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edges, and Work Attitudes as Perceived by Employers/Office Supervisors
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presented by

Ghani Ruth Moses

has been accepted towards fulfillment
of the requirements for

Ph.D. degree in Teacher Education


Major professor

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AN ANALYSIS OF THE GENERAL OFFICE CLERICAL ENTRY-LEVEL
SKILLS, KNOWLEDGES, AND WORK ATTITUDES AS PERCEIVED
BY EMPLOYERS/OFFICE SUPERVISORS AND INCUMBENT
OFFICE EMPLOYEES IN GREATER LANSING
AREA BUSINESSES

By

Gnani Ruth Moses

A DISSERTATION

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ABSTRACT

OFFICE CLERICAL ENTRY-LEVEL AN ANALYSIS OF THE GENERAL SKILLS, KNOWLEDGES, AND WORK ATTITUDES AS PERCEIVED BY EMPLOYERS/OFFICE SUPERVISORS AND INCUMBENT OFFICE EMPLOYEES IN GREATER LANSING AREA BUSINESSES

By

Gnani Ruth Moses

The study was designed to determine if significant differences existed between the perceptions of employers/office supervisors and incumbent, first year, entry-level general office clerical employees with respect to the importance of skills, knowledges, and work attitudes required for entry-level general office clerical employees in the greater Lansing area businesses, according to the size of business office and the type of business organization. The purpose of this study was to supply information for developing innovative and relevant curriculum in the office education field.

Participants for this study were randomly selected from the membership lists of the Lansing Regional Chamber of Commerce. Two separate questionnaires were developed to obtain data from the employers/office supervisors and

incumbent, first year, entry-level general office clerical employees. Copies of these two questionnaires were mailed to 300 businesses and industries in the greater Lansing area. One hundred and forty-two employers/office supervisors and 92 incumbent, entry-level office employees completed and returned the questionnaires.

The six hypotheses identified in this study were tested using the F ratio. The analysis of data revealed significant differences between the perceptions of employers/office supervisors and incumbent, entry-level office employees on the importance of skills and knowledges required for entry-level general office clerical employees in the following areas: keyboarding/typing, word processing, data processing, computations, and communications. Significant differences were also found between the perceptions of the two groups on the importance of work attitudes.

Respondents (employers/office supervisors and incumbent, entry-level office employees) among the three sizes of business offices varied on the importance of skills and knowledges for the following areas: keyboarding/typing, data processing, records management, computations, and communications. The respondents also varied on the importance of work attitudes.

Significant differences were also found in the perceptions of respondents among the five types of business organizations on the importance of skills and knowledges required in all six areas. Significant differences were further found in the perceptions of respondents on the importance of work attitudes.

The rank ordering of skills, knowledges, and work attitudes as perceived by respondents revealed significant differences. Some skills, knowledges, and work attitudes were rank ordered and perceived similarly, while others were rank ordered and perceived differently. The rank ordering of seven areas as perceived by respondents revealed the following areas as important: work attitudes, communications, computations, and keyboarding/typing.

DEDICATED

to

My husband Dr. Y. J. Moses, and children

Ken and Juanita, for their patience,

understanding, and encouragement

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CHAPTER 1

INTRODUCTION

In our society a person's work tends to determine his personal and social status. Likewise, his educational achievement also tends to determine the kind or level of work he does. Hence, there is an obvious relationship between the world of work and the world of school. Such a relationship calls for a high degree of cooperation between businesses and schools.¹

Johnson² writes that businessmen are eager to close the gap between schools and businesses and bring a closer working relationship. They want to cooperate with schools to plan programs and course offerings to train students to obtain jobs in the business world.

She further states that size of the business also seems to determine to what extent students should be trained. In her article, based on taped sessions of businessmen, she indicates:

¹Samuel M. Burt, and Leon M. Lessinger. Volunteer Industry Involvement in Public Education. (Lexington, Massachusetts: Heath Lexington Books, 1970), p. 31.

²Beverly B. Johnson, "Conversations with Business and Industry," American Vocational Journal 46 (1971): 59-61.

Small businesses do not have the staff or facilities to train employees after they get out of schools and go to work. Small companies have to have people who will be able to start performing in their jobs soon after they are employed. Therefore, small companies must often hire their people away from the large companies which have gone to the time and expense to train them.³

Cox⁴ writes that office educators in rural areas focus office training on skills and knowledges needed for small businesses which tend to lack resources or equipment. But he admonishes that this should not be the case, because students, upon completion of their studies, move to metropolitan areas to look for jobs in large businesses. Therefore, they must be well equipped with appropriate skills and knowledges in office education and be given the advantage to compete for employment in small or large businesses.

In medium businesses, the literature indicates that, depending on the number of office employees in its work force and the volume of work, management tends to hire office employees either with specific skills or with general skills. Sometimes, depending on finances, office employees in medium businesses are given opportunities to take seminars or courses to update their skills and knowledges.

³Ibid., p. 60.

⁴Jerry R. Cox, "Word Processing Instruction in Small Schools," Business Education Forum 34 (March, 1980): 14-16.

According to the literature, large businesses have various departments and a large volume of work; therefore, large businesses tend to look for office employees with more specific office skills than general skills. Also large businesses have the resources and finances to hire trainers to conduct workshops and in-house seminars to update the skills and knowledges of office employees.

Therefore, when training students for office jobs office educators need to focus on skills, knowledges, and work attitudes that are important to any type or any size of business. Cox further declares, "We owe our students the training to obtain employment in any kind of office regardless of the size of the office, the location of the office, or the duties and tasks involved."⁵

Office automation has brought a revolution to the office. Some of the jobs in existence in the office education field a few years ago are now extinct. Other jobs in existence today may be eliminated in the future and replaced with improved methods of handling by technology. Office educators have an obligation to provide the best possible and up to date instruction to students. For many students in office education, the instruction they receive in schools is terminal. Therefore, it is important that these students be equipped with the best possible skills, knowledges, and work

⁵Ibid., p. 16.

attitudes to succeed. Students should be taught to be occupationally competent in the business world.

One of the ways in which office educators can ascertain whether the skills, knowledges, and work attitudes taught have been developed sufficiently is to determine what office supervisors and incumbent, first year, entry-level office employees say are the degree of skills, knowledges, and work attitudes necessary for initial employment. This study was undertaken to obtain current and accurate data in skills, knowledges, and work attitudes to use as the basis for reviewing and developing curricular offerings for entry-level general office clerical employees in office education.

Statement of the Problem

The problem of this study was to determine if there were significant differences between the perceptions of employers/office supervisors and incumbent, entry-level office employees with respect to the importance of skills, knowledges, and work attitudes required for entry-level general office clerical employees in the greater Lansing area businesses, according to the size of business office and the type of business organization.

Purpose of the Study

The purpose of this study was to supply information for developing relevant curriculum for office education. With this information, office education teachers can teach skills, knowledges, and work attitudes that are meaningful in terms of future employment, improve present programs, buy new equipment for the classroom, and delete areas of training which are becoming obsolete. Emphasis could be made in areas of instruction where employers/office supervisors and incumbent, first year, entry-level general office clerical employees felt there is a need. This study was to benefit the most important asset of the community--teachers.

Research Questions

Answers to the following questions were considered for reaching conclusions in this study.

1. Does the perceived importance on the part of employers/office supervisors and incumbent, first year, entry-level general office clerical employees differ with respect to the skills and knowledges required for entry-level general office clerical employees in the following areas:

- a. keyboarding/typing
- b. word processing
- c. data processing
- d. records management
- e. computations
- f. communications

2. Does the perceived importance on the part of employers/office supervisors and incumbent, first year, entry-level general office clerical employees differ with respect to the work attitudes required for entry-level general office clerical employees.

3. Does the perceived importance on the part of respondents (employers/office supervisors and incumbent, first year, entry-level general office clerical employees) differ among small, medium, and large business offices with respect to the skills and knowledges required for entry-level general office clerical employees in the following areas:

- a. keyboarding/typing
- b. word processing
- c. data processing
- d. records management
- e. computations
- f. communications

4. Does the perceived importance on the part of respondents (employers/office supervisors and incumbent,

first year, entry-level general office clerical employees) differ among small, medium, and large business offices with respect to the work attitudes required for entry-level general office clerical employees.

5. Does the perceived importance on the part of respondents (employers/office supervisors and incumbent, first year, entry-level general office clerical employees) differ in the types of business organizations with respect to the skills and knowledges required for entry-level general office clerical employees in the following areas:

- a. keyboarding/typing
- b. word processing
- c. data processing
- d. records management
- e. computations
- f. communications

6. Does the perceived importance on the part of respondents (employers/office supervisors and incumbent, first year, entry-level general office clerical employees) differ in the various types of business organizations with respect to the work attitudes required for entry-level general office clerical employees.

7. Does the perceived importance on the part of employers/office supervisors and incumbent, first year, entry-level general office clerical employees differ in the rank ordering of skills, knowledges, and work

attitudes in the seven areas required for entry-level general office clerical employees.

8. Does the perceived importance on the part of employers/office supervisors and incumbent, first year, entry-level general office clerical employees differ in the rank ordering of the seven areas required for entry-level general office clerical employees.

Hypotheses

The following hypotheses will be tested as a part of this study:

1. There are no significant differences regarding the job titles with respect to the perceived importance on the part of employers/office supervisors and incumbent, first year, entry-level general office clerical employees in skills and knowledges required for entry-level general office clerical employees in the following areas:

- a. keyboarding/typing
- b. word processing
- c. data processing
- d. records management
- e. computations
- f. communications

2. There are no significant differences regarding the job titles with respect to the perceived importance on

the part of employers/office supervisors and incumbent, first year, entry-level general office clerical employees in work attitudes required for entry-level general office clerical employees.

3. There are no significant differences regarding the sizes (small, medium, and large) of business offices with respect to the perceived importance on the part of respondents (employers/office supervisors and incumbent, entry-level general office clerical employees) in skills and knowledges required for entry-level general office clerical employees in the following areas:

- a. keyboarding/typing
- b. word processing
- c. data processing
- d. records management
- e. computations
- f. communications

4. There are no significant differences regarding the sizes (small, medium, and large) of business offices with respect to the perceived importance on the part of respondents (employers/office supervisors and incumbent, first year, entry-level general office clerical employees) in work attitudes required for entry-level general office clerical employees.

5. There are no significant differences regarding the types of business organizations with respect to the

perceived importance on the part of respondents (employers/office supervisors and incumbent, first year, entry-level general office clerical employees) in skills and knowledges required for entry-level general office clerical employees in the following areas:

- a. keyboarding/typing
- b. word processing
- c. data processing
- d. records management
- e. computations
- f. communications

6. There are no significant differences regarding the types of business organizations with respect to the perceived importance on the part of respondents (employers/office supervisors and incumbent, first year, entry-level general office clerical employees) in work attitudes required for entry-level general office clerical employees.

The Need for the Study

For many years office occupations have been one of the leading opportunities in the job market. One has only to look at the classified section of any large city newspaper to substantiate such a statement. The Michigan Employment Security Commission (MESC) in Lansing indicated

that there were no openings in general office clerical field in the winter of 1988, because former openings were already filled. But they did predict that there would be more openings in the middle or late spring of 1988. Other agencies such as: Kelly Services, Manpower Temporary Services, Michigan State University, Davenport College, and others also indicated similar predictions as those of MESD.

