the results are equivocal and the conclusions to be drawn must also remain so at this time. The thrust of the program was developmental; and the measurement, although crucial, was not the reason for the program's inception.

The attempt to simulate many of the essential aspects of a secretarial job was done to provide a climate of involvement in the learning experience as well as a means of measurement. The participation by the girls in the exercises supported the first point; the results of the study do not as strongly justify the use of these types of exercises. Perhaps the strongest criterion measures must come from the relationship between the performance of the girls during the program and their evaluation on their job four months after the completion of the training. Appendix B provides an evaluation of the effectiveness of the program.

SUMMARY

1. Overall, there were very marked improvements in the in-basket performance of most of the girls. The group moved from the "questionable" to "satisfactory" range.
2. Rank-order correlation on the two in-baskets was significant but low (.36).
3. The in-baskets correlated with typing and shorthand skills significantly (.36).
4. The appraisal of the girls' skills correlated almost perfectly when rated by the instructor and by the girls themselves (.97).
5. Race was an issue in choice of friends; white chose white and black chose black beyond chance level.
6. Race was not an issue in evaluating secretarial competency; no tendency for the girls to choose their own races in evaluating skills was indicated.

APPENDIX B

TEST SCORES AND PROGRAM EVALUATIONS

Test Scores

The pre-employment and clerical training test scores are given in the tables which follow. These tests include clerical, numerical, and verbal comprehension; typing, shorthand, math, and English. Graphs which depict the improvement changes resulting from the training are also shown.

Supervisory Evaluations

Questionnaires were sent to supervisors of the trainees for a four-month evaluation of job performance following completion of the clerical training. The evaluation provided a comparison of classroom performance with on-the-job performance, and a reappraisal of the selection criteria for future clerical candidates. The comments received from the supervisors are summarized in table 11.

Trainees' Comments

After four months on the job, questionnaires were sent to the trainees for their evaluation of the clerical program. Information desired included an appraisal of the pilot program, suggestions for future classes, length of class periods, and an evaluation of the simulated training exercises. Results of the trainees' comments are summarized in tables 12 and 13.

Absentee Record

The absence record for the 12-week training program is shown in table 15.

TABLE 5
GENERAL CLERICAL TEST SCORES⁺

Trainee	CLERICAL		NUMERICAL		VERBAL		Total	Rating	Change	
	Grade	Rating	Grade	Rating	Grade	Rating				
1	* 73	A	36	B	75	B	184	A		
	** 72	A	27	C	90	A	189	A	+ 5	2.7%
2	59	B	34	B	64	C	157	B		
	68	A	35	B	79	B	182	A	+25	15.9%
3	48	C	26	C	73	B	147	C		
	56	B	28	C	77	B	161	B	+14	9.5%
4	37	C	17	E	42	E	96	E		
	29	E	11	E	61	C	101	E	+ 5	5.2%
5	53	B	13	E	55	C	121	C		
	63	A	18	E	63	C	144	C	+23	19.0%
6	62	A	30	C	57	C	149	C		
	73	A	30	C	63	C	166	B	+17	11.4%
7	58	B	38	B	57	C	153	C		
	63	A	39	B	80	B	182	A	+29	19.0%
8	52	B	30	C	62	C	144	C		
	62	A	25	C	67	C	154	B	+10	6.9%
9	48	C	28	C	59	C	135	C		
	57	B	28	C	71	B	156	B	+21	15.6%
10	68	A	40	A	70	B	178	B		
	74	A	33	B	71	B	178	B	0	0

TOTALS:

3/ 4/68	558	292	614	1464
5/15/68	<u>617</u>	<u>274</u>	<u>722</u>	<u>1613</u>
Difference:	+59	-18	+108	+149
Change:	10.6%	6.2%	17.6%	10.2%
	Improvement	Decrease	Improvement	Improvement

SCORES (Total Time: 46 minutes -- Total Possible Score: 243)				
CLERICAL	NUMERICAL	VERBAL	TOTAL	RATING
60-plus	40-plus	85-plus	179-plus	A
51-59	34-39	70-84	154-178	B
35-50	24-33	54-69	120-153	C
32-34	22-23	48-53	113-119	D
31 or less	21 or less	47 or less	112 or less	E

