

LEVELS AT WHICH SKILLS OR KNOWLEDGE IN COOPERATIVE OFFICE EDUCATION  
IN VIRGINIA ARE TAUGHT AS PERCEIVED BY TEACHERS AND THE  
LEVEL USED AS PERCEIVED BY GRADUATES

by

Jimmie L. Adkins

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APPROVED:

-----  
Martin McMillion, Chairman

-----  
Johnnie H. Miles

-----  
James P. Clouse

-----  
James L. Hoerner

-----  
Charles M. Good, Jr.

Blacksburg, Virginia

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## DEDICATION

This research is dedicated to the members of the writer's family, his wife, , and our children, and for their support and sacrifices during this period of graduate study.

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## Chapter 1

### BACKGROUND AND NEED

Business subjects have been enthusiastically taught in the Nation's secondary schools for many years. Around the turn of the century, typing and bookkeeping were popular subjects. Shorthand was added to the curriculum prior to World War I. Business subjects were popular with students and the business community. Businessmen gave their support because of the great demand for office workers. The public secondary schools quickly became the number one source of office related workers.

This demand for office workers is expected to continue for some years to come. It has been estimated that there will be over 350,000 new clerical and related jobs needed to be filled for the next ten years. There were a total of 14 million office jobs in 1972. A total of 20 million is expected by 1985. Along with the continued demand will be fundamental changes in the way people perform office jobs. United States Department of Labor, Bureau of Labor Statistics Bulletin #1809 (1974:20) stated:

Clerical workers, the largest major occupational group in 1972, will be greatly affected by developments in computers, office equipment; and communication devices - all of which are expected to retard the growth of employment for some clerical occupations and increase it for others. For example, the use of computers and bookkeeping machines to handle routine repetitive work is expected to reduce the utilization of clerks in filing, payroll computations, inventory, control, and customer billing. On the other hand, the number of clerical workers needed to prepare material for the computer is projected to increase greatly.

Business Education has always been vocational in nature. French (1972:1) notes that business teachers, as a group, have not considered themselves as vocational teachers. With the passage of the Vocational Act of 1963, Business Education was recognized as a vocational service and received substantial federal aid for initiating and maintaining vocational office education programs at the secondary level.

The concept of cooperative education has been utilized for many years. It is a method of education that integrates learning experience in school with work experience made available in some cooperating agency outside the school. This is all under the regular supervision of a school representative called a teacher-coordinator. It was not until the passage of the Vocational Education Amendments of 1968 that this concept became widely applicable to business education. The Act defined cooperative vocational education (Thomas, 1973) as:

. . . a program of vocational education for persons, who through a cooperative arrangement between the school and employer, receive instruction, including required academic courses and related vocational instruction by alternation of study in school with a job in any occupational field, but these two experiences must be planned and supervised by the school and employers so that each contributes to the student's education and to his employability.

Cooperative Office Education programs are those in which instruction and training on the job are combined to develop vocational competency in office skills. The classroom instruction includes such subjects as bookkeeping, shorthand, transcription and business machine operation with these school subjects given previous to the period of employment training.

Cooperative Office Education programs in the secondary schools of Virginia are trying to meet the demands of the present by helping their students acquire the necessary entrance requirements for a successful transition from high school to the world of work. The Virginia Business Education Service (1974:i) defines Cooperative Office Education in the following way:

Cooperative Office Education is the capstone of a high school student's training program in office occupations. The program coordinates classroom study and on-the-job training; each complements the other. Cooperative Office Education students' schedules are arranged so that they attend classes part of the school day and are employed in offices during the other part of the school day. The office instruction is an extension of the classroom instruction.

The Cooperative Office Education Student's Earnings Report of 1974-1975 indicates there are one hundred thirty-seven high schools that offered programs. There are 2,863 students involved and they earned \$4,491,025. Data from the State Department of Business Education indicated there were one hundred fifty teacher-coordinators involved in the program for the 1974-1975 school year.

The heart of the cooperative program is the related instruction provided by the teacher-coordinator. National Business Education Yearbook (1972:215) states: "the purpose of the instruction for COE is to assist the student in developing desirable working skills, knowledges, and attitudes for success on a real job or to give practice for actual practice." The instruction must include a variety of instructional materials to provide for the individual needs of students.

In order for Cooperative Office Education programs to be relevant to the needs of the student and community, the degree of



proficiency to which the student is taught skills and knowledge should be congruent with the proficiency levels needed to become vocationally competent in office related occupations.

Cooperative Office Education programs should be assessed periodically to determine if they are meeting the needs of the student. By so doing, we can address the task mentioned in the National Business Yearbook (1970:296):

The Vocational Education Amendments of 1968 P.L. 90-576 is directed to the task of making vocational education of high quality available to persons of all ages in all communities. Its goal is to provide all employable persons with job skills, knowledges, and attitudes in occupations that are readily available to them.

Evaluation of vocational programs is necessary in order to improve their effectiveness and justify their continuance. Evaluation is of necessity based upon data received concerning that particular program. The 1968 Vocational Amendments states according to the Report To The Congress (1974:69): Evaluation of the results of vocational programs of instruction will be made periodically by the states and continuously on the local level. The results will be used for necessary change and improvement.

If data are not available concerning Cooperative Office Education, it would be difficult to assume that the programs are or are not working effectively for the student and the community. Butler and York (1971:9) believe it is essential for local schools to engage in evaluative research activities to operate and improve cooperative vocational programs.

Congress has been concerned for many years about the lack of data. The Report To The Congress (1974:33) indicates that Congress has repeatedly observed that information about vocational education is inadequate for the purpose of ascertaining whether current programs are working effectively.

One of the major components to evaluate Cooperative Education programs, according to Butler and York (1971:10), is follow-up studies on the effectiveness of the programs as perceived by student graduates. A school which is sincerely concerned with providing education which is relevant to the needs of students will conduct follow-up studies of graduates. It is important to know what problems they have had in making a satisfactory occupational adjustment.

Cooperative Office Education programs must be relevant to the existing needs of the individual student and the community. One of the factors which affects relevancy of existing vocational programs is the follow-up on graduates of those programs.

Follow-up studies have several purposes according to the Teaching Guide For Cooperative Office Education (1970:31);

1. Determine the types of office occupations in which former students are employed.
2. Determine the nature of the duties and responsibilities involved in these occupations.
3. Gather information concerning the strengths and weaknesses of the Cooperative Office Education program based on opinions of program graduates.

4. Provide information for the evaluation and improvement of the Cooperative Office Education program.

The existing vocational programs at all levels, according to the Report To The Congress (1974:82), lacked adequate student follow-up. Follow-up on graduates has been marginal or nonexistent. This lack of information makes it difficult to determine the extent to which Cooperative Office Education programs are meeting individual needs. This evidence of lack of follow-up data raises certain questions. Some of these questions are:

1. Can the teacher-coordinator be aware of strengths and weaknesses of the program without the opinion of past graduates?

2. Can the teacher-coordinator determine the duties and responsibilities involved in these occupations?

3. Is it possible that teacher-coordinators are overtraining or undertraining in certain skills and knowledge?

4. Are there skills and knowledge which should be added to the program?

States collect some information on vocational graduates, mainly to comply with Federal reporting requirements. The categories for reporting are: (1) employed full-time in the field of training, (2) employed in an unrelated field, and (3) unemployed. According to Miller and Budke (1972:23) the information is gathered three months after graduation to comply with the reporting procedure. Informal follow-up was basis for Federal reports. The Report To The Congress (1974:82) indicates that most teachers use an informal follow-up with

a limited number of former students to determine their status. The extent of the follow-up depends upon the individual teacher's time, concern, and interest.

Related studies were conducted in Kentucky, Arkansas, Illinois, and Mississippi. Clemons (1972) studied the adequacy of Cooperative Office Education programs on the secondary level in preparing students to meet business requirements. He found that teachers were sometimes unaware of the types of activities students are required to perform on the job.

Burkett (1972) found that teachers believed the competencies included in the program were more applicable to the needs of graduates than did businessmen or graduates. It was also found that teachers overemphasized shorthand.

Roberts (1976), like Burkett, found that teachers stressed shorthand too much. Teachers and businessmen were not in agreement in judging the ability of graduates in the following: basic accounting principles, basic economics, procedure for travel arrangements, personal appearance and grooming. Cheshire (1972) concurred that teacher-coordinators needed to emphasize dress and grooming, as well as communication skills.

Boyd (1969) in studying the Cooperative Office Education programs in Illinois found that the students were not adequately prepared for full-time office employment.

The Cooperative Office Education programs on the secondary level in Mississippi were surveyed by Lee (1974). Lee found that

teacher-coordinators taught 13 of the 43 skills and knowledge areas that were listed on the instrument at significantly different levels of proficiency than the levels of training needed by graduates in their work. Studies of this nature have not been conducted in the Cooperative Office Education programs in the state of Virginia.

#### STATEMENT OF THE PROBLEM

The problem is to determine the perceived skills and knowledge levels that are being taught in the Cooperative Office Education programs and to determine if these skills and knowledge competency levels are accurately meeting the needs as perceived by the graduates who are employed in office occupations.

#### QUESTIONS OF THE STUDY

The primary question to be answered by the study was: Are there significant differences in levels of proficiency of skills and knowledge taught as perceived by teacher-coordinators in the secondary Cooperative Office Education programs in the state of Virginia and the training levels needed as perceived by graduates of these programs who are employed in office occupations?

Secondary questions of the study were:

1. What items of skill and knowledge are taught in the secondary Cooperative Office Education programs as perceived by teacher-coordinators?
2. What levels of proficiency are perceived as being taught by teacher-coordinators in the secondary Cooperative Office Education

programs in Virginia?

3. What items of skill and knowledge are used as perceived by graduates of the secondary Cooperative Office Education programs who are employed in office occupations?

4. What levels of training are perceived as being needed by graduates of secondary Cooperative Office Education programs who are employed in office occupations?

5. Are there skills and knowledge which need to be added to the secondary Cooperative Office Education programs as perceived by teacher-coordinators and graduates who are employed in office occupations?

#### DEFINITION OF TERMS

The following definitions are offered to provide clarity to meaning for important terms used throughout the study:

Cooperative Office Education Program: a program of business and office education for students which is arranged through a cooperative agreement between the school and employers. The student receives instruction including academic courses and appropriate related instruction by alternating study in school with a job in the area of office occupations. These activities must be planned and supervised by the school and employer so as to contribute to the student's education and employability.

Office Occupations: activities performed by persons which are related to the function of the office. These activities include

communication and reporting of information, recording and retrieval of data, and supervision and coordination of office duties.