At the national level, there will be a wide range of job skills needed by 1995.⁶ "Employment in jobs requiring a college education or specialized post-secondary technical training is expected to increase significantly between 1982 and 1995. However, many jobs that do not require post secondary training are also expected to expand significantly."⁷ Between 1982 and 1995 the demand for general office clerks will increase by 33 percent.⁸ "In 1984, secretaries held about 2,797,000 jobs making this one of the largest occupations in the U.S."⁹ By early 1990s, the demand for secretaries is expected to grow more slowly than the average. "Despite the slower

⁶George T. Silvestri, John M. Lukasiewicz, and Marcus E. Einstein, "Occupational Employment Projections Through 1995," Monthly Labor Review 106 (November, 1983): 35.

⁷Ibid.

⁸Ibid., p. 37.

⁹U.S., Department of Labor Bureau of Statistics, Occupational Outlook Handbook, (April, 1986), p. 282.

than average growth predicted, an exceptionally large number of jobs will be available through mid 1990s due to the need to replace experienced secretaries who transfer to other jobs or stop working."¹⁰

At the state level, according to the Michigan Occupational Forecasts(1990)¹¹, the need for office clerical employees in 1980 was for people to fill 646,500 jobs, and by 1990 that number is expected to increase to 718,700. It further states that there will be annual, average openings of 29,510 in office clerical occupations. The Michigan Employment Security Commission (MESC) indicates, "Clerical was the second largest occupational group after operating and maintenance. Clerical made up of 27.5 percent of the regulated industries total employment, about 35,810 individuals."¹²

At the local level, MESC further states that in the greater Lansing area (covering Clinton, Eaton, and Ingham counties) there will be a need for 43,125 office clerical workers by 1990, compared to 38,625 in 1980. The MESC continues by indicating that the annual demand will be for 1,781 jobs in greater Lansing area alone. This demand is

¹⁰Ibid., p. 283.

¹¹Michigan Occupational Forecasts (1990). Michigan Employment Security Commission, Bureau of Research and Statistics, Detroit, MI., p. 22.

¹²Michigan Employment Security Commission, Michigan Regulated and Trade Industries Occupational Employment Service, Detroit, MI (September, 1985), p. 7.

attributed to two main factors: (1) greater Lansing recorded a population growth of 11 percent compared to four percent statewide, and (2) the greater Lansing economy is strongly influenced by auto related manufacturing, the location of the capitol, a major university, and government offices. According to MESC, the greater Lansing economy is expected to perform slightly better than the state.

A report by the National Business Education Association Task Force on New Concepts and Strategies for Business Education¹³ states that the demand for office workers will remain strong throughout the century. Therefore, it is important that the office educators need to train students with appropriate skills, knowledges, and work attitudes to meet that demand.

Morris and Kilpatrick¹⁴ write that if office education is to continue to provide employees for the growing number of office occupations, teachers must constantly survey local business needs to keep their programs up to date with changing technology. They recommend that teachers should survey skills, knowledges,

¹³"Future Directions and Recommended Actions for Business Education: A Report by the NBEA Task Force on New Concepts and Strategies for Business Education," Business Education Forum 64 (November, 1983): 3-6.

¹⁴Debbie Morris, and Retha H. Kilpatrick, "Skills and Knowledges Needed for Entry-Level Office Occupations." The Balance Sheet (1985): 12-14.

and attitudes required in entry-level office occupations to determine if students have developed sufficiently the degree of skill necessary to secure initial employment.

Delimitations

The following are delimitations of the study:

1. The persons responding to the questionnaire may have different job titles and positions, and their responsibilities may differ from one another and this may affect their responses.
2. The respondents might interpret questions differently, which may also affect their responses.
3. A general office clerical employee may be called an office clerk, or a desk clerk. This may affect their responses.

Limitations

This study was limited to the perceptions of office supervisors and incumbent, first year, general office clerical employees in regard to the skills, knowledges, and work attitudes required by entry-level general office clerical employees in the greater Lansing area, covering Clinton, Eaton, and Ingham counties.

The distribution of the data-gathering instrument used in this study was limited to businesses and industries randomly selected from the two 1987 membership lists of Lansing Regional Chamber of Commerce.

Definition of Terms

Following are some of the terms used and their meanings for this particular study:

Business Community. It is a place in which businesses and industries are located and hire large number of employees. It is also a place in which it is expected that the majority of the graduates of a particular school, college, or career center will be employed.

Construction Type of Business Organization. For purposes of this study, construction type of business organizations consisted of only those who identified themselves on the questionnaire as construction type of business organizations.

Entry-Level Office Employee. For purposes of this study, a person who has been on the job in an office from three months to 15 months is an entry-level office employee.

Finance Related Type of Business Organization. For purposes of this study, finance related type of business

organizations consisted of insurance companies, accounting firms, CPA consulting firms, advertising specialists, real estate, and those who identified themselves on the questionnaire as finance type of business organizations.

General Office Clerical Employee. An employee who writes and/or types bills, statements, letters, and manuscripts is a general office clerical employee. That person might also sort and file documents, receive money from customers and deposit money in a bank, answer telephones and convey messages. Office duties of a general office clerk may vary from day to day. In this study, a general office clerk may be an office clerk, or a desk clerk.

Job Title. This category is comprised of employers/office supervisors and incumbent, first year, entry level general office clerical employees.

Knowledge. The understanding of how to perform a task is knowledge.

Large Business Office. For purposes of this study, a business with more than ten office workers is termed as a large business office.

Manufacturing Type of Business Organization. For purposes of this study, manufacturing type of business organizations include commercial, metal treating industries, and those who identified themselves on the

questionnaire as manufacturing type of business organizations.

Medium Business Office. For purposes of this study, a business with six to ten office workers is considered to be a medium business office.

Office Supervisor. An employee who supervises the office clerical staff, and evaluates their performance is an office supervisor. This person also coordinates the office work flow and reports to the administrative personnel in the business or industry. Sometimes an office supervisor might perform office tasks, such as: recording financial information, compiling data for typing of financial statements, typing confidential information, filing documents, and doing bookkeeping. In this study, an office supervisor could be an owner, a president, a vice-president, a personnel director, or a business manager.

Other Types of Business Organizations. For purposes of this study, other types of business organizations include education, communications, federal government, health care, transportation, law, agriculture, and mining,

Service Type of Business Organization. For purposes of this study, service type of business organizations include retail/sales, wholesale, human services, restaurants, management services, cultural services agency, food services, printing services, data processing

services, interior designing services, and those who identified themselves on the questionnaire as service type of business organizations.

Skill. The ability required to perform a task is a skill.

Small Business Office. For purposes of this study, a small business office is one that has five or fewer office workers in its work force.

Work Attitude. An employee's actions and behavior that are an indication of his/her commitment or lack of it toward his/her job compose his/her work attitude.

Summary

The literature indicates that a person's education and work determine his social status in the community. Therefore, there is a relationship between school and work. In office education, such a relationship calls for a cooperative effort between schools and businesses. It is necessary for office educators and school administrators to have current and accurate data to use as the basis for reviewing and developing course offerings for those being trained as office clerical employees. Students should be well trained and should be able to compete for office employment in any size of business office or in any type of business organization. This

study was undertaken to gather and analyze data on the perceptions of employers/office supervisors and incumbent, first year, entry-level general office clerical employees regarding skills, knowledges, and work attitudes required for entry-level general office clerical employees in greater Lansing area businesses and industries.

CHAPTER 2

REVIEW OF RELATED LITERATURE

A review of the literature was undertaken to establish a need for the study and to assist in determining appropriate skills, knowledges, and work attitudes needed for entry-level office workers. The review of this literature was divided into three main sections. The first section deals with a rationale for skills and knowledges survey, the second section deals with a rationale for work attitudes survey, and the third section deals with a review of related surveys.

Rationale for Skills and Knowledges Survey

Modern technology is changing the business world today more rapidly than ever before. Wagoner states: "The last ten years have brought more changes than the previous one hundred years, and industry experts will generally agree that the next five years will bring even more dramatic changes."¹⁵

¹⁵Kathleen P. Wagoner, "Now is the Time--," Journal of Business Education 56 (May, 1981): 297.

Ettinger¹⁶ emphasizes that office education should prepare students for the present as well as for the future and should provide students with the skills and knowledges of emerging technologies. Hence, it is apparent that there is a need for identification of current specific skills and knowledges in the area of office education. It means that the office educators must take an interest to seek out the changes in order to prepare students to be competent office workers for entry-level positions. To do this, they must regularly conduct research to determine what changes are taking place and what businesses expect of office workers and incorporate these findings into the curriculum of office education.

Kaufman and English state:

External needs assessment will identify the skills and knowledges which are important outside the school so that this information can be used as the basis for educational design and effort.¹⁷

Jorgensen and Campbell also emphasize the importance of research in office education:

Business education occupational preparation programs must be representative of the working environments that are actually found in offices.

¹⁶Blanche Ettinger, "A Study of the Requirements and Business Training Procedures for Word Processing Personnel with Implications for Word Processing Curriculum Development in Two-Year Post-Secondary Institutions." (Ed.D. dissertation, New York University, 1980), p. 372.

¹⁷Roger Kaufman, and Fenwick English. Needs Assessment Concept and Application (Englewood Cliffs: Educational Technology Publications, 1979), p. 78.

Those students who have had the opportunity to develop basic office skills on up to date equipment and who have completed occupational programs in which office systems have been emphasized will be in a better position to accept employment.¹⁸

Williamson and Houghton add that even office education classroom teachers should be research oriented:

All teachers that are in the business of training office workers should know the need of the local business community.... Teachers should take it upon themselves to determine what are the initial job requirements of local area businesses.... This will be a factor in curriculum revision. By providing better trained secretaries, we would also be helping the business community.¹⁹

Research indicates that the changing of office technologies contributes to the need for periodic review of skills and knowledges in office education. Office educators need to keep in tune with the business community and provide meaningful programs for students.

Literature concerning skills and knowledges required by entry-level office employees as related to six commonly required areas was reviewed for this study. The information gathered through that review is presented in the following six areas: keyboarding/typing, word processing,

¹⁸Carl D. Jorgensen, and Melvin E. Campbell, "Business Classroom and Laboratory Equipment," Business Education Forum 36 (1982): 29.

¹⁹Davis Williamson, and Edward L. Houghton, "Shorthand Skills Required by Business Administrators." NABTE Review. No. 5, 1978, National Business Education Association, Reston, VA, p. 93.

data processing, records management, computations, and communications.

Keyboarding/Typing. Although technology has changed drastically over the past 20 years, and will continue to change in the 1980s, typewriting skills will still be essential in office education.²⁰ Ivarie further states: "Typewriting will continue to be a corner stone of office preparation."²¹ to this, Poland adds:

With the advent of the high speed typewriters with various types of memory capabilities, new divisions of office functions have resulted.... Each of these require typewriting skills but to varying levels of proficiency.... The basic functions of each of the word processing positions vary but are typewriting related.²²

Typewriting skill is related to word processing as well as to data processing. Therefore, keyboarding skill must be given importance in classroom teaching. Dennee's²³ study on the importance and frequency of entry-level competencies revealed that keyboarding from straight copy,

²⁰Theodore W. Ivarie, "Curriculum Concerns About the Changing Office," Business Education Forum 35 (November, 1980): 18.

²¹Ibid.

²²Robert Poland, "Typewriting Instruction for 1980s," Journal of Business Education 35 (October, 1980): 2.

²³Jean M. Dennee. "Importance and Frequency of Entry-Level Competencies as Perceived by Word Processing Supervisors, Correspondence and Administrative Secretaries, and Word Processing Educators in Wisconsin. (Ed.D. dissertation, Utah State University, 1981).

statistical copy, and formatting documents rated from "important" to "critical" for an office worker.