*March 4, 1968

**May 15, 1968

TABLE 6

CLASS RANK - GENERAL CLERICAL TEST

March 4, 1968 - May 15, 1968

Class Rank	CLERICAL				NUMERICAL				VERBAL			
	Trainee 3/4		Trainee 5/15		Trainee 3/4		Trainee 5/15		Trainee 3/4		Trainee 5/15	
1	1	73	1	72	10	40	7	39	1	75	1	90
2	10	68	10	74	7	38	2	35	3	73	7	80
3	6	62	6	73	1	36	10	33	10	70	2	79
4	2	59	2	68	2	34	6	30	2	64	3	77
5	7	58	5	63	6	30	3	28	8	62	9	71
6	5	53	7	63	8	30	9	28	9	59	10	71
7	8	52	8	62	9	28	1	27	6	57	8	67
8	3	48	9	57	3	26	8	25	7	57	5	63
9	9	48	3	56	4	17	5	18	5	55	6	63
10	4	37	4	29	5	13	4	11	4	42	4	61

Class Rank	TOTAL SCORE				RATING			
	Trainee 3/4/68		Trainee 5/15/68		Trainee 3/4/68		5/15/68	
1	1	184	1	189	1	A	A	
2	10	178	2	182	2	B	A	
3	2	157	7	182	7	C	A	
4	7	153	10	178	10	B	B	
5	6	149	6	166	6	C	B	
6	3	147	3	161	3	C	B	
7	8	144	9	156	9	C	B	
8	9	135	8	154	8	C	B	
9	5	121	5	144	5	C	C	
10	4	96	4	101	4	E	E	

GENERAL CLERICAL TEST

(Clerical, Numerical, Verbal)

March 4, 1968 - May 14, 1968

TEST SCORES

FIGURE 4

TABLE 7

SUMMARY TYPING SCORES*

<u>Trainee</u>	<u>Start</u> <u>3/4/68</u>	<u>Net Scores</u>			<u>Final</u> <u>5/20/68</u>	<u>Net</u> <u>Increase</u>
		<u>4/19/68</u>	<u>4/26/68</u>	<u>5/3/68</u>		
1	38/31/-24	48	46	57	69/2/65	+89
2	38/8/17	43	46	54	59/2/55	+38
3	51/7/37	36	48	60	75/3/69	+32
4	36/5/26	44	50	53	57/1/55	+29
5	38/15/8	33	43	48	51/1/49	+41
6	61/7/47	70	68	77	81/3/75	+28
7	51/7/37	46	56	64	69/7/55	+18
8	32/15/2	19	40	38	50/6/38	+36
9	43/9/25	50	57	63	66/2/62	+37
10	43/10/23	42	53	59	62/2/58	+35

SUMMARY

<u>TOTAL</u>		
<u>Gross</u>	<u>Errors</u>	<u>Net</u>

March 4, 1968	426	114	198
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May 20, 1968	639	29	581
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Difference	213	85	383
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Improvement in Gross WPM	50%		
Reduction in Errors		74.6%	
Improvement in Net WPM			193.4%

Passing: 55 WPM

*Gross - (errors x 2) = Net WPM

IMPROVEMENT IN TYPING SKILLS

FIGURE 5

TABLE 8
SHORTHAND TEST SCORES*

<u>Transcription Accuracy</u>												
<u>Class Rank</u>	<u>Trainee</u>	<u>% Acc. @ 55</u>	<u>Qual. Pts.</u>	<u>% Acc. @ 55</u>	<u>Qual. Pts.</u>	<u>% Acc. @ 66</u>	<u>Qual. Pts.</u>	<u>% Acc. @ 75</u>	<u>Qual. Pts.</u>	<u>% Acc. @ 93</u>	<u>Qual. Pts.</u>	<u>Total</u>
2	1	100	20	100	20	100	20	90	18	50	10	93/88
5	2	100	20	90	18	95	19	85	17	-	-	75/74
4	3	100	20	95	19	100	20	75	15	-	-	75/74
7	4	95	19	95	19	85	17	-	-	-	-	66/55
8	5	95	19	95	19	75	15	-	-	-	-	66/53
6	6	100	20	100	20	80	16	80	16	-	-	75/72
3	7	95	19	95	19	95	19	95	19	55	11	93/87
10	8	90	18	90	18	-	-	-	-	-	-	55/36
9	9	100	20	90	18	-	-	-	-	-	-	55/38
1	10	100	20	95	19	100	20	95	19	75	15	93/93

*Test included five letters (tape dictation) at speeds of 55, 55, 66, 75, and 93 wpm each graded 20 quality points. "Mailable" letters were prepared; and typing, English, and shorthand errors were noted.