Teacher-coordinator: a secondary school staff member who teaches both the related and technical subject matter involved in the Cooperative Office Education programs and coordinates classroom instruction with on-the-job training.

Coordination: the performance of those activities that creates a harmonious relationship between the school and employers resulting in an effective learning experience for the student-learner.

Level of Proficiency: the degree to which a knowledge or skill is taught in the classroom as perceived by the teacher and the degree to which a knowledge or skill is used on the job as perceived by the former student. "Not taught" or "not used" has a value of zero in determining the level of proficiency.

#### ASSUMPTIONS

1. All data received from the teacher-coordinators were accurate as perceived by them.
2. The sample used in the study was representative of the teacher-coordinators in Virginia.
3. The lists of graduates, supplied by the teacher-coordinators, who were employed in office occupations were accurate and complete.
4. All data received from the graduates, who were employed in office occupations, were accurate as perceived by them.

5. Additional terms which were added to some items of the instrument added more clarity.

#### LIMITATION OF THE STUDY

This study was limited to the Cooperative Office Education teacher-coordinators who operated programs in the public secondary schools of Virginia during the 1974-1975 school year. It was also limited to those teacher-coordinators who continued in the same capacity in the same high school for the 1975-1976 school year. It was limited to the perceptions and opinions of those described teacher-coordinators and the 1975 graduates of those coordinators who were employed in office occupations. Graduates who were not employed in office occupations for a period of at least six months following graduation were excluded from the study.

Another possible limitation was that the questionnaires could not be worded in such a way that the meanings were completely parallel in regard to the levels the teacher-coordinators attempted to develop and the levels used by graduates. Generalizations from the study are appropriate in regard to data collected from the teachers due to the random selection of the sample. A random selection process was not used in gathering graduate data, therefore, caution should be noted in making generalizations concerning graduates.



## Chapter 2

### REVIEW OF LITERATURE

#### INTRODUCTION

The purpose of this chapter was to present pertinent literature and research directly or indirectly related to the study. The literature relating to program evaluation was extensive.

The Readers' Guide to Periodical Literature, textbooks, year-books, reviews of research, Educational Resources Information Center (ERIC) search, Dissertation Abstracts, and doctoral dissertations were examined.

Portions of the literature were presented and organized under the headings: (1) Employer's Concerns With Competencies of Office Graduates, (2) How Employers Perceived Needed Skills Compared With Teachers and Students/Graduates, (3) Program Evaluations, and (4) Procedurally Related Studies.

#### EMPLOYER'S CONCERNS WITH COMPETENCIES OF OFFICE GRADUATES

The New Office and Business Education Learning Systems (Nobels) project was one of the most comprehensive surveys undertaken in recent years. An inventory of 375 educational specifications in behavioral terms was developed that represented basic office tasks performed by 16-24 year old office workers. Data were collected by interview

technique from 1232 office employees and their supervisors from four areas of the United States.

The supervisors indicated that accuracy was the fundamental characteristic they desired in office workers. Lanham (1970) defined accuracy from the Nobels interviews of office supervisors to mean:

An accurate office task performance means perceiving what an accurate product is, identifying likely points of error, checking and correcting so that the product is accurate because the worker has checked and eliminated any potential inaccuracy.

Lanham also indicated from the interviews of office supervisors that oral and written communication skills were major sources of poor office performance for beginning office workers. Fortman (1971) studied entry requirements for beginning office workers in California. The major inadequacies of beginning office employees were in basic business knowledge, basic math, and proofreading.

Hammer (1975) conducted one of the most recent surveys of the business community which involved the 500 largest industrial corporations. Approximately two out of every three managers believed that high schools could modify the programs to produce better employees. The concern and need for accuracy was repeated again as in the Nobels interviews. Some managers blamed the schools because they considered the schools to be too lax and undemanding of accuracy in students.

The implications of the Hammer study are that fewer entry-level employees will be hired if the economy continues in a slow growth or depressed state and that businesses will expect more of beginning office workers in specific skills. Managers indicated they expected business programs to be sensitive to their needs.

Office, production, and marketing are the three main categories of workers. Entry level office jobs will be the most directly affected by poor economic conditions. Hammer (1975:3) indicated the major reason why office workers would be affected first in labor reductions is that their contributions are considered to be service oriented and secondly to the contributions of production and marketing workers.

Hammer also contended:

High school business education programs should be examined to determine how the qualifications of graduates can be raised in the important areas of basic office machine and task skills; reading, writing, and computation; correct oral and written expression; and interpersonal relations. Throughout all aspects of the educational program, accuracy should be emphasized.

Kaplan (1975) was concerned with how the employers of the Philadelphia area perceived the efforts of the secondary business vocational programs to prepare workers for beginning positions. A free response questionnaire was developed and mailed to employers representing two thirds of the area's work force.

The employers were in agreement that the breadth of the vocational offerings were adequate but business education programs were not placing sufficient emphasis on typing and shorthand skills. Kaplan concurs with Hammer that there is a definite need for business teachers to place more emphasis on developing a higher degree of competency in task skill areas of office work.

HOW EMPLOYERS PERCEIVED NEEDED SKILLS COMPARED  
WITH TEACHERS AND STUDENT/GRADUATES

Clemons (1972) in determining the adequacy of cooperative education programs in Kentucky found that businessmen and cooperative office education students were in more frequent agreement on items which dealt with the preparation of students for office jobs than were the teachers. Similar findings were indicated by Burkett (1972). Businessmen and graduates were in agreement decisively more often than teachers concerning what was more applicable to needs of graduates in office occupations.

The purpose of the Abbott (1974) study was to develop a list of critical requirements which contributed to the adjustment of beginning office workers. Fifty firms were randomly selected from the 1545 firms located in the Atlanta Metropolitan area. The narrative interview method of critical incident technique was utilized. Abbott found that beginning office workers and their supervisors were equally aware of human relations behaviors. The foremost concern of beginning office workers and supervisors was telephone skills.

Roberts (1976) in studying the adequacy of secretarial and clerical programs in Arkansas Vocational-Technical Schools indicated that employers rated the ability of graduates significantly more satisfactorily than did the teachers in certain skill areas. Roberts indicated that businessmen disagreed considerably with the teachers over the ability of students to understand basic business principles, bookkeeping fundamentals, and travel arrangements.

## PROGRAM EVALUATIONS

An assessment of the Cooperative Office Education programs on the secondary level was done by Clemons (1972). The study was undertaken to determine the adequacy of the programs in meeting the business requirements of those businesses which employed students prepared in those programs.

Clemons found that cooperative business teachers were sometimes unaware of the types of activities their students are required to perform on the job. Students and businessmen were in more agreement on items which dealt with office competency preparation of students than were the teachers.

Businessmen rated the students' poor preparation in communication skills as the cooperative programs' most fundamental weakness and considered the students to have a poor knowledge of the business environment. Clemons further reported that businessmen, teachers, and students all agreed that one of the major weaknesses of the program was the poor communication between the teacher and employer.

The Burkett (1972) study evaluated business and office programs in vocational schools in much the same way as did Clemons. Data were gathered from the graduates of the programs who were employed in office occupations, teachers who conducted the programs, and employers of graduates who had completed the programs.

Burkett's findings were similar to those of Clemons. Teachers believed the need for certain competency levels in their programs were more often applicable to the needs of graduates more often than did

businessmen or graduates. Teachers believed shorthand was used much more in business situations than did employers or graduates. He recommends that teachers should analyze those competencies in their programs and to emphasize or deemphasize certain skills to better meet the needs of their graduates.

French (1972) related in his study, that Kirk (1966) also concluded that business teachers need to become better informed of the qualifications needed to fill office positions so that their programs become more relevant to the competency levels needed by graduates to satisfy employers.

A study to ascertain the adequacy of the secretarial and clerical programs was done by Roberts (1976) in the vocational-technical schools of Arkansas. This study closely paralleled the studies done by Clemons and Burkett. The purpose was to provide information for improving the respective programs.

Roberts found, as did Clemons and Burkett, that teachers had overemphasized or underemphasized certain competencies they felt were needed in the business situation. Businessmen rated the ability of graduates to perform certain tasks significantly higher than did their teachers. It was also found that teachers and employers differed concerning their perceptions of how well graduates understood basic business principles and the importance of personal appearance.

Roberts recommended that: (1) teachers place more emphasis on basic business offerings and stress the correction of typing errors, and (2) that teachers seek the assistance of employers to

become familiar with the standards that are needed to prepare students for entry level office occupations.

The Kaplan (1975) study reiterated the need mentioned by Roberts. He found that business education programs in the Philadelphia area are not teaching certain skills to the competency level needed by the local businesses.

Kaplan further contended: There is a strong need for better understanding between business and secondary business education programs regarding job opportunities and the requirements for those jobs.

The purpose of the Frame (1971) study was related to the previously mentioned studies in that the tasks performed by vocational office education students were compared to the tasks performed by first and second year office employees. A total of 600 office tasks were identified and included in the study.

Frame concluded that:

1. Eighty office tasks were performed by higher percentages of first and second year office workers than by vocational office education students prior to their graduation.
2. Vocational office education students were performing a total of 119 tasks to a significantly greater degree than office workers were expected to perform.

## PROCEDURALLY RELATED STUDIES

One of the major components to evaluate in cooperative vocational education programs is follow-up studies on the effectiveness of cooperative programs as perceived by students/graduates. A one-year or 15-month follow-up of graduates has the advantage of more elapsed time since graduation. A year on the job should be ample time for the graduate to evaluate the adequacy of his training. The Report To The Congress (1974:82) indicated that existing vocational programs at all levels lacked adequate student follow-up. Data that was collected was collected too soon for program improvement.

The purpose of the Boyd (1969) study was to determine the effectiveness of the secondary cooperative office education programs by the follow-up technique. The study was limited to the northern twenty-one counties of Illinois. A questionnaire was mailed to 200 former graduates one year after graduation.

Boyd reported that the cooperative office program helped the student obtain initial job entry, but that the program did not adequately prepare students for full-time office employment. The Lawrence (1973) study concurred with the report by Boyd about the inadequacy of job preparation. Lawrence surveyed 1207 Louisiana cooperative trainees one year after graduation. The respondents indicated that more emphasis should have been given to the trainees particular job requirements.

The Burkett (1972) study findings were similar to Boyd and Lawrence in regard to the perceptions of graduates concerning the level



of adequacy which was needed in the office environment. The purpose of the Burkett study was to assess the effectiveness of the preparation of vocational office students for entry-level office occupations. The data were gathered by mail from graduates of the programs who were employed in office occupations and the teachers who conducted the programs.