Literature indicates that good keyboarding techniques must be developed early and consistently, because of their speed and development in this computer-oriented society. Schuette²⁴ writes that today's concern for accuracy in keyboarding is brought about by the degree of computerization in our society. He also emphasizes that proofreading is an important skill in keyboarding. Myatt adds:

It is more important for equipment operators to be able to produce accurate work than to be able to type at a speed of 60 words per minute. The conclusions may be reached that keyboarding classes which help prepare entry-level equipment operators should stress accuracy more than speed.²⁵

Myatt further states:

In the typewriting area, office employees will continue to need keyboarding skills with a great amount of emphasis on accuracy and proofreading.²⁶

Basic keyboarding skills will continue to play an important role in training of office employees. Office

²⁴Oscar H. Schuette, "Error Analysis: An Essential in Typewriting Instruction," Business Education Forum 36 (May, 1984): 6-8.

²⁵Sam J. Myatt, "Competencies Common to Word and Data Processing Personnel," The Balance Sheet 66 (September/October, 1984): 7.

²⁶Ibid., p. 8.

educators will need to integrate keyboarding skills into computer classes. To this Lockhead writes:

Basic writing skills are as important as ever. In addition, the teaching of typewriting on the computer must become an integral part of typewriting instruction.²⁷

McMullan also writes:

Industry continues to reinforce the importance of the keyboarding skill, including the alpha and the 10-key keyboard.²⁸

He further indicates that office educators should use modern terminology in the classrooms like "inputers" for "typists" to keep with the information age. "The need for basic keyboarding skills in the office has not changed and will not change."²⁹

Ownby³⁰ states that office employees are deficient in accuracy in keyboarding and formatting. She further indicates that office educators should give importance to production of letters, memoranda, business forms, tables and reports. She continues by writing that classrooms

²⁷Louise P. Lockhead, "Typewriting on Computers: An Exciting Program," Business Education Forum 38 (May, 1984): 16.

²⁸Linda McMullan, "Keyboarding: A Basic Skill for Everyone," Business Education Forum 38 (April/May, 1984): 24.

²⁹Ibid., p. 25.

³⁰Arnola C. Ownby, "Typewriting Skills Needed in the Automated Office," Business Education Forum 36 (April, 1982): 9-10.

must update their office machines to bridge the gap between office and classroom. Literature indicates that the keyboarding skills are not only important to an office employee, but also to executives and managers for composing at typewriters and computers. Keyboarding skill continues to play an important role in office education. Yacht states:

At each phase of keyboard instruction, encourage students to compose at their typewriters.... Mastery of keyboarding and proofreading skills must be reinforced at each stage of learning."³¹

Composing at the keyboard is becoming increasingly an important skill because of the text editing features found in computers and in electronic typewriters, and teachers need to teach this skill to the students. Cox and Donin³² also state that composing and accuracy in keyboarding are necessary to function as efficient keyboard operators:

The students see a new total picture in which instantaneous communication between offices, between cities, across the nation, and across ocean is possible. They realize the importance of correct communications, their reports, their business letters, their data will form the basis of major decisions by businesses in the information society.³³

³¹Carol Yacht, "Developing Skills in Keyboarding and Proofreading Required for Word Processing," Business Education Forum 37 (March, 1983): 14.

³²Rollie Cox, and Donald M. Donin, "The Time Has Come to Teach Composing at the Keyboard," Business Education Forum 39 (May, 1985): 17.

³³Ibid.

Electronic typewriters are becoming popular, because of their cost, and for the additional features manufacturers offer. Literature indicates that the office educators must choose electronic typewriters that are compatible with computers, with additional features such as merge, list, delete, block move/copy, and global search and replace. Manufacturers are also offering electronic typewriters with printing speeds of up to 14 to 30 characters per second, and disks that hold up to 70 pages.³⁴ With advanced electronic typewriters and computers available in today's information age, students need to learn to use these office machines as early as possible in school. Robinson and Johnson write:

Individuals at every level of the business hierarchy--from clerks to executives--are required to use keyboards or electronic terminals to enter and retrieve information that is essential to the successful completion of their work.³⁵

Robinson and Johnson³⁶ further state that office employees who are not exposed to keyboards in classroom are handicapped on the job. They need keyboarding skills

³⁴Sherly Evans, "Electronic Typewriter: An Update," Office Administration and Automation 45 (March, 1984): 52-54.

³⁵Jerry W. Robinson, and Gary L. Johnson, "Learning Microcomputer Keyboarding, The Balance Sheet 63 (March, 1982): 228-231.

³⁶*Ibid.*

to operate efficiently on a computer. McMullan and Cox³⁷ advise office educators to train students to be independent and self-directed thinkers. They further state that students should be given freedom to express themselves, to direct their own learning, and to evaluate themselves. In this changing information age, office employees need to be able to teach themselves, and update themselves in all aspects of keyboarding skills.

Word Processing. Dartnell Corporation describes word processing as "an automated system designed to cut the cost and time of the originate/dictate, check/type/retype, sign/mail/distribute, and retain cycle of producing business documents."³⁸ Claffey³⁹ found that the function of word processing was to produce quality typewritten copy from handwritten and dictated material in an efficient and timely manner.

Maroney⁴⁰ identified seven skill areas necessary for those who work with word processors. They are typing

³⁷Connie J. McMullan, and David W. Cox, "Advanced Keyboarding: A Humanistic Approach," Business Education Forum 39 (January, 1985): 19-20.

³⁸Dartnell Corporation. Glossary of Word Terms. Chicago: author, 1977.

³⁹George F. Claffey, "Word Processing: Case Studies of 15 Selected Business Firms." (Ed.D. dissertation, Indiana University, 1979.)

⁴⁰John W. Maroney, "Word Processing--What Skills Should an Entry-Level Applicant Have?" Century 21 Reporter (Fall. 1979): 5.

skills, transcription of dictation, proofreading, grammatical skills, use of resource materials, mathematics, and concepts and theory of word processing. Further more he states: "Every office worker whether administrative/support or progressional, will need to work with word processing in one form or another."⁴¹ Baumgardner further confirms: "The office worker of the eighties must be equipped to function in a systems environment."⁴²

Word processing is important in today's office, and office educators must recognize its importance. Office education students need to learn word processing concepts, applications, formatting, and be able to work on word processing equipment. Fry⁴³ in her doctoral dissertation found significant relationships between the size of a business and its use of the following word processing equipment: non-display stand alone stations, one-line display stand alones, stand alones with CRTs, shared logic systems, OCR readers for input, terminals on-line to computers, portable dictation units, desk-top dictation machines, central dictating/recording systems, and

⁴¹Ibid., p. 6.

⁴²Mary Baumgardner, "Above and Beyond the Skills," Business Education Forum 36 (1981): 10.

⁴³Betty C. Fry, "A Study of Selected Oklahoma City and Tulsa, Oklahoma, Businesses to Assess Competencies Needed by Future Employees in Automated Offices." (Ed.D. dissertation, Oklahoma State University, 1984).

computer-aided transcription. Anderson⁴⁴ writes that students also need to familiarize themselves with such equipment as: satellite communications, bubble memory, fiber optic cable transmissions, laser impact printers, plasma displays, voice creation, voice recognition, and portable keyboards. She further states that this equipment is no longer found just in discussion topics, but it is moving to realities in word processing. Bergurud and Gonzalez⁴⁵ indicate that the use of communicating word/information processors in automated offices will increase in the future. They further indicate that voice reminder systems, voice message systems, teleconferencing mailgram and stored mailgram, electronic computer originated messages, advanced communications service, and satellite business systems will become part of automated office.

Myatt⁴⁶ conducted a study with selected members of the Fortune 500 Directory, business educators, and word/

⁴⁴Ruth I. Anderson, "Word Processing," The Changing Office Environment. NBEA Yearbook, No. 18, 1980, National Business Education Association, Reston, VA, pp. 55-65.

⁴⁵Marly Bergerud, and Jean Gonzalez. Word Processing Concepts and Careers: A Step Toward Office Automation (3rd Ed.). (New York: John Wiley & Sons, 1984), pp. 183-186.

⁴⁶Sam J. Myatt, "Competencies Common to Word and Data Processing Personnel," The Balance Sheet 66 (September/October, 1984): 6-8.

data processing equipment manufacturers to determine the skills essential in word and data processing. The findings indicated the following skills were important for word and data processors: performs accurate work, follows written and oral job instructions, exhibits willingness to learn, meets accepted standards, handles confidential information in a professional manner, exhibits willingness to follow organized procedures, manages time to reach maximum productivity, exhibits willingness to do detailed work, works well under pressure, maintains a friendly attitude toward coworkers, meets work deadlines, handles magnetic media, and proofreads and corrects copy before final input of data.

Myatt's study further identified competencies that were either essential or important in word processing and data processing: understands office procedures, groups and recovers media, handles source documents, types input data from original source documents, activates machines to produce printed copies of data, proofreads accurately, accepts responsibility, maintains a service center approach to work, logs information pertaining to incoming and completed work, prioritizes duties, and codes and indexes documents on disk for easy retrieval and grouping.

Data Processing. The first business-use computers were installed in 1950s.⁴⁷ They further state that the late 1950s and early 1960s saw the development of a more reliable mainframe computer. Drum writes: "By the mid 1960s many of the earlier unit record installations had been replaced by electronic equipment in large businesses."⁴⁸ He further identifies input media as punched cards, punched tape, disks, optical character readers (OCR), magnetic ink character readers (MICR), direct input keyboards, and audio input; and some of the output media as printed lines, punched cards, punched paper tape, magnetic tape, video (CRT), microfiche, and audio. The central processing unit (CPU) is identified as an electronic filing cabinet that controls the processing routine, performs authentic functions, and maintains a quickly accessible memory.

Seymour⁴⁹ indicates that micro computers are common in most businesses. He advises that office students

⁴⁷Padmakar M. Sapre, and Roscoe D. Perritt, "A Historical Development of Accounting and Data Processing," Business Education Yesterday, Today, and Tomorrow. NBEA Yearbook, No. 14, 1980, National Business Education Association, Reston, VA, p. 46.

⁴⁸William O. Drum, "Data Processing," The Changing Office Environment. NBEA Yearbook. No. 14. 1980, National Business Education Association, Reston, VA, p. 46.

⁴⁹Jim Seymour, "The Micros of 1990," Today's Office (July, 1985): 45.

should be taught how to use these machines, because their advantages are great and more sophisticated equipment is being placed in the market. He further writes that as these microcomputers are connected to personal computers, their power as office automation tools increases; and then they can be used for intra-office electronic messaging and the sharing of common files. He continues that the graphics-based interfaces are becoming popular, and they are much easier to operate and also easier for the user to remember how programs work. Literature indicates that the computers in the 1990s will be able to remember how an owner likes things done and consult an internal set of rules to analyze and suggest answers. In this advanced technological world, students must be introduced to computers as early as possible.

Badler states: "Perhaps the fastest growing microform usage area involves computer-assisted retrieval (CAR) systems."⁵⁰ He further indicates that other systems like microfiche magazine systems, microfiche systems, and micrographics are becoming increasingly popular in the business world. The future generation will be using computers as common equipment in schools, offices, and homes. Therefore, it is the duty of office educators to teach these computer skills to the students.

⁵⁰Mitchell. M. Badler, "Micrographics are in Tune with the Times," Office Systems 3 (April, 1986): 42.