UCC-ND Passing Grade: 75/66 (75 wpm + cumulative total of 66 quality points).

TABLE 9
MATHEMATICS TESTS

<u>Trainee</u>	<u>Class Rank</u>	<u>Test #1 4/4/68</u>	<u>Test #2 4/10/68</u>	<u>Test #3 4/10/68</u>	<u>Average</u>
1	6	76	65	88	76.3
2	3	88	75	96	86.3
3	7	60	40	72	57.3
4	9	44	15	44	34.3
5	8	28	35	56	39.6
6	10	28	30	32	30.0
7	1	96	90	100	95.3
8	5	72	75	100	82.3
9	2	80	100	96	92.0
10	4	80	80	88	82.7

TABLE 10
ENGLISH EXAMINATIONS

Class Rank	Trainee	Progress			Progress		Change - Grades 3/4 - 5/13
		Prelim. 3/4/68	Test #1 3/28/68	Prelim. Retest 4/1/68	Test #2 5/2/68	Final 5/13/68	
3	1	61	63	77	78	72	+11
5	2	50	65	82	68	69	+19
4	3	62	71	75	58	72	+10
10	4	30	48	58	28	63	+33
9	5	44	53	72	39	72	+28
7	6	59	58	73	54	65	+ 6
2	7	55	76	85	68	69	+14
8	8	53	67	69	45	70	+17
6	9	46	61	78	56	78	+32
1	10	56	67	84	68	81	+25
Average:		51.6	62.9	75.3	56.2	71.1	
Comparison 3/4 - 5/13		19.5					
Improvement:		37.8%					

TABLE 11

SUPERVISORY EVALUATION OF TRAINEES AFTER FOUR MONTHS ON THE JOB

Scale: 1 2 3 4 5
 Poor Outstanding

Trainee	1	2	3	4	5	6	7	8	9	10
Accuracy	4	3.5	2	2	2	3	4	1	3	3
Alertness	4	4	1	2	2	3.5	4	2	4	3
Attendance	5	4.5	3	3	4	3.5	4	4	4	4
Attitude Toward Work	4	4	1	2	3	3.5	4	3	3	3
Conversational Ability	3	3	3	2	2	3.5	4	3	3	3
Courtesy	3	4	4	3	3	4	4	3	4	3
Créativity	*	4	1	1	1	3	3	2	3	2
Dependability	4	4	1	2	2	2.5	4	3	4	4
Drive	3	4	2	3	3	3	4	3	3	3
Friendliness	3	3.5	3	2	2	3.5	4	3	3	2
Housekeeping	3	4.5	2	1	1	4	4	2	3	2
Job Knowledge	3	3	2	2	2	3	4	2	3	3
Organizing and Planning Ability	3	4	1	2	2	3	4	2	3	3
Personal Appearance	3	4.5	2	3	3	4	4	3	3	1
Personality	3	4	3	3	3	3.5	4	3	4	3
Physical Fitness	3	4	3	3	3	4.5	3	3	5	3
Stability	3	4	3	3	3	3	3	3	3	3

Overall Evaluation

Outstanding										
Definitely above average		X				X	X			
Doing an average job	X								X	X
Substandard but improving			X	X	X			X		
Definitely unsatisfactory										

*Unknown

TABLE 12.
 TRAINEES' EVALUATION OF COURSES AND STUDY PERIODS

<u>Course</u>	<u>Liked</u>		<u>No</u> <u>Comment</u>	<u>Longer</u> <u>Period</u>	<u>Shorter</u> <u>Period</u>	<u>No</u> <u>Comment</u>
	<u>Best</u>	<u>Least</u>				
Typing	8	-	2	9	0	1
*Shorthand	8	1	1	10	0	0
English	7	-	3	4	4	2
Office Procedures	7	-	3	7	2	1
Simulated Training	5	2	3	5	2	3
Mathematics	3	4	3	2	5	3
Vocabulary Studies	3	2	5	3	4	3
Filing Skills	3	6	1	2	6	2

*Six trainees passed UCC-ND's shorthand requirements. Comments on frequency of use of skill on the job ranged from never (two) to once or twice (two) and once weekly (two).