Burkett recommended that:

1. Teachers need to analyze those competencies in their programs to determine if those competency levels should be modified to better meet the needs of their students.
2. Opinions of graduates differ from the opinions of teachers in many instances regarding the program and should be given serious consideration.

The Roberts (1976) study indicated additional support that businessmen were not in agreement with teachers in assessing the ability of graduates in regard to many office tasks. The adequacy of vocational office education programs in Arkansas was the concern of Roberts. Data were collected by questionnaire technique from graduates of the programs and the teachers who conducted those programs in much the same manner as did Burkett.

A list of 38 items for rating the quality of office occupations preparation was included on the questionnaire. The items were divided into three groups: (1) basic skills, (2) understandings, and (3) personal traits. The respondents were asked to rate each item as

being either: (1) superior, (2) satisfactory, (3) less than satisfactory, or (4) not applicable.

Roberts recommended that more emphasis be placed on basic business tasks and understandings. Teachers should gain more understanding of the standards that students need to enter office related occupations.

Beck (1971) studied the cooperative office education programs in Southeastern Pennsylvania. This study, like Schmidt's (1974), gathered data from graduates one year or more after they had graduated and were working in office related occupations. Permission from the selected schools was obtained and the schools helped locate the graduates.

The present study follows the procedure used by Lee (1974) more closely than any other study previously mentioned and is a replication of that study.

Lee surveyed the cooperative office education programs in Mississippi on the secondary level. The purpose of the study was to determine the skills and knowledge that were taught and to determine if those skills and knowledge were meeting the needs of graduates who were employed in office related occupations.

Questionnaires were mailed to the seventeen teacher-coordinators in the study. They were asked to indicate the levels of proficiency they taught skills and knowledge and to supply a list of their 1972 graduates who were employed in office occupations.

The list provided by the teacher-coordinators supplied the names and addresses of the 115 graduates who were included in the survey. The graduates were also surveyed by mail. They were asked to indicate the level of training which they needed for each skill and knowledge in their work.

Frequency distributions were established and percentages computed for the skills and knowledge they were taught by the teacher-coordinators and skills and knowledge the graduates needed in their work. Differences were considered significant at the .01 level.

Lee found that 13 of the 43 skills and knowledge listed on the instruments were significantly different in the levels of proficiency taught by the teacher-coordinators and the levels of training needed by the graduates in their work. The skills and knowledge that the graduates were not using or were taught at higher levels of proficiency than needed were as follows: cold typesetting, geographic filing, variable proportional space typewriting, shorthand, transcribing machine usage, business ethics, banking procedures, fluid and stencil process duplication, rotary calculator, electronic calculator, applying for a job, and oral and written reports.

Lee recommended:

1. That additional studies should be conducted to determine whether the results are similar.
2. That the program in Mississippi should be compared with other programs to serve as a guide for program modification.

## SUMMARY

From a review of the literature, it is apparent that the abilities of vocational office graduates has been and still is of great concern to the business community. This concern will increase and continue for many years. In past years, when resources were more abundant, the efficiency of workers was less of a factor because abundant resources could offset certain inefficiencies in production. In a world of rapidly dwindling resources, the factor of worker efficiency will become of increasingly greater significance.

Closely associated with the concern about the ability of the office worker of today, it is obvious that programs most directly responsible for their preparation are being evaluated in some way so as to prepare a better qualified graduate. It is apparent from the literature that business teachers need to become more acquainted with the standards that exist in today's job market. There are many ways a program can be evaluated, but in the final analysis it can only be justified when it provides training that enables those engaged in business occupations to give better, more economical, and more efficient service.

## Chapter 3

### PROCEDURE

The major steps in conducting this study were as follows:

(1) selection of the population and sample, (2) securing written approval from the superintendents, (3) gaining permission to use and modify the instruments, (4) submitting the instruments, and (5) analyzing the responses.

#### Selection of Population and Sample

All of the secondary Cooperative Office Education teacher-coordinators in the state of Virginia who conducted programs during the 1974-1975 school year and who also operated them in the 1975-1976 school year were included in the study. A list of the teacher-coordinators was obtained by a personal visit to the office of the State Supervisor of Business Education in Richmond, Virginia.

This list was compared to the 1975-1976 Roster of Business Teachers to determine the number of teacher-coordinators who had moved to a new school division or who had left the State. In order to be on the final population list, the teacher had to still be employed in that same school. With this procedure, a final list of (one hundred forty-one) teacher-coordinators was compiled.

This final list of teacher-coordinators was arranged in alphabetical order. Each name was numbered in numerical order (beginning with number 001 for the first name and the number 141 for the

last name on the list). A Table of Random Numbers (Kendall and Smith, 1938) was utilized to select a total of twenty-five teacher-coordinators. Ten extra names were selected in the event of non-cooperation from the superintendents.

The participating teacher-coordinators were asked to supply a list of their 1975 graduates and the addresses of those who were employed in office occupations. This composed the student group to be involved in this study.

#### Securing Written Approval from the Superintendents

The teacher-coordinator's school division in the sample was identified. A letter was sent to the superintendent in each division in which a teacher-coordinator was part of the sample. This letter explained the nature of the study and asked the superintendents for written permission to allow the teacher-coordinator(s) to take part and supply a list of 1974-1975 graduates who were employed in office occupations. Superintendents who failed to return their written approval were contacted by telephone approximately ten days after the mailing of the letters.

Five superintendents refused to grant their approval for teacher-coordinators in their division to participate in the study. The superintendents electing not to participate in the study were replaced by utilizing the next five names on the extra list.

### Gaining Permission to Use and Modify the Instruments

A study of this type was done by Delene Lee in the state of Mississippi in 1973. A letter explaining the purpose of the study and asking permission to use and modify the instrument was mailed to Dr. Lee. Written approval was obtained to use and modify the instruments.

Data collected by Vocational-Technical Education Consortium of States (V-TECS) in 1975 were used in adding clarity to the instruments. V-TECS does research, including surveys and the compilation of worker tasks in logical order. A description of office equipment presently in use by office personnel was developed. It also included a percentage of office personnel who performed activities using various office equipment. These data were used to add clarity to some of the duplicating and office machine terms.

The following terms were added to Lee's instruments for more clarity: (1) The word "spirit" was added to the term fluid process, (2) the word "mimeograph" was added to the term stencil process, and (3) the word "comptometer" was added to the term key-driven calculator.

Teacher-coordinators were asked to select the levels of proficiency which they attempted to teach for the selected skills and knowledge or to check the "not taught" category. Graduates employed in office occupations were asked to indicate the levels of training which they needed in employment for each selected skill and knowledge or to check the "not used" category. Graduates were asked to list any skills and knowledge which they had needed in employment, but

which were not included as part of the instrument.

Levels of proficiency on the teacher-coordinator survey were represented as follows:

0 = Not taught.

1 = Low. Students taught at this level have only been introduced to this skill or knowledge. It has been taught on an acquaintanceship level only. Additional on-the-job and/or classroom training will be necessary for them to perform competently.

2 = Average. Students taught at this level have acquired the basic minimum of this particular skill or knowledge for entry-level employment. They can usually be expected to perform this skill or knowledge without additional on-the-job and/or classroom training.

3 = High. Students taught at this level have mastery of this particular skill or knowledge. They can be expected to perform at a high level of competency without additional on-the-job and/or classroom training.

Levels of training on the graduate survey were represented as follows:

0 = Not used.

1 = Low. I only need acquaintanceship or introductory level training in this skill or knowledge to do my work well.

2 = Average. I needed to know the basic minimums of this skill or knowledge to do my work well.

3 = High. I needed mastery of this skill or knowledge to do my work well.



The following skills and knowledge were included in the instruments for teacher-coordinators and graduates:

Filing

- Alphabetic
- Numeric
- Geographic
- Subject

Recordkeeping

Typewriting

- Standard electric typewriting
- Manual typewriting
- Automatic typewriting (Cold typesetting)
- Proportional space typewriting

Dictating and transcribing skills

- Gregg shorthand
- Transcribing machine
- Machine shorthand (stenograph)

Bookkeeping/accounting machines

Business ethics

Addressing machine skill

Banking procedures

Communications

- Composing letters
- Telephone training
- Receptionist duties
- Use of reference materials
- Oral and written reports

Data processing

- Simulated key punch
- Key punch

Personal development

- Appearance
- Attitude

Travel and transportation

Office supplies

Parliamentary procedure

Duplicating and copying skills

- Fluid process (Spirit)
- Stencil process (Mimeograph)
- Offset printing process
- Carbon paper process
- Photocopier

Office machine skills

- Full-key adding
- Ten-key adding
- Rotary calculator
- Key-driven calculator (Comptometer)
- Electronic calculator

Business math

Personal money management

Consumer education

Applying for a job

Graduates were also asked to identify their present job titles and to list additional skills which they needed in their positions. They were asked to indicate whether they were employed part time or full time. Teacher-coordinators were also asked to add skills and knowledge which they felt should be a part of the Cooperative Office Education programs, but which were not.

#### Submission of Instruments to Sample

The instruments for the teacher-coordinators were submitted by mail to the thirty-six teacher-coordinators of the secondary Cooperative Office Education programs in Virginia that were operational in the 1974-1975 school year and which were still in operation in 1975-1976. The teacher-coordinators were also asked to complete a form giving the names and mailing addresses of their 1974-1975

graduates who were employed in office occupations. Those who did not respond in two weeks were sent a follow-up letter requesting their assistance, including another instrument. Those who did not respond in ten more days were contacted by telephone to solicit their cooperation. Those contacted by telephone were sent additional copies of the instrument if needed.

Instruments were mailed to graduates employed in office occupations upon receipt of the teacher-coordinators responses. Graduates who did not respond in two weeks were sent a follow-up letter and instrument. No additional effort was made to contact those who did not respond to the follow-up letter.

#### Analysis of Responses

The data were processed at the Computing Center at Virginia Polytechnic Institute and State University. Teacher-coordinators and graduates were assigned identifying numbers, and responses from both groups were transferred to IBM cards. Statistical Package for the Social Sciences is the name of the computer program that was used. A t-test was used to determine whether or not there were significant differences in the level taught by teacher-coordinators and the perceived level of use by graduates for each of the forty-two items of skill and knowledge. The differences were considered significant at the .01 level.

## Chapter 4

### PRESENTATION OF DATA

This chapter presents data analysis and interpretation of the findings of the study. The Teacher Survey was mailed to thirty-six Cooperative Office Education teachers in September of 1976. By the end of September, 83.3 percent of the questionnaires had been completed and returned along with the names and addresses of the 1975 graduates. The biographical data of teacher-coordinator respondents were as follows: (1) the mean number of years of teaching experience was 13.1, (2) the mean number of years as teacher-coordinator was 3.7, (3) the mean number of years of work experience outside of education was 3.9, and (4) twelve of the thirty teachers had completed the requirements for a Masters degree.