Records Management. Goodman defined records management as "the application of efficient management methods to the creation, utilization, maintenance, retention, preservation, and disposal of records."⁵¹ He further mentions that Congressman Frank Horton of New York addressed the Association of Records Managers and Administrators, and indicated that "paperwork... is indeed a national problem. It prevents programs from operating properly, and in some cases, it prevents programs from operating at all."⁵² Willard also states: "Without the important filing function, our offices would be in a constant state of chaos."⁵³ He further states:

Twenty years ago records management meant perfecting skills as a file clerk; now it includes assisting in top management policy formation and cost control responsibilities. Today, records management has moved from the file cabinet to the computer, making it a viable career choice for the 1980s.⁵⁴

Echternacht declares: "To be an effective worker in offices today, one must be able to work not only with conventional paper needs, but also with computer records,

⁵¹David G. Goodman, "Records Management: An Area Demanding Attention," The Balance Sheet 61 (February, 1980): 205.

⁵²*Ibid.*, p. 204.

⁵³Benjamin H. Willard, Jr., "Editorial Comments," The Balance Sheet 62 (December 1980/January 1981): 146.

⁵⁴*Ibid.*

with data transmissions, and with miniaturized records."⁵⁵
 Maedke also states the importance of micrographics in records management:

The utilization of micrographics can reduce records storage space requirements by 98 percent and cut labor and distribution costs. It is essential that the records manager understands the procedures involved in making a microfilm feasibility study and selecting an appropriate microform if one is warranted.⁵⁶

Maedke further adds:

Information regarding microform technology that is important for records management personnel to know includes the basic elements of microform use and technology, the functions of the various types of rotary and flat bed cameras, the differences that exist among the various kinds of microform processing and inspection of equipment, and the process and capabilities of computer output and computer input of microfilm.⁵⁷

The literature indicates that in spite of microforms, microfilms, and microfiche usage in records management, paper documents will continue to be important. When training students to be records managers or records employees, teachers should focus more on producing generalists rather than specialists for this information age. Maedke further writes:

⁵⁵Lonnie Echternacht, "Filing Instruction for Today's Office," Journal of Business Education 56 (October, 1980): 13.

⁵⁶Wilmer O. Maedke, "What is Records Management All About," Business Education Forum 38 (April/May, 1984): 17-23.

⁵⁷Ibid.

The records managers of today who want to work ahead in the future must broaden horizons and perspective. The blindness of narrow specialization must be replaced with the viewpoint of a generalist.... One who is comfortable with diverse technology and acquainted with techniques that range across the entire spectrum of information management.⁵⁸

The introduction of computers into the offices has changed records management procedures; therefore, office educators need to take into consideration the changes brought about as a result of this information age and train students to enter work force competently.

Computations. Roemer⁵⁹ writes that business math is an important skill in a great many jobs and in every day, personal, usable skills. Schools should stress this skill in classrooms. This is one area where a majority of students are found deficient. Not only is business math important in schools and work places, but also bookkeeping and accounting. Office workers are constantly faced with bookkeeping and simple accounting problems, and they should be taught how to solve such problems.

Calculators are used as an aid to solving math and bookkeeping problems in most homes, offices, and schools. Their popularity has increased in the past few years. Harcharik states:

⁵⁸Ibid., p. 19.

⁵⁹Elaine S. Roemer, "Putting Life Into Business Math," Business Education World 61 (March/April, 1981): 21.

The growth of the electronic calculator market has an impact on many occupations.... and has moved into business offices, homes, and schools. The ten-key keyboard is one of the most important keyboards in business, second to the typewriter. Knowledge of the electronic calculator, applications, and skills in operating the calculators are an essential element of today's business career.⁶⁰

Siragusa⁶¹ writes that first electronic desk top printing calculators entered the market in the late sixties. She continues by writing that they are faster, sleeker, quieter, and much easier to use. She further states that calculators of the future will use ink-jet print heads, as opposed to tape heads or ribbons, and ink-jet heads are much quieter and produce crisper print. Computers are increasing the use of calculators. Many offices have calculators along with computers to make calculation functions easier. Office educators should train students to use calculators efficiently along with computers.

Calculators are used in offices for solving accounting and bookkeeping problems. Accounting and bookkeeping knowledge is important for office clerical employees to obtain jobs, and the office curriculum should include courses in these subjects. Satlow states:

⁶⁰Kathleen Harcharik, "Teaching the Correct Use of the Electronic Calculators," Journal of Business Education 56 (February, 1981): 18.

⁶¹Gail Siragusa, "Thomas Amazing Desk Top Calculators," Office Administration and Automation 45 (October, 1984): 51-52, 54, and 58.

The pupils who leave our schools before graduation and those who await graduation are entitled to the technical training that will equip them with a reserve of knowledge and skills that will serve them in good stead beyond the period of initial employment.⁶²

The literature also reveals that an office employee needs to have good knowledge of the computer keyboard as well as accounting principles and procedures to function efficiently in an office job. To this Werner writes:

Many employers want an accounting employee who can use the touch system on the calculator and on the 10-key pad of a computer.⁶³

Reap describes the importance of accounting in clerical jobs:

The need for educators to keep current is just as important in planning programs in clerical accounting as it is in planning programs in professional accounting.... The duties performed depend on the size and type of employing firm and its system of record keeping. The work of the clerical accountant can range from running a machine to keeping complete set of records in a small office. Clerical accountants may type or hand post entries in journals or ledgers, check items on reports, code business papers for computer entry, proofread, and verify a variety of financial papers and forms. Clerical accountants prepare invoices and statements to send to customers, verify and pay bills, calculate payrolls, and

⁶²David Satlow, "Helpful Hints Teaching Bookkeeping and Accounting," Monograph 96. (Cincinnati: South-Western Publishing Co., 1956), p. 5.

⁶³Sheila F. Werner, "What Should be Taught to Today's Accounting Students?" Business Education Forum 38 (April/May, 1984): 40-44.

proof bank accounts. They use typewriters, adding machines, calculators, data processing equipment and telephones extensively.⁶⁴

Reap further points out that businesses will continue to install electronic data processing systems to handle routine accounting tasks. Therefore, office clerical employees who have basic knowledge of business machines, computer entry devices, and data processing competencies will be in a favorable position to obtain jobs. According to Herbert, "payroll accounting provides substantial opportunities for the beginning office employee."⁶⁵ Therefore, office educators should also include federal and state payroll laws in the office curriculum and train students to obtain beginning office jobs. Microcomputers are being used in accounting in most of the businesses. To this Herbert further writes:

Microcomputers give both large and small businesses the ability to input data, retrieve related data, and generate information. Through the use of microcomputers and word processors, businesses are to increase the quality for decision making and expedite the flow of paper work.⁶⁶

Office educators should work towards integrating microcomputer technology into the accounting classroom to

⁶⁴Margaret C. Reap, "Accounting is More than a Balance Sheet," Business Education Forum 38 (April/May, 1984): 44.

⁶⁵Bruce Herbert, "Integrated Payroll Skills Pay Big Dividends," Business Education Forum 37 (December, 1982): 22-24.

⁶⁶Ibid., p. 19.

facilitate the preparation of students to work in this information age.

Communications. Eskey bemoans the fact that businesses are losing millions of dollars because of the "lack of English skills among newly hired and older workers."⁶⁷ He further states:

One corporation reported that 70 percent of all outgoing correspondence must be retyped due to errors in grammar and spelling.... More than 40 percent of their secretaries have difficulty reading correspondence.⁶⁸

The literature indicates that the businesses are not satisfied with the English skills that employees possess. Ettinger writes: "Supervisors and managers complain that secretarial personnel are deficient in spelling, English usage, and punctuation skills that are prerequisite to proofreading ability."⁶⁹

Moody⁷⁰ recommends that office educators should also direct improvement toward listening skills, following directions, and in language arts. Teachers need to place more emphasis in this area and train students to be

⁶⁷K. Eskey, "Young Americans Lacking Skills Survey Finds," The Pittsburgh Press (March 9, 1983): B-6.

⁶⁸Ibid.

⁶⁹Blanche Ettinger, "Are the Language Skills Showing?" SRA Business Education News (Spring, 1983): 2.

⁷⁰Patricia G. Moody. "Identification of Entry-Level Competencies and Locus of Training for Word Processing Secretaries in South Carolina. (Ed.D. dissertation, University of South Carolina, 1978), p. 177.

efficient in their jobs. Ettinger summarizes the importance of communications in office education field by stating:

Research studies report that employers, managers, and supervisors of secretarial personnel consider language skills and the ability to think as more important than knowing how to operate equipment.... Unfortunately some teachers in their attempt to keep pace with the times, tend to stress technology at the expense of language arts.⁷¹

Literature indicates that students are declining in language arts skills, and office educators must turn these deficiencies into proficiencies.

Communications through the postal system is an important part of successful functioning of most businesses. More than one-half of business transactions are completed through the mail.⁷² Depending on the size of the business, secretaries are called upon to handle complete mail functions in the company's mail department. Employers prefer employees to come trained in mail handling so that they can be cost efficient in that area. Mayer states: "Controlling postage cost is a fact of office life today.... Employers are looking for entry-level workers who have been sensitized to the problem and who practice cost-effective communication and mail handling

⁷¹Ettinger, p. 2.

⁷²Harry Huffman, Donald Mulkerne, and Allen Russon, "Office Mailing," Office Procedures and Administration (1965): 202.

procedures."⁷³ Business offices expect office employees to be proficient not only in traditional mail handling, but also in electronic mail transmissions. Glasgow writes:

Electronic mail is the transmission of message contents electronically.... Computers usually play a role in formatting, managing or forwarding an electronic-mail message. The cost performance of computers improves by 25% each year, allowing mail systems to become more powerful, flexible, and inexpensive⁷⁴

Glasgow further states several advantages of electronic mail systems:

Electronic mail can improve productivity and solve business problems. Information from the field can arrive rapidly and exchanged in hours or minutes, rather than days or weeks. Better decisions can be made more quickly, and once made, new instructions can be transmitted at electronic speeds.⁷⁵

"The integration of voice-mail systems with PBX and other phone systems, as well as soon-to-emerge dispersed voice mail networking capabilities should make voice mail the leading way for businesses to answer phones as well as a way to send, store, and forward messages worldwide."⁷⁶

⁷³Kenneth R. Mayer, "Teaching Postage Consumerism," Business Exchange 3 (1981): 22.

⁷⁴Steve Glasgow, "Getting the Message Across with Electronic Mail Systems," Office Systems 3 (July, 1986): 21.

⁷⁵Ibid., p. 24.

⁷⁶Ibid., p. 74.

Besides communicating by phone or other electronic mail systems, businesses are also demanding that the spoken word be transcribed into the written word. This calls for skilled office employees in the area of machine transcription. Maroney writes:

Dictation is being used more widely in creating work in the business world because of the stress on time management for professional staff. Shorthand in word processing environments is not fully being utilized, however, machine dictation is very prevalent. Machine transcription capabilities have become an important and integral part of word processing.... Familiarity with machine transcription as a means of creating typed copy has become a must.⁷⁷

From these comments it is clear that entry-level office employees need to be proficient in skills and knowledges reviewed in this section to be competent in an office.

Rationale for Work Attitudes Survey

A great number of businessmen state that they are more interested in attitudes than in skills of new employees, because they feel it is the attitudes that determine if employees will be successful or not in their jobs.⁷⁸

⁷⁷Maroney, p.5.

⁷⁸Verner Dotson, "Modern Business Education," NEA Journal 55: (February, 1966): 44.