TABLE 13
 TRAINEES' EVALUATION OF SIMULATED EXERCISES

Exercise	Liked Best	Liked Least
Leaderless Discussion	8	2
Human Relations	8	2
In-basket Exercises	7	3
Traits, Eff. Secretary	7	3
Divisional Typing	7	3
Dictation from visitor	7	3
Role-playing Exercise	5	5
Roles, Boss/Secretary	5	5
Traits, Boss	4	6
Wired Music	1	9
Sociometric (class rank)	1	9
Self-description Exercise	-	10

TABLE 14

RANK EVALUATION OF TRAINEES

<u>Trainee</u>	<u>Instructor's Ranking* 4/16/68</u>	<u>Dr. Jaffee's Ranking 4/16/68**</u>	<u>Final Clerical Test 5/15/68</u>	<u>Instructor's Evaluation 5/21/68⁺</u>
1	3	4	1	3
2	6	8	2	4
3	4	5	6	6
4	7	2	10	10
5	10	10	9	9
6	2	6	5	2
7	1	1	3	1
8	9	9	8	8
9	8	7	7	7
10	5	3	4	5

*Sixth-week evaluation

**Based on total scores in in-basket, skills, sociometric exercises (simulated training).

⁺Based on skills and observations during simulation training: energy; ability to deal with outsiders; deal with peers; organizing and planning ability; decision-making ability; proper materials; resistance to stress; personal attire; attitude; and written/oral communications.

TABLE 15

ABSENTEE REPORT

<u>Trainee</u>	<u>Reason</u>	<u>Length of Time (Hours)</u>	<u>Total</u>
1	*Late - Car Trouble	0.1	0.1
2			0.0
3	*Illness	8.0	8.1
	*Late - Car Trouble	0.1	
4	Personal - Child ill	8.0	40.1
	Illness	8.0	
	Illness	8.0	
	Illness	8.0	
	Illness	8.0	
	*Late - Car Trouble	0.1	
5	Illness	8.0	76.0
	Illness	8.0	
	Illness	8.0	
	Illness	8.0	
	Illness	8.0	
	Illness	8.0	
	Illness	8.0	
	Illness	8.0	
	Illness	8.0	
	Illness	4.0	
6	Illness	8.0	12.0
	Illness	4.0	
7	Personal - Child ill	4.7	16.7
	Personal - Death in family	8.0	
	Personal - Funeral	4.0	
8	Illness	8.0	19.2
	Late	0.1	
	Personal - Funeral	3.1	
	Personal	8.0	
9	Illness	8.0	8.0
10	Illness	8.0	19.0
	Personal - Transportation	8.0	
	Personal - Illness in family	3.0	
*Same car pool			
Caucasian Absences = 36.7 = 7.64%			
Minority Absences = 162.5 = 33.85%			

APPENDIX C

DISCUSSION AND RECOMMENDATIONS

Some insight was gained from the pilot training program concerning the advantages to be realized from vestibule training. The administrative and technical approaches were most effective in that only minor revisions in the initial program were required. In particular areas, the following observations, along with recommendations concerning future programs, are outlined.

Overall Evaluation - Courses

The arrangement of courses (morning) and simulated training exercises (afternoon) was satisfactory. No change is anticipated in the courses for future classes; however, some class periods will be expanded (mathematics and office procedures).

An advantage of the in-class simulated exercises was the controlled environment in which the trainees worked as contrasted to on-the-job assignments involving varying degrees of supervision and duties. The simulated training removed the inequities present in on-the-job assignments.

Consultation. During the program, the trainees had opportunities to consult with Dr. Jaffee concerning the simulated training program and areas of study. There was good communication between Dr. Jaffee and the trainees; the discussions were relaxed, frank, and conducted in an informal manner.

Attitudes. There was never the first sign of racial problems during the entire training program. The trainees were very serious about their work and the goals of the program. During the morning and afternoon breaks, the girls sat together; at lunch, they often ate together or sat in groups of two's and three's. During the study periods, they helped each other with the daily assignments. The congeniality of the pilot training group was exceptional.