The Graduate Survey was mailed to 184 Cooperative Office Education graduates in October of 1976. By the end of October, 67.4 percent of the questionnaires had been completed and returned. This represented a total number of 124 graduates. There were six office occupational classifications on the instrument. The occupational breakdown of respondents are as follows: (1) Secretary, 29.8 percent, (2) Clerk Typist, 20.2 percent, (3) General Office Clerk, 20.2 percent, (4) Stenographer, 6.5 percent, (5) Receptionist, 8.1 percent, and (6) Other, 15.3 percent.

Forty-two items of skill or knowledge were marked by teacher-coordinators according to the degree or level to which they felt they

had taught the item. The same items of skill or knowledge were marked by graduates according to the degree or level at which they felt they used the skill or knowledge in their occupations. The degree or level at which a skill or knowledge was taught or was used on the job could vary from zero ("not used" or "not taught") to three ("highly used" or "highly taught").

The primary question of the study was: Are there significant differences in levels of proficiency of skills and knowledge taught as perceived by teacher-coordinators in the secondary Cooperative Office Education programs in Virginia and the training levels needed as perceived by graduates of these programs who are employed in office occupations?

Means, standard deviations, and t-values for teacher-coordinators and graduates for each item of skill or knowledge are summarized in Table 1 on page 46. Table 1 should be referred to in relation to each item as it is discussed on subsequent pages. The table has a number for each item and the numerical order of data presentation corresponds to the number in the table.

A comparison of the data obtained from teacher-coordinators and their graduates for each of the forty-two items of skill or knowledge follows:

#### Alphabetic Filing (Item 1)

Teachers perceived alphabetic filing as being taught at the 2.87 level, and graduates perceived this skill or knowledge to be used at the 2.40 level in their work. This skill or knowledge was perceived

as being taught at a .47 higher level than the graduates indicated they used this particular skill or knowledge, which was significant at the .01 level.

#### Numeric Filing (Item 2)

Teachers perceived numeric filing as being taught at the 1.73 level, and graduates perceived this skill or knowledge to be used at the 1.89 level in their work. This skill or knowledge was perceived as being taught at a .16 lower level than the graduates indicated they used this particular skill or knowledge, which was not significant at the .01 level.

#### Geographic Filing (Item 3)

Teachers perceived geographic filing as being taught at the 1.43 level, and graduates perceived this skill or knowledge to be used at the .62 level in their work. This skill or knowledge was perceived as being taught at a .81 higher level than graduates indicated they used this particular skill or knowledge, which was significant at the .01 level.

#### Subject Filing (Item 4)

Teachers perceived subject filing as being taught at the 1.36 level, and graduates perceived this skill or knowledge to be used at the 1.41 level in their work. This skill or knowledge was perceived as being taught at a .05 lower level than the graduates indicated they used this particular skill or knowledge, which was not significant at the .01 level.

Recordkeeping (Item 5)

Teachers perceived recordkeeping as being taught at the 1.97 level, and graduates perceived this skill or knowledge to be used at the 1.69 level in their work. This skill or knowledge was perceived as being taught at a .28 higher level than the graduates indicated they used this particular skill or knowledge, which was not significant at the .01 level.

Standard Electric Typewriting (Item 6)

Teachers perceived standard electric typewriting as being taught at the 2.97 level, and graduates perceived this skill or knowledge to be used at the 2.18 level in their work. This skill or knowledge was perceived as being taught at a .79 higher level than the graduates indicated they used this particular skill or knowledge, which was significant at the .01 level.

Manual Typewriting (Item 7)

Teachers perceived manual typewriting as being taught at the 1.90 level, and graduates perceived this skill or knowledge to be used at the .85 level in their work. This skill or knowledge was perceived as being taught at a 1.05 higher level than the graduates indicated they used this particular skill or knowledge, which was significant at the .01 level.

Automatic Typewriting (Item 8)

Teachers indicated that automatic typewriting was not being taught at all (.00 level), and graduates perceived this skill or know-

ledge to be used at the .21 level in their work. This skill or knowledge was perceived as not being taught and the graduates indicated they used this particular skill or knowledge at the .21 level, which was not significant at the .01 level.

Proportional Space Typewriting (Item 9)

Teachers perceived proportional space typewriting as being taught at the .71 level, and graduates perceived this skill or knowledge to be used at the .98 level in their work. This skill or knowledge was perceived as being taught at a .27 lower level than the graduates indicated they used this particular skill or knowledge, which was not significant at the .01 level.

Gregg Shorthand (Item 10)

Teachers perceived Gregg shorthand as being taught at the 2.13 level, and graduates perceived this skill or knowledge to be used at the .88 level in their work. This skill or knowledge was perceived as being taught at a 1.25 higher level than the graduates indicated they used this particular skill or knowledge, which was significant at the .01 level.

Transcribing Machine (Item 11)

Teachers perceived transcribing machine skills as being taught at the 2.20 level, and graduates perceived these skills to be used at the .71 level in their work. This skill or knowledge was perceived as being taught at a 1.49 higher level than the graduates indicated they



used this particular skill or knowledge, which was significant at the .01 level.

Machine Shorthand (Item 12)

Teachers indicated that machine shorthand was not taught at all (.00 level), and graduates perceived this skill or knowledge to be used at the .13 level in their work. This skill or knowledge was perceived as not being taught and the graduates indicated they used this particular skill or knowledge at the .13 level, which was not significant at the .01 level.

Bookkeeping/Accounting Machines (Item 13)

Teachers perceived bookkeeping/accounting machines as being taught at the .34 level, and graduates perceived this skill or knowledge to be used at the 1.30 level in their work. This skill or knowledge was perceived as being taught at a .96 lower level than the graduates indicated they used this particular skill or knowledge, which was significant at the .01 level.

Business Ethics (Item 14)

Teachers perceived business ethics as being taught at the 2.63 level, and graduates perceived this item to be used at the 1.93 level in their work. This skill or knowledge was perceived as being taught at a .70 higher level than graduates indicated they used this particular skill or knowledge, which was significant at the .01 level.

Addressing Machine Skill (Item 15)

Teachers perceived addressing machine skill as being taught at the .07 level, and graduates perceived this skill to be used at the .78 level in their work. This skill or knowledge was perceived as being taught at a .71 lower level than the graduates indicated they used this particular skill or knowledge, which was significant at the .01 level.

Banking Procedures (Item 16)

Teachers perceived banking procedures as being taught at the 2.17 level, and graduates perceived this skill or knowledge to be used at the 1.39 level in their work. This skill or knowledge was perceived as being taught at a .78 higher level than graduates indicated they used this particular skill or knowledge, which was significant at the .01 level.

Composing Letters (Item 17)

Teachers perceived composing letters as being taught at the 2.20 level, and graduates perceived this skill or knowledge to be used at the 1.91 level in their work. This skill or knowledge was perceived as being taught at a .29 higher level than the graduates indicated they used this particular skill or knowledge, which was not significant at the .01 level.

Telephone Training (Item 18)

Teachers perceived telephone training as being taught at the 2.67 level, and graduates perceived this skill or knowledge to be used at the 2.52 level in their work. This skill or knowledge was perceived

as being taught at a .15 higher level than the graduates indicated they used this particular skill or knowledge, which was not significant at the .01 level.

Receptionist Duties (Item 19)

Teachers perceived receptionist duties as being taught at the 2.57 level, and graduates perceived this skill or knowledge to be used at the 2.19 level in their work. This skill or knowledge was perceived as being taught at a .38 higher level than the graduates indicated they used this particular skill or knowledge, which was not significant at the .01 level.

Use of Reference Materials (Item 20)

Teachers perceived the use of reference materials as being taught at the 2.30 level, and graduates perceived this skill or knowledge to be used at the 1.94 level in their work. This skill or knowledge was perceived as being taught at a .36 higher level than the graduates indicated they used this particular skill or knowledge, which was not significant at the .01 level.

Oral and Written Reports (Item 21)

Teachers perceived oral and written reports as being taught at the 1.80 level, and graduates perceived this skill or knowledge to be used at the 1.23 level in their work. This skill or knowledge was perceived as being taught at a .57 higher level than the graduates indicated they used this particular skill or knowledge, which was significant at the .01 level.

Simulated Key Punch (Item 22)

Teachers perceived simulated key punch as being taught at the .30 level, and graduates perceived this skill or knowledge to be used at the .24 level in their work. This skill or knowledge was perceived as being taught at a .06 higher level than the graduates indicated they used this particular skill or knowledge, which was not significant at the .01 level.

Key Punch (Item 23)

Teachers perceived key punch as being taught at the .70 level, and graduates perceived this skill or knowledge to be used at the .38 level in their work. This skill or knowledge was perceived as being taught at a .32 higher level than the graduates indicated they used this particular skill or knowledge, which was not significant at the .01 level.

Appearance (Item 24)

Teachers perceived appearance as being taught at the 2.80 level, and graduates perceived this item to be used at the 2.56 level in their work. This skill or knowledge was perceived as being taught at a .24 higher level than the graduates indicated they used this particular skill or knowledge, which was not significant at the .01 level.

Attitude (Item 25)

Teachers perceived attitude as being taught at the 2.83 level, and graduates perceived this item to be used at the 2.73 level in their

work. This skill or knowledge was perceived as being taught at a .10 higher level than the graduates indicated they used this particular skill or knowledge, which was not significant at the .01 level.

Travel and Transportation (Item 26)

Teachers perceived travel and transportation as being taught at the 1.53 level, and graduates perceived this skill or knowledge to be used at the 1.40 level in their work. This skill or knowledge was perceived as being taught at a .13 higher level than the graduates indicated they used this particular skill or knowledge, which was not significant at the .01 level.

Office Supplies (Item 27)

Teachers perceived office supplies as being taught at the 2.17 level, and graduates perceived this skill or knowledge to be used at the 2.17 level in their work. This skill or knowledge was perceived as being taught at the same level that the graduates indicated they used this particular skill or knowledge, which was not significant at the .01 level.

Parliamentary Procedure (Item 28)

Teachers perceived parliamentary procedure as being taught at the .80 level, and graduates perceived this skill or knowledge to be used at the .96 level in their work. This skill or knowledge was perceived as being taught at a .16 lower level than the graduates indicated they used this particular skill or knowledge, which was not significant at the .01 level.

Fluid Process (Item 29)

Teachers perceived the fluid process as being taught at the 2.83 level, and graduates perceived this skill or knowledge to be used at the .74 level in their work. This skill or knowledge was perceived as being taught at a 2.09 higher level than the graduates indicated they used this particular skill or knowledge, which was significant at the .01 level.