Hoggatt writes: "Even though there was disagreement between the teachers and employers on the degree of importance, they did agree that the main reason for selecting an entry-level office worker was personality."⁷⁹ He further writes:

Teachers should work on programs to improve the areas indicated by employers as meeting the most improvement in the preparation of entry-level office workers. Specific attention should be given to developing methods of increasing student's concern for productivity, developing their human skills.... Teachers should work with students to improve personal characteristics which employers desire most in entry-level workers. Teachers should emphasize attitudes, character integrity, and dependability as the main areas for personal improvement.⁸⁰

Melick also states: "Office employees possess adequate levels of skills, but it was felt by many business personnel that entry-level office employees lacked traits that are necessary to be successful in a job."⁸¹ She further quotes comments of a supervisor on the importance of traits for entry-level office workers:

They seem to lack self-discipline and do not realize that it is seven and one-half hours and attend to the details. I recently read that

⁷⁹Jack P. Hoggatt, "Perceptions of Vocational Business Teachers, Qualifications for Entry-Level Office Workers in Utah." (Ed.D. dissertation, Utah State University, 1979) p. 171.

⁸⁰Ibid., p. 178.

⁸¹Norma E. Melick, "Statement by Supervisors of Entry-Level Business Employees," Relevance in the Education of Today's Business Students. No. 11. 1978, National Business Education Association, Reston, VA. p. 16.

most people hear only one-third of what is said to them.... This becomes frustrating.... When you add the fact that they do not want to pay attention to the details, it makes it very, very large problem.⁸²

Human relations are important and critical to all because there is constant interacting taking place among people. According to Claffey: "The ability to cooperate and interact with others is absolutely essential for nearly all positions in business."⁸³ Servat⁸⁴ indicates that office educators must put emphasis on students' attitudes as businesses and industries demand employees who want to work, who take pride in their work, and who work well with others. If students do not possess good work attitudes, then Stinespring⁸⁵ states that it is encouraging to realize that these attitudes can be developed. A positive person who is energetic, motivated, productive and alert contributes to the productivity of others.

Dotson⁸⁶ writes that business teachers must realize that the skills their students are learning today may not

⁸²Ibid.

⁸³Claffey, p. 33.

⁸⁴Myrtle M. Servat, "Why Should I Care?" Journal of Business Education 56 (November, 1980): 7.

⁸⁵Vickey Stinespring, "Are Employment Interview Skills 'That' Important?" Journal of Business Education 52 (May, 1977): 369.

⁸⁶Dotson, p. 44.

always be in such a great demand. For this reason, many office educators consider skill development only part of their main teaching, and not necessarily the most important part. He further states that the greatest concern of the modern business education teachers should be the development of proper attitudes in their students, because when students take pride in their work, they show willingness to learn new things, and have a pleasing personality which is always needed in the world of business. Wilson⁸⁷ also emphasizes that attitudes are very important for the success of a career. He further states that initiative, dependability, and integrity will have more to do with success of business than basic proficiencies. He believes that the character traits will reflect readiness to meet change which is the keystone to personal development in today's technological world.

In today's automated offices, more routine clerical work is being taken over by machines. However, Arnstein⁸⁸ states that a greater emphasis should be placed on an applicant's ability to handle work requiring judgment, initiative, specialized training, and facility in dealing with people.

⁸⁷Joseph C. Wilson, "Comments," NEA Journal 55 (February 1966): 46.

⁸⁸George E. Arnstein, "The Impact of Automation in Occupational Pattern," Recent and Projected Developments Affecting Business Education. Yearbook, 1964, National Business Education Association, Reston, VA, p. 49.

A well known business educator, Tonne,⁸⁹ declares that it is the duty of office educators to modify the attitudes of their students. To add to Tonne's comments, Campbell states:

Our schools must begin producing students who are not only capable of inquiry and problem solving, but who have also developed the emotional stability and interpersonal skills for a humanized existence.⁹⁰

Campbell further points out that if a person has no understanding of the mechanics of applying the knowledge gained to help himself and others, then the society is doomed to become more and more materialistic with man becoming less and less significant. Feirer⁹¹ indicates that employers do not hire students with an intention to change their personality, but they expect schools to equip them with appropriate skills, knowledges, and work attitudes.

Research indicates that good work attitudes are important to be successful in the business world. Burns⁹² writes that poor personal traits account for employees not

⁸⁹Herbert A. Tonne. Principles of Business Education 2nd Ed. (New York: McGraw-Hill Book Co., 1954), p. 92.

⁹⁰Lloyd P. Campbell, "Cognitive and Affective: Dual Emphasis," Contemporary Education 46 (1974): 113-114.

⁹¹John L. Feirer, "What Do Industry and Business Want from Vocational Education?" Industrial Education 65 (December, 1976): 4.

⁹²John E. Burns, "Labor and Industrial Relations." Industrial Management 15 (April, 1973): 1-6.

advancing in their jobs. To this, Wilson⁹³ adds that most people fail or lose their jobs not because of insufficient job skills or inadequate performance, but for poor personal traits. Boynton⁹⁴ also states that large number of workers discharged or not promoted lacked social or personal traits. He further states that among negative attitudes identified were non-cooperative behavior, dishonesty, and lack of courtesy.

From these comments it is clearly evident that office educators must emphasize more than narrow vocational training to develop work attitudes that will have much to do with success enjoyed by persons entering the business world. Many of these work attitudes will have to be desired in the home, and office training institutions will have to modify them.

Many positive work attitudes were identified by businessmen and office educators. Some of these are punctuality, loyalty, and ability to progress,⁹⁵ appearance and attitudes,⁹⁶ accuracy and dependability,

⁹³H. Wilson, "What is a Good Employee?" Industrial Management 15 (1973): 14-15.

⁹⁴P.W. Boynton, "So You Want a Better Job?" Mobil Oil Co. 1955.

⁹⁵William Jolly, "What Industry Expects from the New Employee?" Business Education Forum 15 (March 1961): 36.

⁹⁶Weston C. Wilsing, "Is Business Education in the Public High Schools Meeting the Need and Desires of Businessmen?" Monograph No. 99. (Cincinnati: Southern Publishing Co., 1960), pp.20-21.

willingness to cooperate, self-discipline, initiative, willingness to learn, flexibility, and character skills.⁹⁷

The following headings of the work attitudes were taken from Gehris'⁹⁸ study on work attitudes of beginning office employees, and the work attitudes were taken from the literature and other related questionnaires.

Employer-employee relationship:

- has the ability to get along with supervisors
- understands and observes company policies
- accepts constructive criticism from supervisors
- seeks the advice of supervisors
- follows written/oral instructions

Employee-employee relationship:

- works congenially with coworkers
- develops the ability to plan and work in groups
- volunteers to help coworkers to complete rush jobs
- accepts constructive criticism from coworkers

Employee responsibility:

- can be depended upon to follow a job through to its completion
- accepts and practices loyalty and honesty
- works independently without supervision
- ability to meet deadlines
- is punctual in all office activities
- works well under pressure
- practices care for good personal appearance

A Review of Related Surveys

A review of related surveys in business education may prove useful as a background, since the proposed study is

⁹⁷ John Ellerback, "Teacher and Employer: A Dialogue on the Jobs in the 'Real' World," Industrial Education 66 (April, 1977): 30-31.

⁹⁸ Dennis O. Gehris, "A Study to Determine the Extent to Which Selected Factors can Predict the Work Attitudes of Beginning Office Employees." (Ed.D. dissertation, Temple University, 1980).

to deal with a community survey. The review begins with early investigations and continues with presentation of doctorate, masters, and independent studies.

According to Meredith⁹⁹ the earliest business community surveys were made in Massachusetts (1911), and in Richmond, Virginia (1914). Collins¹⁰⁰ states that in 1914, the Boston Chamber of Commerce conducted a survey to determine the opinions of Boston employers as to what subjects were most needed to work effectively in office occupations. She further adds that in 1915 the Chamber of Commerce of Rochester, New York, made a study to obtain special information from individual workers, and general information from employers.

The literature indicates that before 1933, the best known surveys were city surveys. These surveys were done in Cleveland (1916), New York (1918), Minneapolis (1925), Pasadena (1926), and Chicago (1928).¹⁰¹ Moore further writes that city surveys were completed in Pittsburgh

⁹⁹Evelyn D. Meredith, "A Review of Certain Aspects of Selected Business Community Surveys." (Ed.D. dissertation, Teachers College, Columbia University, 1962).

¹⁰⁰Rebecca I. Collins, "Guidelines for Community Occupational Surveys in Vocational Education." (Ed.D. dissertation, University of Tennessee, 1972), p. 23.

¹⁰¹Virginia E. Moore, "The Determination of Those Factors and Understandings Which Should be Secured by Business Community Surveys." (Ed.D. dissertation, New York University, 1953) pp. 17-22.

(1948), and Yakima, Washington (1949), and a commercial occupations survey of Virginia was completed in 1942.

Malsbary¹⁰² reports that in the 1960s, three studies financed by government grants were completed. The first study was done in the Detroit metropolitan area for high school graduates, as reported by employers to determine what actually happened to them as they sought to enter labor market in office and retail jobs. The second study was done in selected businesses in Connecticut to determine the effects of technology on the types of office machines used, with implications for business education curriculum. The third study was done by Malsbary, and he describes it as:

This study sought to identify the office entry positions in business firms in the state of Connecticut, the nature of the work the beginning workers are assigned to perform, and the knowledges, skills, attitudes, and understandings they need in order to perform the work.¹⁰³

A review of literature from early 1900s to 1960s shows that studies were done in local communities. Meredith¹⁰⁴ in her study found that the majority of the 235 survey-type studies done between 1955 and June 1960 were local. She further writes it is important that local

¹⁰²Dean R. Malsbary, "Re-evaluation of Business Education Based on Surveys." Business Education Forum (January, 1968) p. 17.

¹⁰³Ibid, p. 29.

¹⁰⁴Meredith, p. 29.

community surveys should be conducted, and their findings should help to determine more up to date curriculum in office education field.

Many excellent surveys were done by individuals as well as organizations in the field of office education. Tomlan,¹⁰⁵ for her doctoral study, investigated the relevancy of the secretarial/clerical curriculum in the department of office administration of Boyce Campus of the Community College of Alleghany County. A survey of the needs of business in the service area in the eastern suburbs of Pittsburgh was conducted. The ultimate purpose of this study was to ensure that students are equipped with pertinent office skills.

The data were collected through the use of a questionnaire. The instrument was organized into six major sections which listed 56 selected skills and equipment/systems representing cognitive and psychomotor domains. A random sample of 216 units representing 50% of the population of 433 members of the Monroville Chamber of Commerce was selected for the survey. There was a response rate of 72.2% (153 questionnaires returned).

The results of the analysis produced data regarding typing and shorthand rates as well as validated sets of

¹⁰⁵Dolores M. Tomlan, "An Identification of the Word Processing Skills and Knowledges Needed by Entry-Level Secretarial/Clerical Employees as Perceived by Members of the Local Business Community." (Ed.D. dissertation, Nova University, 1983).

competencies. Traditional skills are still upheld as valid for clerical jobs. The results also indicated that although word processing and automated office approaches are not yet widespread in the service area, trends seem to suggest that movement is in that direction.

Fry¹⁰⁶ conducted a doctoral study to determine the competencies required of future employees performing technical functions in automated offices. The purpose of this study was to supply information to develop relevant curriculum for the automated office field. A sample of 400 businesses was selected from membership lists of Oklahoma City and Tulsa Chapters of the Administrative Management Society (AMS), and the Data Processing Management Association (DPMA).

The data were collected through the use of a four-page questionnaire. There was 64.08 percent response rate. The findings indicated that the types of automated functions performed in Tulsa and Oklahoma city were found to be similar. The various types of business organizations were found to vary in the use of certain areas of office automation. The size of the business organization was found to affect the use and function of various areas of office automation. The perceived importance of

¹⁰⁶Betty C. Fry, "A Study of Selected Oklahoma City and Tulsa, Oklahoma, Businesses to Assess Competencies Needed by Future Employees in Automated Office." (Ed.D. dissertation, Oklahoma State University, 1984).

competencies needed for automated functions according to location and types of business organization was found to be similar.