Recommendations

The outline of the pilot program stated that "the overall conduct of the classroom would be that of a simulated office where the training and evaluation would take the form of actual work the trainee would be required to do in a real-work environment." The "overall conduct" of future programs should refer strictly to the afternoon sessions when simulated training is conducted. Interruptions should be kept to a minimum during the mornings when courses are being taught. The classroom and "simulated office" training sessions must remain separated if the trainees are to benefit from the program.

There were numerous interruptions during the pilot program; some were unavoidable while others concerned matters which could have been handled at later times.

In future classes, visits to the classroom should be arranged with the instructor to avoid interruptions of the class work at times when tests are under way.

Selection Process. Some relaxation in the selection criteria was allowed during the pilot program. Firm guidelines should be followed when screening applications for the next session. Screening for the pilot program was done at the time the interviews were conducted, after which reference and security checks were conducted.

For the next program, screening should be done in three stages: economic, interview and testing, and interview and medical (ORGDP). The Central Employment Office or the Security Department (ORGDP) investigations should ensure that potential applicants meet the economic criteria before an interview is scheduled.

Performance Evaluation. Trainees, in future programs, should be evaluated at the sixth week of training. As set forth in the indenture agreement, signed by the applicant upon entering the program, UCC-ND reserves the right to discontinue the training at any time during the 12-week period. Therefore, the trainees who, by performance and testing records, fail to show significant improvement should be terminated at the end of the sixth week.

APPENDIX D

TEXTBOOKS AND CLASS SCHEDULE

Typing

Lessenberry, D. D., Crawford, T. J., and Erickson, L. W., 20th Century Typewriting, 9th ed. South-Western Publishing Company, Cincinnati, 1967.

Grammar

Reigner, C. G., College Vocabulary Studies, The H. M. Rowe Company, Baltimore, 1965.

_____, College English for Business, 2nd ed. The H. M. Rowe Company, Baltimore, 1967.

Mathematics

Hancock, J. D., and Holder, F., ASMD Addition, Addison-Wesley Publishing Company, Reading, 1963.

_____, and Lucas, J. S., ASMD Subtraction, Addison-Wesley Publishing Company, Reading, 1963.

_____, and O'Brien, J. J., Jr., ASMD Multiplication, Addison-Wesley Publishing Company, Reading, 1963.

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Stein, E. I., Refresher Mathematics, Allyn and Bacon, Inc., Boston, 1967.

Shorthand

Gregg, J. R., Leslie, L. A., and Zoubak, C. E., Gregg Shorthand, Diamond Jubilee Series, McGraw-Hill Book Company, New York, 1963.

Leslie, L. A., and Zoubak, C. E., Workbook for Gregg Shorthand, McGraw-Hill Book Company, New York, 1963.

Office Procedures

Beamer, E. K., Hanna, J. M., and Popham, E. L., Effective Secretarial Practices, 4th ed. South-Western Publishing Company, Cincinnati, 1962, (excerpts).

Handbook

Hutchinson, L. I., Standard Handbook for Secretaries, 7th ed.,
McGraw-Hill Book Company, New York, 1967.

Dictionary

Webster's New Collegiate Dictionary, 7th ed., G. & C. Merriam
Company, Publishers, Springfield, 1967.

CLASS SCHEDULE

7:45 - 8:00 - Typing warm-up period
8:00 - 9:00 - Typing
9:00 - 10:00 - Shorthand
10:00 - 10:15 - Break
10:15 - 11:15 - English (Grammar and Vocabulary Studies)
11:15 - 12:00 - Mathematics
12:00 - 12:15 - Study Period
12:15 - 12:45 - Lunch
12:45 - 1:00 - Discussions and Instructions
1:00 - 1:30 - Office Procedures
1:30 - 4:00 - Simulated training - in-basket exercises
prepared by Dr. Jaffee; flexible schedule
includes: discussions, human relations,
Company orientation, office machines,
films, divisional typing assignments,
(10-minute afternoon break)
4:00 - 4:15 - Study Period

APPENDIX E

BIBLIOGRAPHY

1. Jaffee, C. L., Problems in Supervision, Addison-Wesley, Reading, 1968; and Lopez, F. M., "Evaluating Executive Decision Making," A. M. A., New York (1966).