Stencil Process (Item 30)

Teachers perceived the stencil process as being taught at the 2.70 level, and graduates perceived this skill or knowledge to be used at the .84 level in their work. This skill or knowledge was perceived as being taught at a 1.86 higher level than the graduates indicated they used this particular skill or knowledge, which was significant at the .01 level.

Offset Printing Process (Item 31)

Teachers perceived the offset printing process as being taught at the 1.0 level, and graduates perceived this skill or knowledge to be used at the .52 level in their work. This skill or knowledge was perceived as being taught at a .48 higher level than the graduates indicated they used this particular skill or knowledge, which was not significant at the .01 level.

Carbon Paper Process (Item 32)

Teachers perceived the carbon paper process as being taught at the 2.60 level, and graduates perceived this skill or knowledge to be

used at the 1.69 level in their work. This skill or knowledge was perceived as being taught at a .91 higher level than the graduates indicated they used this particular skill or knowledge, which was significant at the .01 level.

Photocopier (Item 33)

Teachers perceived the photocopier process as being taught at the 2.13 level, and graduates perceived this skill or knowledge to be used at the 2.10 level in their work. This skill or knowledge was perceived as being taught at a .03 higher level than the graduates indicated they used this particular skill or knowledge, which was not significant at the .01 level.

Full-Key Adding Machine (Item 34)

Teachers perceived the full-key adding machine as being taught at the 2.10 level, and graduates perceived this skill or knowledge to be used at the 1.15 level in their work. This skill or knowledge was perceived as being taught at a .95 higher level than the graduates indicated they used this particular skill or knowledge, which was significant at the .01 level.

Ten-Key Adding Machine (Item 35)

Teachers perceived the ten-key adding machine as being taught at the 2.80 level, and graduates perceived this skill or knowledge to be used at the 1.79 level in their work. This skill or knowledge was perceived as being taught at a 1.01 higher level than the graduates

indicated they used this particular skill or knowledge, which was significant at the .01 level.

Rotary Calculator (Item 36)

Teachers perceived the rotary calculator as being taught at the 1.27 level, and graduates perceived this skill or knowledge to be used at the .51 level in their work. This skill or knowledge was perceived as being taught at a .76 higher level than the graduates indicated they used this particular skill or knowledge, which was significant at the .01 level.

Key-Driven Calculator (Item 37)

Teachers perceived the key-driven calculator as being taught at the .34 level, and graduates perceived this skill or knowledge to be used at the .25 level in their work. This skill or knowledge was perceived as being taught at a .09 higher level than the graduates indicated they used this particular skill or knowledge, which was not significant at the .01 level.

Electronic Calculator (Item 38)

Teachers perceived the electronic calculator as being taught at the 2.73 level, and graduates perceived this skill or knowledge to be used at the 1.32 level in their work. This skill or knowledge was perceived as being taught at a 1.41 higher level than the graduates indicated they used this particular skill or knowledge, which was significant at the .01 level.



Business Math (Item 39)

Teachers perceived business math as being taught at the 1.93 level, and graduates perceived this skill or knowledge to be used at the 1.72 level in their work. This skill or knowledge was perceived as being taught at a .21 higher level than the graduates indicated they used this particular skill or knowledge, which was not significant at the .01 level.

Personal Money Management (Item 40)

Teachers perceived personal money management as being taught at the 1.67 level, and graduates perceived this skill or knowledge to be used at the 1.63 level in their work. This skill or knowledge was perceived as being taught at a .04 higher level than the graduates indicated they used this particular skill or knowledge, which was not significant at the .01 level.

Consumer Education (Item 41)

Teachers perceived consumer education as being taught at the 1.63 level, and graduates perceived this skill or knowledge to be used at the 1.25 level in their work. This skill or knowledge was perceived as being taught at a .38 higher level than the graduates indicated they used this particular skill or knowledge, which was not significant at the .01 level.

Applying for a Job (Item 42)

Teachers perceived applying for a job as being taught at the 2.87 level, and graduates perceived this skill or knowledge to be used

at the 1.94 level in their work. This skill or knowledge was perceived as being taught at a .93 higher level than the graduates indicated they used this particular skill or knowledge, which was significant at the .01 level.

There were significant differences in nineteen of the forty-two items of skill or knowledge taught as perceived by teacher-coordinators and the training levels needed as perceived by graduates employed in office occupations. Seventeen of these nineteen items were taught at a significantly higher level than graduates perceived that they used them. Only two of those nineteen items; bookkeeping/accounting machines, and addressing machine skill, were perceived to have been used by graduates at a significantly higher level than teacher-coordinators perceived that they taught them. There were no significant differences in twenty-three items of skill or knowledge.

Table 1  
 Comparison of Levels at Which Items of Skill or Knowledge Were Taught  
 as Perceived by Teachers and the Levels Used  
 as Perceived by Graduates

Items of Skill or Knowledge	Teacher		Graduate		t-Value
	Means	Standard Deviation	Means	Standard Deviation	
1. Alphabetic Filing	2.87	.346	2.40	.834	3.03**
2. Numeric Filing	1.73	.785	1.89	1.065	.74
3. Geographic Filing	1.43	.898	.62	.921	4.34**
4. Subject Filing	1.36	.678	1.41	1.063	.23
5. Recordkeeping	1.97	.865	1.69	1.082	1.28
6. Standard Electric Typewriting	2.97	.183	2.18	1.021	4.19**
7. Manual Typewriting	1.90	1.175	.85	1.043	4.73**
8. Automatic Typewriting	.0	.0	.21	.583	1.87
9. Proportional Space Typewriting	.71	.897	.98	1.162	1.14
10. Gregg Shorthand	2.13	1.332	.88	1.207	5.00**
11. Transcribing Machine	2.20	.664	.71	1.063	7.30**
12. Machine Shorthand	.0	.0	.13	.407	1.65
13. Bookkeeping/Accounting Machines	.34	.670	1.30	1.182	4.18**
14. Business Ethics	2.63	.615	1.93	1.066	3.49**
15. Addressing Machine Skill	.07	.262	.78	1.048	3.56**
16. Banking Procedures	2.17	.913	1.39	1.174	3.40**
17. Composing Letters	2.20	.664	1.91	.996	1.51
18. Telephone Training	2.67	.547	2.52	.791	.93
19. Receptionist Duties	2.57	.568	2.19	.985	1.99
20. Use of Reference Materials	2.30	.651	1.94	.961	1.93
21. Oral and Written Reports	1.80	.805	1.23	1.093	2.69**
22. Simulated Key Punch	.30	.794	.24	.651	.40
23. Key Punch	.70	.877	.38	.851	1.86
24. Appearance	2.80	.484	2.56	.642	1.91
25. Attitude	2.83	.379	2.73	.557	.93
26. Travel and Transportation	1.53	.937	1.40	1.172	.59
27. Office Supplies	2.17	.834	2.17	.866	.02
28. Parliamentary Procedure	.80	.961	.96	1.063	.73
29. Fluid Process	2.83	.461	.74	1.035	10.79**
30. Stencil Process	2.70	.596	.84	1.100	8.94**
31. Offset Printing Process	1.00	1.145	.52	.860	2.58
32. Carbon Paper Process	2.60	.814	1.69	1.178	4.02**
33. Photocopier	2.13	.937	2.10	1.165	.16
34. Full-Key Adding Machine	2.10	1.092	1.15	1.252	3.83**
35. Ten-Key Adding Machine	2.80	.484	1.79	1.205	4.49**
36. Rotary Calculator	1.27	1.202	.51	.947	3.68**
37. Key-Driven Calculator	.34	.857	.25	.647	.69
38. Electronic Calculator	2.73	.521	1.32	1.228	6.16**
39. Business Math	1.93	.740	1.72	1.027	1.05
40. Personal Money Management	1.67	1.028	1.63	1.154	.14
41. Consumer Education	1.63	.964	1.25	1.101	1.77
42. Applying For a Job	2.87	.346	1.94	.982	5.07**

\*\*Significant at the .01 level

The secondary questions of the study were:

Secondary Question (Number 1)

What items of skill and knowledge are taught in the secondary Cooperative Office Education programs as perceived by teacher-coordinators?

Teacher-coordinators taught all items of skill or knowledge listed on the instrument at least at the .51 mean level with the following exceptions; automatic typewriting, machine shorthand, bookkeeping/accounting machines, addressing machine skill, simulated key punch, and key-driven calculator.

Secondary Question (Number 2)

What levels of proficiency are perceived as being taught by teacher-coordinators in the secondary Cooperative Office Education programs in Virginia?

The levels of proficiency in which teacher-coordinators of the state of Virginia teach skills and knowledge are as follows:

Low Level (.51-1.50): Geographic filing, subject filing, proportional space typewriting, key punch, parliamentary procedure, offset printing process, and rotary calculator.

Average Level (1.51-2.50): Numeric filing, recordkeeping, manual typewriting, Gregg shorthand, transcribing machine, banking procedures, composing letters, use of reference materials, oral and written reports, travel and transportation, office supplies, photocopier, full-key adding, business math, personal money management, and consumer education.

High Level (2.51-3.00): Alphabetic filing, standard electric typewriting, business ethics, telephone training, receptionist duties, appearance, attitude, fluid process, stencil process, carbon paper process, ten-key adding, electronic calculator, and applying for a job.

Secondary Question (Number 3)

What items of skill and knowledge are used as perceived by graduates of the secondary Cooperative Office Education programs who are employed in office occupations?

Graduates who are employed in office occupations used all items of skill or knowledge listed on the instrument at least at the .51 mean level with the following exceptions; automatic typewriting, machine shorthand, simulated key punch, key punch, and key-driven calculator.

Secondary Question (Number 4)

What levels of training are perceived as being needed by graduates of secondary Cooperative Office Education programs who are employed in office occupations?

The levels of training needed by graduates of secondary Cooperative Office Education programs who are employed in office occupations are as follows:

Low Level (.51-1.50): Geographic filing, subject filing, manual typewriting, proportional space typewriting, Gregg shorthand, transcribing machine, bookkeeping/accounting machines, addressing machine skill, banking procedures, oral and written reports, travel

and transportation, parliamentary procedure, fluid process, stencil process, offset printing process, full-key adding machine, rotary calculator, electronic calculator, and consumer education.

Average Level (1.51-2.50): Alphabetic filing, numeric filing, recordkeeping, standard electric typewriting, business ethics, composing letters, receptionist duties, use of reference materials, office supplies, carbon paper process, photocopier, ten-key adding machine, business math, personal money management, and applying for a job.