Hoggatt,¹⁰⁷ for his doctoral study, compared perceptions of vocational business teachers, entry-level workers, and employers regarding office work requirements for entry-level office workers in Utah. The information was obtained by questionnaires mailed to vocational business teachers, entry-level workers, and employers of entry-level office workers. Eighty percent of 95 teachers responded, while 72 percent of 232 businesses surveyed responded.

The principal findings were that there is a difference between the perceptions of vocational business teachers, and entry-level office workers, and employers for entry-level office workers in Utah. Teachers indicated greater importance on skills such as shorthand, filing, and running duplicating machines, while employers and employees gave more emphasis to the skills which require some sort of decision making or human relations skill.

All three groups agreed that entry-level office workers need to complete high school before securing

¹⁰⁷Jack Hoggatt, "Perceptions of Vocational Business Teachers, Employers, and Entry-Level Office Workers Regarding Employable Qualifications for Entry-Level Office Workers in Utah." (Ed.D. dissertation, Utah State University, 1979).

jobs, and that some college training was advisable. Personality was given primary importance for selecting an entry-level office employee. The teachers viewed ability to follow suggestions and instructions, employers showed concern for productivity, and employees viewed the ability to write and speak effectively as the areas in need of improvement for entry-level office workers.

Wagley¹⁰⁸ conducted a doctoral study with four groups of individuals: group one, teachers (federally funded teachers in cooperative office education or intensive office education); group two, teachers (those teachers of non-federally funded course in Office Practice); group three, employers (those employers concerned with the hiring of beginning office employees); and group four, employees (those employees considered to be beginning office employees). The study determined each group's opinions as to the degree of office skills needed by the beginning office employees.

Data were gathered through the use of a questionnaire containing 137 office skill items was mailed and visitations were made to teachers in groups one and two, to selected employers, and to employees in Montgomery County, Ohio. A comparison was made to see if the

¹⁰⁸Robert A. Wagley, "A Comparative Study: Skills Needed by Beginning Office Employees as Viewed by Two-Groups of High School Business Education Teachers, Employers, and Beginning Office Employees." (Ed.D. dissertation, University of Cincinnati, 1974).

percentage of agreement among groups in the area of typewriting skills, shorthand skills, stenographic skills, office-machine accounting clerk's skills, filing miscellaneous skills would differ from the percentage of agreement among groups on office skills as a whole. The findings indicated that there was no percentage of agreement among group one, teachers; group two, teachers; group three, employers; and group four, employees within the four skill classifications.

Gehris¹⁰⁹ did a doctoral study to determine the degree to which the following eleven characteristics of business education students can be used to predict their work attitudes as beginning office employees: sex, race, socio-economic status, business education concentration, scholastic achievement, attendance records, tardiness records, size of town or city of residence, participation in office simulations, participation in cooperative office education programs, and participation in business education student organizations.

Seventy beginning office employees from seven county regions of Eastern Pennsylvania were selected for this study. The work supervisors were asked to rate a specially prepared work attitude evaluation form

¹⁰⁹Dennis O. Gehris, "A Study to Determine the Extent to Which Selected Factors Can Predict the Work Attitudes of Beginning Office Employees. (Ed.D. dissertation, Temple University, 1971).

containing 39 attitude considerations. The findings indicated that none of the eleven variables tested in the study can be used individually to predict the work attitudes of beginning office employees.

Corrigan,¹¹⁰ for her master's thesis, surveyed skills and competencies needed for entry-level employment in office occupations in the rural mid-Michigan area. A total of 36 employees/supervisors representing six employment grouping: finance, government, health, industrial, legal and retail businesses were selected. Each employer was interviewed personally or by telephone using a prepared interview guide and data recording instrument. Every employer contacted participated in the study.

This study identified the following skills as necessary for beginning office workers: typing, reprographics, records management, business machines, office procedures, shorthand, communications, proofreading, and human relations.

Chaney and Leggett¹¹¹ did an independent study with Memphis, Tennessee, businesses. A sample population of

¹¹⁰Rennee C. Corrigan, "Office Skills and Competencies Required for Entry-Level Office Workers in the Rural Mid-Michigan Area." (M.A. Central Michigan University, 1981).

¹¹¹Lilian A. Chaney, and James C. Leggett, "Survey Area Businesses to Determine Utilization of Office Technology," The Balance Sheet (March/April, 1987): 12-14.

120 companies was drawn from the Rodney and Company listing of Who's Who in Memphis Business. The data were gathered through the means of a four-page questionnaire. Out of 120 businesses contacted, 92 responded, but only 89 questionnaires were usable.

Through the help of the research questionnaire information was gathered on the types of office technology, brand names of equipment, approximate age of computers, types of disks and printers, and different types of information systems and data banks used. The findings indicated that 88% of the firms purchased office machines and systems generally from local distributors. Seventy percent used hard disks and 67% percent used floppy disks. Many of the firms with computer systems reported using more than one type of printer. Most firms (77 percent) used dot matrix printers, and 36 percent used daisy wheel printers. Eighty-seven percent of the firms indicated that some of their employees have their own computer work stations. The following office technologies were found to be used in the businesses surveyed: computers, reprographics, telecommunications, dictation equipment, data processing, word processing, and teleconferencing. The most common method of training employees was with on-site training using current employees as instructors.

Porreca and Stallard¹¹² also conducted an independent study to identify common affective domain competencies of students among vocational technical areas and to validate them through the Delhi technique. The competencies identified in this study were to help improve the haphazard teaching of affective domain competencies, provide direction for further inquiry, and to meet various learner needs. The following procedures were used to identify the common affective domain competencies of students among vocational areas: (1) reviewed and solicited common affective domain competencies from publications representing agriculture, business and office, distributive education, home economics, and industrial education; (2) verified the elicited common affective competencies by submitting the identified competencies to groups of employers, employees, home economics and industrial education teachers; and (3) validated the affective domain competencies by state-level directors of vocational education to determine the degree of commonality.

Two separate samples were used in this study. Sample one was used to verify the synthesized common affective domain competencies and consisted of 191 persons randomly

¹¹²Anthony G. Porreca, and John J. Stallard, "Common Affective Domain Competencies of Students Among Vocational Areas." (Independent Study, The Tennessee Research Coordinating Unit, 1975).

selected from the East Tennessee and South West Virginia. The sample included the following: forty employees in vocational-technical area, 51 employers of vocational-technical graduates, and 100 secondary and area vocational teachers representing five vocational areas: agriculture, business and office, distributive education, home economics, and industrial education.

Sample two was used to validate the common affective domain competencies among vocational students and was composed of 48 state-level directors of vocational education. Validation was completed through the Delhi technique using two probes. The conclusions of the study were: (1) state-level directors of vocational education appear to agree that there are common affective domain competencies found among students in agriculture, business and office, distributive education, home economics, and industrial education; (2) the perceptions among employers, employees, and secondary area and vocational education teachers appear to be similar to the perceptions of state-level directors of vocational education; (3) employers, employees, and secondary area and area vocational teachers appear to have similar perceptions concerning what are important affective domain competencies for employment career success of the 111 statements; (4) affective domain competencies appear to provide a commonality of learning which link agriculture, business and office, distributive

education, home economics, and industrial education; (5) common affective domain competencies of students among vocational areas appear to be as important as cognitive domain and psychomotor domain competencies in vocational-technical education.

Most of the surveys conducted in office education have been done to complete requirements for a doctoral degree, a masters degree, or as independent projects strictly for improving programs. The studies completed at the masters level used smaller samples and were conducted in one geographical location. Studies completed at the doctorate level used larger samples and were done in more than one location. Studies completed at the independent level used varied sample sizes, some were conducted in one single location, and others were conducted in more than one location.

Summary

The review of literature indicates that the demand for office clerical employees will remain strong throughout this century. It is important that office educators equip students with appropriate skills, knowledges, and work attitudes to meet that demand. In this age of information, office technologies are changing rapidly, and this contributes to the need for periodical

review of skills and knowledges required for entry-level office employees. Office educators need to keep in tune with the needs of the business community to provide meaningful programs to the students.

In this chapter, literature concerning six commonly required areas for entry-level office employees was reviewed. The information gathered through that review was presented in the following six areas: keyboarding/typing, word processing, data processing, records management, computations, and communications.

A great many businessmen state that they are more interested in work attitudes than in office skills of new employees. They feel it is these work attitudes that will determine if new office employees will be successful in their jobs. Therefore, this study also reviewed the work attitudes commonly required of entry-level office employees.

CHAPTER 3

THE QUESTIONNAIRE AND THE PROCEDURES

This chapter contains a discussion of methods and procedures used in this study. Specifically, this chapter contains a description of the development of the questionnaire, pilot study, the sample, preparation of cover letters, collection of data, and statistical analysis of data.

Development of the Questionnaire

Two questionnaires were developed to obtain data to analyze the status and extent of skills, knowledges, and work attitudes required in selected businesses and industries in greater Lansing area. To construct a good questionnaire, Belson¹¹³ offers seven guidelines: define terms, offer alternatives, use respondent's language, avoid ambiguous words, avoid giving the respondents too difficult a task to perform, minimize effort to respond, and avoid questions that confuse respondents.

¹¹³William A. Belson. The Design and Understandings of Survey Questions. (England: Gower Publishing Co. Ltd., 1981), p. 389.

Romine¹¹⁴ indicates 12 principles that are important in constructing a questionnaire. They are: give clear directions, use simple and short questions, group similar questions, group questions to give a whole picture, avoid questions that need a high degree of expertness, provide questions that promote uniformity, avoid invalid channeling of responses, word questions to promote ease and accuracy, state questions in such terms as will receive usable concentration of data, put multiple choice questions in random order, and field-test the questionnaire before a final draft is made.

Hillestad¹¹⁵ states:

1. visualize the respondents;
2. group together questions dealing with each aspect of the study;
3. arrange questions in either a psychological or logical order;
4. make apparent that the questions are related to the purpose of the study;
5. use an easy-to-answer format;
6. prepare dummy tables of your anticipated responses;

¹¹⁴Stephan Romine, "Criteria for a Better Questionnaire," Journal of Educational Research 42 (September, 1948): 69-71.

¹¹⁵Mildred Hillestad. Research: Process and Product. (St. Peter, Minnesota: Delta Pi Epsilon, 1975).

7. design an attractive questionnaire;
8. supply clear, complete directions;
9. try out your questions; and
10. write a good cover letter and follow-up reminders.

The recommendations of Belson, Romine, and Hillestad were followed in constructing the questionnaire.

The questionnaires for employers/office supervisors and incumbent, first year, entry-level office employees requested the title of the respondent, the company's name, and the number of office employees as part of the information in the study. An identification number was assigned to each questionnaire for use in the follow-up mailing.

The identification of specific skills, knowledges, and work attitudes was based on an intensive review of literature. Each item in the sections on skills and knowledges was identified as "essential", "important", "somewhat important", "not important," and "not applicable". Each item in the section on work attitudes was identified from "most important" to "not important."

The questionnaires (Appendices A and B) were designed to yield information in the following areas:

- title of office supervisor
- title of incumbent, first year, entry-level office employee

- type of business or industry
- number of individuals employed in the business organization
- types of skills, knowledges, and equipment used in the following areas:
 - keyboarding/typing
 - word processing
 - data processing
 - records management
 - computations
 - communications
- types of work attitudes used in the following categories:
 - employer-employee relationship
 - employee-employee relationship
 - employee responsibility

The survey instruments designed to gather data for this study were two five-page questionnaires (Appendices A and B) based on an extensive review of related literature, similar questionnaires, pilot study, and consultations with business educators at Michigan State University and other office educators. The two questionnaires, cover letters, and the proposal of the research study was approved by the University Committee on Research Involving Human Subjects on July 6, 1987. After the approval, the pilot study sample was selected.