High Level (2.51-3.00): Telephone training, appearance, and attitude.

#### Secondary Question (Number 5)

Are there skills and knowledge which need to be added to the secondary Cooperative Office Education programs as perceived by teacher-coordinators and graduates who are employed in office occupations?

A limited number of teacher-coordinators (3) indicated that Cooperative Office Education programs need to teach data processing. An overwhelming number of graduates, 102 out of 124, indicated the programs could not add any skills or knowledge to those listed on the questionnaire used in the study. A limited number of graduates indicated a need for computer skills, ability to get along with fellow-workers, and a knowledge of business law.

## Chapter 5

### SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

#### SUMMARY

The primary question of the study was to determine if there were significant differences in perceived levels of proficiency taught by teacher-coordinators in the secondary Cooperative Office Education programs in Virginia and the training levels needed as perceived by graduates of these programs who are employed in office occupations.

Secondary questions of the study were to answer the following:

1. What items of skill and knowledge are taught in the secondary Cooperative Office Education programs as perceived by teacher-coordinators?

2. What levels of proficiency are perceived as being taught by teacher-coordinators in the secondary Cooperative Office Education programs in Virginia?

3. What items of skill and knowledge are perceived as being needed by graduates of the secondary Cooperative Office Education programs who are employed in office occupations?

4. What levels of training are perceived as being needed by graduates of secondary Cooperative Office Education programs who are employed in office occupations?

5. Are there skills and knowledge which need to be added to the secondary Cooperative Office Education programs as perceived by

teacher-coordinators and the graduates who are employed in office occupations?

It was assumed that: (1) all persons who responded to the instrument responded honestly and (2) the sample used in the study was representative of all teacher-coordinators in the secondary Cooperative Office Education programs in Virginia.

The study was limited to the Cooperative Office Education teacher-coordinators who operated programs in the public secondary schools of Virginia during the 1974-1975 school year and who continued teaching in the same school for the 1975-1976 school year. The study was limited to the perceptions and opinions of the above mentioned teacher-coordinators and the 1975 graduates of those coordinators who had been employed in office occupations for at least six months.

A review of the literature revealed that the abilities of vocational office graduates have been and still are of great concern to the business community. One of the most frequent concerns was the poor preparation and performance in communication skills. Businessmen and supervisors believed graduates needed more training in the following areas: (1) reading, (2) writing, (3) oral and written expression, and (4) telephone skills.

The literature indicated that there is a need for vocational business teachers to put more emphasis on basic math, basic business principles, and basic office machine skills in their training programs. Many businessmen felt that business teachers needed to become better acquainted with the job requirements of existing opportunities in office occupations at the entry level.



The questionnaire method was used in collecting data for this study. A questionnaire, cover letter, and a stamped return addressed envelope were sent to each teacher-coordinator included in the sample. A request was made in the cover letter to provide the names and addresses of the 1974-1975 Cooperative Office Education graduates. Completed questionnaires with lists of graduates were obtained from thirty teacher-coordinators. These thirty teacher-coordinators and their graduates of the Cooperative Office Education programs comprised the sample of the study. Completed questionnaires were returned by 124 graduates of the 1974-1975 programs.

Data obtained from the questionnaires of the teacher-coordinators were used to determine the levels at which teacher-coordinators attempted to teach skills and knowledge in the programs. Data obtained from the questionnaires of the graduates were used to determine the levels at which graduates used skills and knowledge in their work. All information from respondents was key-punched on IBM cards and verified for processing. The data were processed on the IBM 3700 computer at Virginia Polytechnic Institute and State University.

Teacher-coordinators of the Cooperative Office Education programs in Virginia teach skills and knowledge at a significantly different level than graduates used them in nineteen of the forty-two skills and knowledge items listed on the questionnaire. The items are as follows: alphabetic filing, oral and written reports, business ethics, addressing machine skill, rotary calculator, banking procedures,

standard electric typewriting, geographic filing, carbon paper process, applying for a job, full-key adding machine, bookkeeping/accounting machines, ten-key adding machine, manual typewriting, Gregg shorthand, electronic calculator, transcribing machine, stencil process, and fluid process.

Teacher-coordinators perceived they taught seventeen of the nineteen items, in which a significant difference existed, at a significantly higher level than graduates perceived these items to be used in office occupations. Only two of these nineteen items; bookkeeping/accounting machines, and addressing machine skill, were perceived to have been used by graduates at a higher level than teachers attempted to teach that skill or knowledge. The data indicated that teacher-coordinators are setting high standards.

A significant difference did not exist between the perceived levels of the teaching of skills and knowledge and the perceived levels of their use in twenty-three of the forty-two items listed on the questionnaire. The items are as follows: numeric filing, subject filing, recordkeeping, automatic typewriting, proportional space typewriting, machine shorthand, composing letters, telephone training, receptionist duties, use of reference materials, simulated key punch, key punch, appearance, attitude, travel and transportation, office supplies, parliamentary procedure, offset printing process, photocopier, key-driven calculator, business math, personal money management, and consumer education.

A summary of the answers to the secondary questions of the study follows:

1. All items of skill or knowledge listed on the instrument were taught at least at the .51 mean level with the following exceptions; automatic typewriting, machine shorthand, bookkeeping/accounting machines, addressing machine skill, simulated key punch, and key-driven calculator.

2. The levels of proficiency in which teacher-coordinators of the state of Virginia Teach skills and knowledge are as follows:

Low Level (.51-1.50): Geographic filing, subject filing, proportional space typewriting, key punch, parliamentary procedure, offset printing process, and rotary calculator.

Average Level (1.51-2.50): Numeric filing, recordkeeping, manual typewriting, Gregg shorthand, transcribing machine, banking procedures, composing letters, use of reference materials, oral and written reports, travel and transportation, office supplies, photocopier, full-key adding, business math, personal money management, and consumer education.

High Level (2.51-3.00): Alphabetic filing, standard electric typewriting, business ethics, telephone training, receptionist duties, appearance, attitude, fluid process, stencil process, carbon paper process, ten-key adding, electronic calculator, and applying for a job.

3. All items of skill or knowledge listed on the instrument were used at least at the .51 mean level or above with the following

exceptions; automatic typewriting, machine shorthand, simulated key punch, key punch, and key-driven calculator.

4. The levels of training needed by graduates of secondary Cooperative Office Education programs who are employed in office occupations are as follows:

Low Level (.51-1.50): Geographic filing, subject filing, manual typewriting, proportional space typewriting, Gregg shorthand, transcribing machine, bookkeeping/accounting machines, addressing machine skill, banking procedures, oral and written reports, travel and transportation, parliamentary procedure, fluid process, stencil process, offset printing process, full-key adding machine, rotary calculator, electronic calculator, and consumer education.

Average Level (1.51-2.50): Alphabetic filing, numeric filing, recordkeeping, standard electric typewriting, business ethics, composing letters, receptionist duties, use of reference materials, office supplies, carbon paper process, photocopier, ten-key adding machine, business math, personal money management, and applying for a job.

High Level (2.51-3.00): Telephone training, appearance, and attitude.

5. The great majority of teacher-coordinators did not indicate new items of skill or knowledge should be added to the Cooperative Office Education curriculum.

## CONCLUSIONS

1. Teacher-coordinators are not aware of the level of the skill or knowledge needed by their graduates for successful employment in office occupations.

2. Teacher-coordinators perceive themselves to be attempting to teach skills and knowledge, in general, at a high level.

3. Most teacher-coordinators do not perceive that they need to add further items of skill or knowledge to those listed on the questionnaire.

## RECOMMENDATIONS

Based on the findings and conclusions of the study it is recommended that:

1. Teacher-coordinators should reduce the emphasis on the teaching of alphabetic and geographic filing. Perhaps more time should be devoted to giving attention to filing practices of employers who are providing cooperative work experience for students in the program. Some time could also possibly be devoted to students on an individual basis in the area of disposal of obsolete files in accordance with established disposal procedures of employers.

2. Teacher-coordinators should devote less time in the developing of proficiency levels of students with regard to standard electric typewriting and manual typewriting skills. Perhaps more emphasis could be placed on editing material for possible errors in grammar, spelling, punctuation, and content; developing the skill of

students in composing their own letters in the handling of routine correspondence; and routine maintenance of typewriters and other office machines.

3. Teacher-coordinators should spend less time on developing Gregg shorthand and transcribing machine skills. Coordinators could possibly devote some of the time used in overtraining in this area to the task of familiarizing students with the local employers' entry level job requirements in regard to shorthand, or a more concentrated effort could be made to develop the shorthand skills of those students who use shorthand in their work with emphasis towards the use of specialized vocabularies needed on those jobs.

4. Teacher-coordinators should spend less time stressing business ethics. Perhaps more time should be devoted to giving attention to stressing each employer's services offered, products, types of clientele, and organizational structure; and place more emphasis on standards of work priorities according to routine revisions applicable to the job.

5. Teacher-coordinators should put more emphasis on developing a higher level of skill for students in regard to bookkeeping/accounting machines. If bookkeeping/accounting machines are not readily available, time should possibly be used in locating these types of machines in the business community and permission be obtained from the employer(s) to expose students to them for short periods of time. Several class visits might be needed to gain the desired skill level.

The teacher could volunteer his/her time to acquire the skill to operate these machines prior to the class visits.

6. Teacher-coordinators should develop a higher level of skill in their students in the use of addressing machines. If addressing machines are not readily available, time should possibly be used in locating this type of machine in the business community and permission be obtained from employer(s) to expose students to them for short periods of time. Several class visits might be needed to gain the desired skill level. The teacher could volunteer his/her time to acquire the skill to operate these machines prior to the class visits.

7. Emphasis should be lessened in the teaching of banking procedures. The time used in overtraining in this area could be devoted to the developing of skills in the undertrained area of the use of bookkeeping/accounting machines.

8. In the area of communication skills, teacher-coordinators should put less emphasis on oral and written reports and possibly concentrate their efforts to the task of teaching skills and knowledge needed in handling of customer inquiries and complaints, and getting along with fellow workers and employers. Role playing could be a highly beneficial instrument in the teaching of these skills and knowledge. Ideas could be solicited from guidance counselors and employers on how to best develop these skills and knowledge.

9. Teacher-coordinators should devote less time in developing skills and knowledge in the areas of duplicating and copying skills of fluid process, stencil process, and carbon paper process. This time

could be devoted to the teaching of skills and knowledge concerned with mailing procedures such as the use of zip code directories and postage machines.

10. Teacher-coordinators should devote less time in developing skills in the use of the following office machines; full-key adding machine, ten-key adding machine, rotary calculator, and electronic calculator. The time which has been used in overtraining in these skills could be devoted to developing of skills in the undertrained area of the use of addressing machines.