Pilot Study

The pilot study sample (Appendix G) for the research questionnaires included employers/office supervisors and incumbent, first year, entry-level office employees. Two businesses from each (small, medium, and large) size of business offices in the Lansing area were included in this study. Employers/office supervisors were personally contacted for feedback on the questionnaires. Then the employers/office supervisors contacted the incumbent, first year, entry-level office employees in their businesses for feedback on the first year office employee questionnaires.

The completed questionnaires from the pilot study sample were carefully reviewed. The responses revealed that the following statement should be added to the question on equipment use under the heading "word processing": "microcomputer as word processor." The revision was made on the questionnaires before mailing them out to the sample (Appendix F).

The Sample

The sample of this study was drawn from two membership lists (Greater Lansing Business, Industry, and Professions, and Greater Lansing Industries) of the

Lansing Regional Chamber of Commerce. To determine the sample size the following formula¹¹⁶ was used:

$$n = \frac{N \sigma^2}{(N-1) D + \sigma^2}$$

$$= \frac{\text{Range}}{4} = \frac{100}{4} = 25$$

$$\sigma^2 = (25)^2 = 625$$

(B is found as follows--B is the boundary of error estimate)

$$B = 5\% \times 100 = 5$$

(A 95% confidence level is taken)

$$D = \frac{B^2}{4} = \frac{5^2}{4} = \frac{25}{4} = 6.25$$

Now based on the formula:

$$n = \frac{N \sigma^2}{(N-1) D + \sigma^2}$$

$$= \frac{1500 (625)}{(1499) 6.25 + (625)} = 93$$

According to the formula, only 93 businesses and industries were needed to be surveyed in each of the following two groups: employers/office supervisors and incumbent, first year, entry-level office employees. But to increase the statistical power, the sample size was increased to 300 businesses and industries.

¹¹⁶Richard L. Scheaffer, William Mendenhall, and Lyman Ott. Elementary Survey Sampling, Third Edition, (Boston: Duxbury Press, 1986), pp. 54-55.

The membership lists for businesses and industries were checked for duplicates and numbered consecutively. After placing numbers one through nine on slips of paper, the slip on which number five appeared was drawn. Using Chao's Random Digits Table, every fifth number was selected until 300 members for the sample were drawn. The incumbent, first year, entry-level office employees selected for this study were from among the 300 businesses and industries included in this study.

The eighteen categories of different types of business organizations shown in the questionnaires under question two were reconstituted as:

Service. Service type of business organizations include retail/sales, wholesale, human services, restaurants, management services, cultural services agency, food services, interior designing services, printing services, and those who identified themselves on the questionnaire as service type of business organizations.

Manufacturing. Manufacturing type of business organizations include commercial, metal heat treating industries, and those who identified themselves on the questionnaire as manufacturing type of business organizations.

Finance Related. Finance related type of business organizations include insurance companies, accounting

firms, CPA consulting firms, advertising specialists, real estate, and those who identified themselves on the questionnaire as finance type of business organizations.

Construction. Construction type of business organizations included only those who identified on the questionnaire as construction type of business organizations.

Other. Other types of business organizations included education, communications, federal government, health care, transportation, law, agriculture, mining, and professional theatre.

Preparation of Cover Letters

Cover letters were prepared to accompany the questionnaires to explain the study and to request participation in the study. These letters were designed to obtain cooperation in the return of the completed questionnaires. Letters to the employers/office supervisors and to the incumbent, first year, entry-level office employees were duplicated.

To encourage a good response to the questionnaire, the President of Lansing Regional Chamber of Commerce was requested to sign a cover letter typed on Chamber stationery. The letter was obtained from the President

(Appendix C) on July 14, 1987, and a copy of this letter accompanied each questionnaire with each mailing.

Collection of Data

The following items were mailed to each of the employers/office supervisors and incumbent, first year, entry-level office employees of individual businesses and industries randomly selected for the sample (Appendix F) on July 15, 1987:

- a. a cover letter,
- b. a letter from the President of Lansing Regional Chamber of Commerce,
- c. a five-page questionnaire, and
- d. a self-addressed stamped envelope for return of the completed questionnaire.

(The questionnaires and the cover letters for this mailing appear as Appendix A, Appendix B, and Appendix C, respectively).

The label on the mailing envelope identified the employer, and if the employer were in charge of office clerical employees, then he/she was asked to complete the employer/office supervisor questionnaire. If the employer were not in charge of office clerical employees, then he/she was asked to hand the questionnaire to the office supervisor to complete it. The employer/office supervisor

was then asked to identify a first year office employee and request that person to complete the first year office employee questionnaire. A due date of July 31, 1987, was suggested for the return of completed survey questionnaires.

A follow-up letter for each of the employers/office supervisors and incumbent, first year, entry-level office employees who did not respond was prepared. To encourage participation in the study, the follow-up letter was mailed on August 6, 1987. With the follow-up letter (Appendix D), a copy of questionnaire and a copy of letter from the President of Lansing Regional Chamber of Commerce was mailed. A due date of August 21, 1987, was suggested for return of completed survey questionnaires.

In an effort to maximize the return rate, a second follow-up letter to each of the employers/office supervisors and the incumbent, first year, entry-level office employees who did not respond was prepared, and mailed on September 2, 1987 (Appendix E). A copy of the questionnaire, and a copy of the letter from the President of Lansing Regional Chamber of Commerce were enclosed. A due date of September 18, 1987, was suggested for the return of completed survey questionnaires.

Out of the 300 questionnaires mailed to each of the employers/office supervisors and to incumbent, first year, entry-level office employees, 142 employers/office

supervisors and 102 incumbent, first year, entry-level office employees responded. But out of the 102 incumbent, first year, entry-level office employee questionnaires received, 10 were not usable. The following is a breakdown by size of business office of the total questionnaires received:

Employers/Office Supervisors

small business offices	-	86
medium business offices	-	23
large business offices	-	<u>33</u>
Total Respondents		<u>142</u>

First Year Office Employees

small business offices	-	46
medium business offices	-	21
large business offices	-	<u>25</u>
Total Respondents		<u>92</u>

Statistical Analysis of Data

The data obtained from the returned questionnaires were processed through the Computer Center facilities at Michigan State University. The Statistical Package for the Social Sciences, Release X (SPSSx), computer program package was utilized to process the data. A One-Way ANOVA (One-Way Analysis of Variance) was used as an appropriate

method because it provides a wide variety of subsidiary statistics in addition to the basic analysis of variance. An F ratio was selected as a method for testing of the hypotheses for the following reasons: it shows differences between the independent variables on the perceived importance, it gives means for the subgroups of independent variables, and it gives an F value and the significant level for each item in the questionnaires. A .05 level of significance was used.

In this study, the independent variables are job title (employers/office supervisors and incumbent, first year, entry-level office employees), size of business office (small, medium, and large), and type of business organization. The eighteen categories for type of business organization were reconstituted as service, manufacturing, finance related, construction, and other. The analysis determined the effect of each of the three independent variables on the perceived importance of skills, knowledges (keyboarding/typing, word processing, data processing, records management, computations, communications), and work attitudes required for first year, entry-level office employees.

The means calculated were used to compare the differences within each of the subgroups in the job title, size of business office, and in the type of business organization. The calculated means were based on the

scale used in the questionnaires. Questions on skills and knowledges used a scale of 1 to 5 with 1 = essential, 2 = important, 3 = somewhat important, 4 = not important, and 5 = not applicable. Based on this scale, the computer program calculated means as follows: a mean of 1 = essential, 2 = important, 3 = somewhat important, 4 = not important, and 5 = not applicable. The question on work attitudes used a scale of 1 to 10 with 1 = most important, and 10 = not important. The scale used for the work attitudes was converted into the scale used for the other questions in the survey. The computer SPSSx program calculated the responses for work attitudes as follows: responses 1-2 = essential, 3-4 = important, 5-6 = somewhat important, 7-8 = not important, and 9-10 = not applicable. Based on this scale, the means were calculated as follows: a mean of 1 = essential, 2 = important, 3 = somewhat important, 4 = not important, and 5 = not applicable.

The means of one-way analysis of variance were used for rank ordering of skills, knowledges, and work attitudes in the seven areas required for entry-level general office clerical employees as perceived by employers/office supervisors and incumbent, entry-level office employees. The means of one-way analysis of variance of collapsed items were used for rank ordering of the seven areas required for entry-level general office

clerical employees as perceived by employers/office supervisors and incumbent, entry-level office employees.

Summary

In this chapter, the development of the research questionnaire, the selection of the pilot study sample, the selection of population sample, the preparation of cover letters, the collection of data, and the statistical analysis of data were discussed. The description of the statistical analysis of data provided the background for the reporting of the analysis of data, rank ordering of skills, knowledges, and work attitudes within seven areas, and rank ordering of the seven areas in Chapter 4.

CHAPTER 4

THE ANALYSIS OF DATA

The purpose of this chapter was to present an analysis of the responses received from the 142 employers/office supervisors and 92 incumbent, first year, entry-level office employees in this study.

This chapter is divided into three main parts. The first part deals with six hypotheses and research questions one through six. It presents an analysis of differences between the three independent variables and the perceived importance of skills, knowledges, and work attitudes required for entry-level general office clerical employees. The second part deals with research question seven. An analysis of the perceptions of employers/office supervisors and incumbent, entry-level office employees resulted in a rank ordering of skills, knowledges, and work attitudes within seven areas. The third part deals with research question eight. An analysis of the perceptions of employers/office supervisors and incumbent, entry-level office employees resulted in a rank ordering of seven areas.

The means shown in the tables were based on the scale used for the two questionnaires. A mean of 1 = essential,

2 = important, 3 = somewhat important, 4 = not important, and 5 = not applicable.

Testing of Hypotheses

Hypothesis 1

Hypothesis 1 states that there are no significant differences regarding the job titles with respect to the perceived importance on the part of employers/office supervisors and incumbent, first year, entry-level general office clerical employees in skills and knowledges required for entry-level general office clerical employees in the following areas:

- a. keyboarding/typing
- b. word processing
- c. data processing
- d. records management
- e. computations
- f. communications

A. Keyboarding/Typing. Table 1 illustrates the differences between job titles as to the perceived importance of skills and knowledges required in keyboarding/typing. An F ratio was used to test the hypothesis. The analysis of data revealed one difference between employers/office supervisors and incumbent, entry-

TABLE 1
DIFFERENCES BETWEEN THE JOB TITLE ON THE PERCEIVED IMPORTANCE
OF SKILLS AND KNOWLEDGES REQUIRED FOR KEYBOARDING/TYPING

SKILLS/KNOWLEDGES	Employers/ Office Supervisors	Entry-Level Office Employees	Job Title	F. Ratio	Sig. Lvl.
	Mean	Mean			
formatting (typing documents):					
from typewritten copy	2.34	2.14	1.816	0.179	
from handwritten copy	1.83	1.91	0.052	0.819	
from rough draft typewritten copy	2.35	2.17	0.841	0.360	
compose at the typewriter	2.92	2.43	7.162	0.008*	
applications:					
long documents (over 10-page length)	3.45	3.31	0.368	0.545	
short reports (3-10 page length)	2.39	2.43	0.000	0.991	
financial statements	3.10	2.85	1.327	0.251	
memos/correspondence	1.94	1.73	1.907	0.169	
use of equipment:					
manual typewriter	4.03	4.18	0.445	0.505	
electric typewriter	1.85	2.00	0.527	0.469	
electronic typewriter	2.82	2.75	1.066	0.303	

*Significant at .05 level

level office employees as to the perceived importance of 11 skills and knowledges required in keyboarding/typing. The skill/knowledge "compose at the typewriter" was found to be significant at .008 level. Therefore, the hypothesis that there are no significant differences regarding the job titles with respect to the perceived importance on the part of employers/office supervisors and incumbent, entry-level general office clerical employees in skills and knowledges required for entry-level general office clerical employees in keyboarding/typing was rejected. Employers/office supervisors, and incumbent, entry-level general office clerical employees varied on the importance of skill/knowledge "compose at the typewriter." In all other skills and knowledges required in keyboarding/typing, the perceived importance of the two groups was similar.