11. Teacher-coordinators should devote less time to the teaching of the skill or knowledge of applying for a job. Perhaps it would be more beneficial to devote this time to the teaching of the requirements which must be met to retain a job after employment. The most common reason for dismissal of employees from jobs could be emphasized. The technique of role playing could be a valuable tool in the teaching of this skill or knowledge.

This study, like the study by Lee (1974), found that Cooperative Office Education teachers taught several skills or knowledge at a higher level than was needed by office workers in their jobs. Those areas of skill or knowledge in which there was agreement are as follows: geographic filing, shorthand, transcribing machine, business ethics, banking procedures, oral and written reports, fluid and stencil process duplication, electronic and rotary calculator, and applying for a job. Burkett (1972) concurred with the present study in that teachers were found to emphasize shorthand skills to a higher degree than graduates believed was needed in their work.



This study, unlike the Lee (1974) study, found that additional items of skill or knowledge were taught at a higher level than graduates needed in their office work. These items are alphabetic filing, standard electric and manual typewriting, carbon paper process, full-key adding machine, and ten-key adding machine. Also, the items bookkeeping/accounting machines, and addressing machine skill, were found to be taught at a lower level than the level at which graduates used them in their work. The findings of the Kaplan (1976) study were in disagreement with the present findings. Kaplan found that there was a need to put more emphasis on typing and shorthand skills.

#### Recommendations for Further Study

1. It is recommended that a similar study be conducted in the Cooperative Office Education programs in Virginia at a later time for the purpose of comparison with this study.
2. It is recommended that a replication of this study be conducted in other states. In further replications, it is suggested that one more factor be considered. The study should include perceptions of employers compared to the perceptions of teacher-coordinators and graduates.
3. It is recommended that further studies be conducted for the purpose of determining teacher-coordinators' knowledge of entrance level requirements of office related occupations.
4. It is recommended that further studies be conducted to develop methods for the purpose of preventing overtraining and under-

training of skills and knowledge in Cooperative Office Education programs.

5. It is recommended that further studies be conducted for the purpose of determining the reasons for the lack of male involvement in Cooperative Office Education programs and determining means for correcting this lack of involvement.

6. It is recommended that further studies be conducted to determine what difference exists between the actual level of learning and the level that teachers attempt to teach.

#### Additional Recommendations and Suggestions

This section of the study was not based upon data from the study. However, these additional recommendations and suggestions could be of benefit to teacher-coordinators.

A simple, systematic follow-up procedure could be initiated by each teacher-coordinator for the purpose of contacting each graduate on a yearly basis. Positions that graduates hold could be ascertained and feedback regarding the program given consideration for possible program changes. Former graduates could be utilized as resource persons in the classroom.

A community survey could perhaps be one of the best ways for teacher-coordinators to familiarize themselves with the business community. Considering that an educator has limited time, maybe the survey could be conducted during the summer months to determine the types of businesses in the area, employment needs, types of entrance

tests used by employers, business machines used, and job entry-level requirements.

Teacher-coordinators could give consideration to working several weeks during the summer in the local community on a volunteer basis to develop skills that would be beneficial in the classroom. This could prove especially beneficial when a new employer or new business machine is introduced into the community.

Job analysis is an area where teacher-coordinators could place emphasis. This knowledge is an important tool in determining new office jobs, identifying changes that have occurred in establishing positions, and as a basis for establishing performance standards. Perhaps a job analysis of at least one job classification each year would be a realistic objective.

The use of diagnostic tests could be utilized in identifying possible weaknesses and strengths of students in the areas of skills and knowledge. These data could serve as a basis for providing individual attention and instructional modification to better meet the needs of each student. Curriculum revision might also be considered.

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## **APPENDICES**

**APPENDIX A**  
**TEACHER-COORDINATOR SURVEY**

TEACHER-COORDINATOR SURVEY  
COOPERATIVE OFFICE EDUCATION

Listed on the following pages are a number of skill and knowledge areas that may be taught in cooperative vocational office training programs. Please check each item listed in terms of the levels of proficiency which you attempted to develop in cooperative vocational office training students in the 1974-75 class. If you do not teach a particular skill or knowledge, please check not taught. If you do teach a particular skill or knowledge, please check low, average, or high as defined below:

- 1 = Low. Students taught at this level have only been introduced to this particular skill or knowledge. They have been taught at the acquaintanceship level only. Additional on-job and/or classroom training will be necessary for them to perform competently.
- 2 = Average. Students taught at this level have acquired the basic minimums of this skill or knowledge for entry level employment. They can usually be expected to perform this skill or knowledge without additional on-job and/or classroom training.
- 3 = High. Students taught at this level have mastery of this particular skill or knowledge. They can be expected to perform at a high level of competency without additional on-job and/or classroom training.

Below is an example:

Areas of Skill or Knowledge	This is the level of proficiency which I attempt to develop in students.			
	Not taught 0	Low 1	Average 2	High 3
Art	✓			
Literature			✓	
Composition				✓

Please indicate a response for each item. Do not omit any items.

Areas of Skill or Knowledge	This is the level of proficiency which I attempted to develop in students.			
	Not Taught 0	Low 1	Average 2	High 3
1. Filing:				
<u>Alphabetic</u>				
<u>Numeric</u>				
<u>Geographic</u>				
<u>Subject</u>				
2. Recordkeeping				
3. Typewriting:				
<u>Standard Electric Typewriting</u>				
<u>Manual Typewriting</u>				
<u>Automatic (Cold typesetting)</u>				
<u>Proportional space typewriting (IBM Executive)</u>				
Other (please specify)				
4. Dictating and transcribing skills:				
<u>Gregg shorthand</u>				
<u>Transcribing machine</u>				
<u>Machine shorthand (stenograph)</u>				
Other (please specify)				
5. Bookkeeping/accounting machines				
6. Business ethics				
7. Addressing machine skill				
8. Banking procedures				

Areas of Skill or Knowledge	This is the level of proficiency which I attempted to develop in students.			
	Not Taught 0	Low 1	Average 2	High 3
9. Communications:				
<u>Composing letters</u>				
<u>Telephone training</u>				
<u>Receptionist duties</u>				
<u>Use of reference materials</u>				
<u>Oral and written reports</u>				
Other (please specify)				
10. Data processing:				
<u>Simulated key punch</u>				
<u>Key punch</u>				
Other (please specify)				
11. Personal development:				
<u>Appearance</u>				
<u>Attitude</u>				
12. <u>Travel and transportation</u>				
13. <u>Office supplies</u>				
14. <u>Parliamentary procedure</u>				
15. Duplicating and copying skills:				
<u>Fluid process (spirit)</u>				
<u>Stencil process (mimeograph)</u>				
<u>Offset printing process</u>				
<u>Carbon paper process</u>				
<u>Photocopier</u>				
Other (please specify)				

Areas of Skill or Knowledge	This is the level of proficiency which I attempted to develop in students.			
	Not Taught 0	Low 1	Average 2	High 3
16. Office machine skills:				
<u>Full-Key adding</u>				
<u>Ten-Key adding</u>				
<u>Rotary calculator</u>				
<u>Key-driven calculator (comptometer)</u>				
<u>Electronic calculator</u>				
Other (please specify)				
17. <u>Business math</u>				
18. <u>Personal money management</u>				
19. <u>Consumer education</u>				
20. <u>Apply for a job</u>				

Are there other skills and knowledge which you teach, but which are not listed above? If so, please specify and indicate the level of proficiency attempted to develop:

	Low	Average	High
21.			
22.			
23.			
24.			



25. Are there skills and knowledge which you feel need to be added to your program but which are not a part of it? If so, please specify:

_____	_____
_____	_____
_____	_____
_____	_____

26. Biographical Data

Total Years of Teaching Experience \_\_\_\_\_

Number of Years as a Coordinator \_\_\_\_\_

Degrees Held and Years Obtained \_\_\_\_\_  
\_\_\_\_\_

Major Field(s) of Study \_\_\_\_\_  
\_\_\_\_\_

Years of Office Work Experience Outside of Education \_\_\_\_\_

LIST OF 1975 GRADUATES OF COOPERATIVE OFFICE EDUCATION  
WHO ARE EMPLOYED IN OFFICE OCCUPATIONS

Please fill in the following:

\_\_\_\_\_ Total number of 1975 graduates.

\_\_\_\_\_ Total number of graduates who are enrolled in postsecondary education (college, vo-tec schools, etc.)

\_\_\_\_\_ Total number of graduates who are employed in occupations other than office occupations.

In the space below, please list the names and last known mailing addresses of the 1975 graduates who are employed in office occupations. List only those who are employed in office occupations. Use the back of this page if additional space is needed.

	Name	Street Address or P.O. Box	City and State	Zip code
1.				
2.				
3.				
4.				
5.				
6.				
7.				

APPENDIX B  
GRADUATE SURVEY

## GRADUATE SURVEY

## COOPERATIVE OFFICE EDUCATION

Do you use the following skills and knowledge in your present work? If you do not use a particular skill or knowledge in your work, please check not used. If you use a particular skill or knowledge, please check the level of training which you need in your present work—low, average, or high - as defined below:

- 1 = Low. I only needed acquaintanceship or introductory level training in this skill or knowledge to do my work well.
- 2 = Average. I needed to know the basic minimums of this skill or knowledge to do my work well.
- 3 = High. I needed mastery of this skill or knowledge to do my work well.

Below is an example:

Areas of Skill or Knowledge	I have needed the following level of training in my work.			
	Not Used 0	Low 1	Average 2	High 3
Art	✓			
Literature			✓	
Spelling				✓

Please indicate a response for each item. Do not omit any item.

Areas of Skill or Knowledge	I have needed the following level of training in my work.			
	Not Used 0	Low 1	Average 2	High 3
1. Filing:				
<u>Alphabetic</u>				
<u>Numeric</u>				
<u>Geographic</u>				
<u>Subject</u>				
2. Recordkeeping				
3. Typewriting:				
<u>Standard Electric Typewriting</u>				
<u>Manual Typewriting</u>				
<u>Automatic (Cold typesetting)</u>				
<u>Proportional space typewriting (IBM Executive)</u>				
Other (please specify)				
4. Dictating and transcribing skills:				
<u>Gregg shorthand</u>				
<u>Transcribing machine</u>				
<u>Machine shorthand (stenograph)</u>				
Other (please specify)				
5. Bookkeeping/accounting machines				
6. Business ethics				
7. Addressing machine skill				
8. Banking procedures				

Areas of Skill or Knowledge	I have needed the following level of training in my work.			
	Not Used 0	Low 1	Average 2	High 3
9. Communications:				
<u>Composing letters</u>				
<u>Telephone training</u>				
<u>Receptionist duties</u>				
<u>Use of reference materials</u>				
<u>Oral and written reports</u>				
<u>Other (please specify)</u>				
10. Data processing:				
<u>Simulated key punch</u>				
<u>Key punch</u>				
<u>Other (please specify)</u>				
11. Personal development:				
<u>Appearance</u>				
<u>Attitude</u>				
12. <u>Travel and transportation</u>				
13. <u>Office supplies</u>				
14. <u>Parliamentary procedure</u>				
15. Duplicating and copying skills:				
<u>Fluid process (spirit)</u>				
<u>Stencil process (mimeograph)</u>				
<u>Offset printing process</u>				
<u>Carbon paper process</u>				
<u>Photocopier</u>				
<u>Other (please specify)</u>				

Areas of Skill or Knowledge	I have needed the following level of training in my work.			
	Not Used 0	Low 1	Average 2	High 3
16. Office machine skills:				
<u>Full-key adding</u>				
<u>Ten-key adding</u>				
<u>Rotary calculator</u>				
<u>Key-driven calculator (comptometer)</u>				
<u>Electronic calculator</u>				
Other (please specify)				
17. Business math				
18. Personal money management				
19. Consumer education				
20. Applying for a job				

Are there other skills and knowledge which you have needed, but which were not listed above? If so, please specify:

	Low	Average	High
21.			
22.			
23.			
24.			

25. What is your job title? Please check the one which most accurately describes your position:

- |   |   |
|---|---|
| <input type="checkbox"/> Secretary            | <input type="checkbox"/> Receptionist                 |
| <input type="checkbox"/> Clerk typist         | <input type="checkbox"/> Other (Please specify below) |
| <input type="checkbox"/> General office clerk | _____   |
| <input type="checkbox"/> Stenographer         |   |

26. Are you employed \_\_\_\_ full time or \_\_\_\_ part time? Please check one.
27. Number of months employed in office occupations since graduation ( \_\_\_\_ months).
28. How many months have you worked for your present employer? ( \_\_\_\_ months).



**APPENDIX C**  
**CORRESPONDENCE**



COLLEGE OF EDUCATION

## VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY

Blacksburg, Virginia 24061

DIVISION OF VOCATIONAL-TECHNICAL EDUCATION

May 6, 1976

Dear Superintendent:

I am a doctoral candidate at Virginia Polytechnic Institute and State University working towards an Ed.D. degree in Vocational-Technical Education. I have ten years of teaching experience, the majority of which has been spent as a business educator.

Presently, I am in the process of gathering data for my dissertation. The purpose of the study is to determine the skills and knowledge which were taught in the secondary Cooperative Office Education Programs in Virginia and to assess whether these skills and knowledge are meeting the needs of graduates who are employed in office related jobs one year after having graduated from the program.

I have been given support and encouragement by \_\_\_\_\_ (State Supervisor, Business Education) staff, especially \_\_\_\_\_ and \_\_\_\_\_ in securing the necessary data to pursue this type of study. State Assistant Supervisor, Business Education, has also given her time and invaluable advice in addressing this particular study.

The study includes selected teachers and the Cooperative Office Education trainees who graduated in the 1974-75 school year. Through random sampling at least one teacher-coordinator in your school division has been selected as one of the teachers who will be included in this study.

We are asking your support and approval in allowing the selected teacher(s) to take part in this study. They will be asked to complete a questionnaire and provide a list of the graduates and their addresses who completed their program in the 1974-75 school year. The final results will not identify the school, teacher, or graduate.

It would be greatly appreciated if you would sign the space provided in this letter granting your approval and return this letter before May 17, 1976 in the enclosed envelope provided for your convenience.

Sincerely,

✓ Jim L. Adkins  
Graduate Research Assistant

APPROVAL OF STUDY

\_\_\_\_\_  
(Name)\_\_\_\_\_  
(date)

COLLEGE OF EDUCATION  
VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY

Blacksburg, Virginia 24061

DIVISION OF VOCATIONAL &amp; TECHNICAL EDUCATION

September 1, 1976

Dear Teacher-Coordinator:

Your help is needed in conducting a research project involving selected teacher-coordinators of the Cooperative Office Education programs in Virginia.

\_\_\_\_\_, State Supervisor of Business Education, is very much interested in this study. His staff, especially \_\_\_\_\_ and \_\_\_\_\_ have been most helpful in helping me to secure the necessary data to pursue this study. \_\_\_\_\_, State Assistant Supervisor of Business Education, has also given her time and invaluable advice in addressing this particular study.

The purpose of the study is to determine the skills and knowledge which were taught in the secondary Cooperative Office Education programs in Virginia and to assess whether these skills and knowledge are meeting the needs of graduates who are employed in office related jobs one year after having graduated from the program.

You can be of help in two ways. First, will you please complete the questionnaire following the directions on the first page? Secondly, will you please include with the questionnaire a list of the 1975 graduates of your program who are presently employed in office occupations and their mailing addresses?

I have obtained written approval from the Superintendent for you to participate in the study and to release the names of the graduates and their mailing addresses. A copy of his approval is enclosed.

For this survey to be useful, it is important that all teacher-coordinators participate in order to get an accurate picture of the Co-op Programs in Virginia. Your response will be strictly confidential and in no way reflect on your professional competency. No individual teacher, school, or student will be identified in summarizing the results of the study.

I realize this is a busy time for educators, which makes me even more grateful if you will complete the instrument and return it to me. Your cooperation is most gratefully appreciated.

Please indicate on the questionnaire if you would like to receive the results of the survey.

Sincerely,

Jim L. Adkins  
Graduate Research Assistant

Enclosures



COLLEGE OF EDUCATION

VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY

*Blacksburg, Virginia 24061*

DIVISION OF VOCATIONAL-TECHNICAL EDUCATION

September 15, 1976

Dear Teacher-Coordinator:

About two weeks ago, a letter and questionnaire were sent to you requesting your cooperation in a research project which I am conducting at Virginia Polytechnic Institute and State University. As a Business Educator, I know you have a very busy schedule.

Please take a few minutes to provide the information requested and return the questionnaire to me as soon as possible. Your response is needed in order to give meaning to my study.

May I hear from you soon?

Sincerely,

Jim L. Adkins  
Graduate Research Assistant



COLLEGE OF EDUCATION

VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY

*Blacksburg, Virginia 24061*

DIVISION OF VOCATIONAL & TECHNICAL EDUCATION

October 1, 1976

Dear Graduate:

A study of cooperative office education programs in the secondary schools of Virginia is being conducted with the support of the State Department of Business Education and members of the staff of the Division of Vocational-Technical Education at Virginia Polytechnic Institute and State University.

As a 1975 graduate of the cooperative office education program, you are asked to complete the enclosed questionnaire following the instructions given on page one. Your reactions and ideas are extremely important to the study and will be kept strictly confidential.

The success of the study depends on graduates like yourself who are employed in office occupations. Please complete the questionnaire and return it in the enclosed stamped and self-addressed envelope.

Your cooperation is greatly appreciated.

Sincerely,

✓ Jim L. Adkins  
Graduate Research Assistant

Enclosures



VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY

COLLEGE OF EDUCATION

*Blacksburg, Virginia 24061*

DIVISION OF VOCATIONAL & TECHNICAL EDUCATION

October 15, 1976

Dear Graduate:

Recently a questionnaire was mailed to you asking you to cooperate in a study of cooperative office education programs. I have not received your questionnaire and I am concerned that you may not have received it. Another copy of the questionnaire is enclosed for your convenience.

We need your help. As a former student in the cooperative office education program, your reply is vitally important and will be greatly appreciated.

Please complete and return the questionnaire in the envelope provided.

Thank you for your cooperation.

Sincerely,

*J*im L. Adkins  
Graduate Research Assistant

Enclosures

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the scanned document**

LEVELS AT WHICH SKILLS OR KNOWLEDGE IN COOPERATIVE OFFICE EDUCATION  
IN VIRGINIA ARE TAUGHT AS PERCEIVED BY TEACHERS AND THE  
LEVEL USED AS PERCEIVED BY GRADUATES

by

Jimmie L. Adkins

(ABSTRACT)

The purpose of this study was to determine the perceived skills and knowledge levels that were being taught in the Cooperative Office Education programs in the state of Virginia and to determine if those skills and knowledge competency levels are accurately meeting the needs as perceived by the graduates who are employed in office occupations.

The population for the study consisted of all the secondary Cooperative Office Education teacher-coordinators in the state of Virginia who conducted programs during the 1974-1975 school year and who continued in that same capacity in the 1975-1976 school year, and their 1974-1975 graduates who were employed in office occupations.

Instruments were mailed to graduates employed in office occupations upon return of the teacher-coordinator responses. The data were processed at the Computing Center, Virginia Polytechnic Institute University, Blacksburg, Virginia. The Statistical Package for the Social Sciences was the computer program that was used. A t-Test was used to determine if there were significant differences in the level taught by teacher-coordinators and the perceived level of use by graduates for each of the forty-two items of skill and knowledge. The differences were considered significant at the .01 level.



Teacher-coordinators of the Cooperative Office Education programs taught skills and knowledge at a significantly different level than graduates employed in office occupations used them in nineteen of the forty-two skills and knowledge items listed on the questionnaire. The items are as follows: alphabetic filing, oral and written reports, business ethics, addressing machine skill, rotary calculator, banking procedures, standard electric typewriting, geographic filing, carbon paper process, applying for a job, full-key adding machine, bookkeeping/accounting machines, ten-key adding machine, manual typewriting, Gregg shorthand, electronic calculator, transcribing machine, stencil process, and fluid process.

Seventeen of these nineteen items were perceived to have been taught at a significantly higher level than graduates perceived these items to be used in office occupations. Only two of these nineteen items; bookkeeping/accounting machines, and addressing machine skill, were perceived to have been used by graduates at a higher level than teachers attempted to teach that skill or knowledge. The data indicated that teacher-coordinators were setting high standards in the Cooperative Office Education programs of Virginia.

A significant difference did not exist between the perceived levels of teaching skills and knowledge and the perceived levels of their use for twenty-three of the forty-two items listed on the questionnaire. The items are as follows: numeric filing, subject filing, recordkeeping, automatic typewriting, proportional space typewriting, machine shorthand, composing letters, telephone training, receptionist duties, use of refer-

ence materials, simulated key punch, key punch, appearance, attitude, travel and transportation, office supplies, parliamentary procedure, offset printing process, photocopier, key-driven calculator, business math, personal money management, and consumer education.