There was a statistically significant difference in the mean ratings of employers/office supervisors and incumbent, entry-level office employees for the skill/knowledge "compose at the typewriter" required in keyboarding/typing. Entry-level office employees perceived "compose at the typewriter" as more important than did employers/office supervisors.

B. Word Processing. Table 2 illustrates the differences between job titles as to the perceived importance of skills and knowledges required in word

TABLE 2
DIFFERENCES BETWEEN THE JOB TITLE ON THE PERCEIVED IMPORTANCE
OF SKILLS AND KNOWLEDGES REQUIRED FOR WORD PROCESSING

SKILLS/KNOWLEDGES	Employers/ Office Supervisors	Entry-Level Office Employees	Job Title	F Ratio	Sig. Lvl.
	Mean	Mean			
formatting (typing documents):					
from typewritten copy	2.97	2.80	0.139	0.710	
from handwritten copy	3.01	2.85	0.159	0.691	
from rough draft typewritten copy	3.44	2.77	7.190	0.008	
compose at the word processor	2.75	2.61	0.101	0.751	
applications:					
long documents (over 10-page length)	3.51	3.43	0.008	0.931	
short reports (3-10 page length)	3.04	3.10	0.155	0.694	
financial statements	3.64	3.59	0.056	0.813	
memos/correspondence	2.84	2.86	0.054	0.816	
use of equipment:					
on-line display stand alone word processor	3.50	3.35	0.373	0.542	
shared logic systems word processor	3.94	3.74	0.399	0.529	
portable dictation unit word processor	4.08	4.16	0.201	0.655	
microcomputer as word processor	3.29	3.81	3.831	0.052*	

*Significant at .05 level

processing. An F ratio was used to test the hypothesis. The analysis of data revealed one difference between the two groups as to the perceived importance of 12 skills and knowledges required in word processing. The skill/knowledge "use of microcomputer as a word processor" was found to be significant at .052 level. Therefore, the hypothesis that there are no significant differences regarding job titles with respect to the perceived importance on the part of employers/office supervisors and incumbent, entry-level general office clerical employees in skills and knowledges required for entry-level general office clerical employees in word processing was rejected.

There was a statistically significant difference in the mean ratings of employers/office supervisors and incumbent, entry-level office employees for the skill/knowledge "use of microcomputer as a word processor" required for word processing. Employers/office supervisors perceived "use of microcomputer as a word processor" as more important than did entry-level office employees.

C. Data Processing. Table 3 illustrates the differences regarding the job titles as to the perceived importance of skills and knowledges required in data processing. The analysis of data revealed one difference between the two groups as to the perceived importance of seven skills and knowledges required in data processing.

TABLE 3

DIFFERENCES BETWEEN THE JOB TITLE ON THE PERCEIVED IMPORTANCE
OF SKILLS AND KNOWLEDGES REQUIRED FOR DATA PROCESSING

SKILLS/KNOWLEDGES	Employers/ Office Supervisors	Entry-Level Office Employees	Job Title	F Ratio	Sig. Lvl.
	Mean	Mean			
competencies:					
data entry and data retrieval	2.25	2.56	2.168	0.143	
computer literacy (ability to manipulate computer with a preestablished program to perform desired tasks)	2.41	2.54	0.463	0.497	
computer fluency (ability to write and analyze a program)	4.07	3.89	0.831	0.363	
use of equipment:					
mainframe computer	3.44	3.21	0.225	0.636	
microcomputer	2.51	2.31	10.913	0.001*	
time-sharing computer	4.15	4.04	0.670	0.414	
computer graphics	4.32	4.35	0.066	0.797	

*Significant at .05 level

The skill/knowledge "use of microcomputer" was found to be significant at .001 level. Therefore, the hypothesis that there are no significant differences regarding the job titles with respect to the perceived importance on the part of employers/office supervisors and incumbent, entry-level general office clerical employees in skills and knowledges required for entry-level general office clerical employees in data processing was rejected.

There was a statistically significant difference in the mean ratings of employers/office supervisors and incumbent, entry-level office employees for the skill/knowledge "use of microcomputer" required in data processing. Entry-level office employees perceived "use of microcomputer" as more important than did employers/office supervisors.

D. Records Management. Table 4 illustrates the differences between the job titles as to the perceived importance of skills and knowledges required for records management. No significant differences were found between the two groups as to the perceived importance of 13 skills and knowledges required for records management.

Therefore, the hypothesis that there are no significant differences regarding the job titles with respect to the perceived importance on the part of employers/office supervisors and incumbent, entry-level general office clerical employees in skills and knowledges required for

TABLE 4

DIFFERENCES BETWEEN THE JOB TITLE ON THE PERCEIVED IMPORTANCE
OF SKILLS AND KNOWLEDGES REQUIRED FOR RECORDS MANAGEMENT

SKILLS/KNOWLEDGES	Employers/ Office Supervisors	Entry-Level Office Employees	Job Title	F Ratio	Sig. Lvl.
	Mean	Mean			
traditional (hard copy documents):					
alphabetic	1.63	1.78	2.241	0.136	
numeric	2.11	2.09	0.043	0.836	
subjective	2.78	2.72	0.020	0.887	
geographic	3.79	3.63	0.193	0.661	
nontraditional (electronic--generating entries to store and retrieve data through CRT on word processors and/or data processors):					
alphabetic	2.72	2.59	0.159	0.691	
numeric	2.94	2.91	0.004	0.953	
subjective	3.37	3.02	2.505	0.115	
geographic	3.91	3.89	0.015	0.904	
use of equipment:					
microfilm	4.45	4.39	0.112	0.733	
microfiche	4.16	4.36	2.119	0.147	
ultrafiche	4.65	4.78	1.437	0.232	
disk storage records	2.92	2.64	1.489	0.224	
tape storage records	3.99	3.93	0.024	0.878	

entry-level general office clerical employees in records management cannot be rejected. The perceived importance of employers/office supervisors and incumbent, entry-level general office clerical employees was similar in all 13 skills and knowledges required for records management.

E. Computations. Table 5 illustrates the differences between job titles as to the perceived importance of skills and knowledges required for computations. The analysis of data revealed one difference between the two groups as to the perceived importance of five skills and knowledges required for computations. The skill/knowledge "business math" was found to be significant at .002 level. Therefore, the hypothesis that there are no significant differences regarding the job titles with respect to the perceived importance on the part of employers/office supervisors and incumbent, entry-level general office clerical employees in skills and knowledges required for entry-level general office clerical employees in computations was rejected.

There was a statistically significant difference in the mean ratings of employers/office supervisors and incumbent, entry-level office employees for the skill/knowledge "business math" required in computations. Employers/office supervisors perceived "business math" as more important than did entry-level office employees.

TABLE 5
DIFFERENCES BETWEEN THE JOB TITLE ON THE PERCEIVED IMPORTANCE
OF SKILLS AND KNOWLEDGES REQUIRED FOR COMPUTATIONS

SKILLS/KNOWLEDGES	Employers/ Office Supervisors	Entry-Level Office Employees	Job Title	F. Ratio	Sig. Lvl.
	Mean	Mean			
business math	2.00	2.56		9.564	0.002*
bookkeeping	2.40	2.38		0.052	0.819
accounting	2.77	2.72		0.062	0.804
use of equipment:					
traditional calculator (ten-key adding machine)	1.96	1.99		0.000	0.983
electronic calculator (ten-key adding machine with memory)	2.30	2.32		0.035	0.851

*Significant at .05 level

F. Communications. Table 6 illustrates the differences between the job titles as to the perceived importance of skills and knowledges required for communications. The analysis of data revealed three differences between the two groups as to the perceived importance of 20 skills and knowledges required in communications. The following skills and knowledges were found to be significant: "basic writing skills" at .003 level, "original composition" at .000 level, and "telecommunications" at .027 level. Therefore, the hypothesis that there are no significant differences regarding the job titles with respect to the perceived importance on the part of employers/office supervisors and incumbent, entry-level general office clerical employees in skills and knowledges required for entry-level general office clerical employees in communications was rejected.

There were statistically significant differences in the mean ratings of employers/office supervisors and incumbent, entry-level office employees for the skills and knowledges "basic writing skills," "original composition," and "telecommunications" required in communications. Entry-level office employees perceived the above mentioned three skills and knowledges as more important than did employers/office supervisors.

TABLE 6

DIFFERENCES BETWEEN THE JOB TITLE ON THE PERCEIVED IMPORTANCE
OF SKILLS AND KNOWLEDGES REQUIRED FOR COMMUNICATIONS

SKILLS/KNOWLEDGES	Employers/ Office Supervisors		Entry-Level Office Employees		Job Title	
	Mean		Mean		F Ratio	Sig. Lvl.
writing:						
grammar	1.37		1.38		0.017	0.896
spelling	1.35		1.30		0.206	0.650
basic writing skills	1.62		1.32		9.128	0.003*
original composition	2.45		1.76		24.182	0.000*
reading:						
comprehension	1.52		1.42		0.668	0.415
vocabulary	1.68		1.50		2.926	0.089
proofreading	1.43		1.48		0.103	0.748
speaking:						
give directions (in clear and concise manner)	1.70		1.47		3.740	0.055
receive directions	1.34		1.32		0.000	0.989
listening	1.29		1.28		0.018	0.894
transmittal of information:						
conventional mailing	1.49		1.41		0.341	0.560
electronic mail and message systems	3.71		3.49		1.172	0.280
telecommunications	3.31		2.79		4.997	0.027*
teleconferences	3.96		3.64		3.209	0.075
telephone procedures	1.40		1.40		0.045	0.831
use of equipment:						
telex	4.05		4.07		0.000	0.991
PBX	4.22		4.35		0.658	0.418
fascimile	4.22		4.35		0.658	0.418
dictaphone (used for dictation of stored messages)	3.62		3.77		0.282	0.596
electronic an "intelligent" copier (which accepts messages for later transcription)	4.47		4.49		0.001	0.973

*Significant at .05 level

Hypothesis 2

Hypothesis 2 states that there are no significant differences regarding the job titles as to the perceived importance on the part of employers/office supervisors and incumbent, first year, entry-level general office clerical employees in work attitudes required for entry-level general office clerical employees.

Work Attitudes. Table 7 illustrates the differences between the job titles as to the perceived importance of work attitudes required for entry-level office employees. The analysis of data revealed two differences between the two groups as to the perceived importance of 14 work attitudes required for entry-level office employees. The following work attitudes were found to be significant: "develops the ability to plan and work in groups" at .003 level, and "accepts constructive criticism from co-workers" at .011 level. Therefore, the hypothesis that there are no significant differences regarding the job titles with respect to the perceived importance on the part of employers/office supervisors and incumbent, entry-level general office clerical employees in work attitudes required for entry-level general office clerical employees was rejected.

There were statistically significant differences in the mean ratings of employers/office supervisors

TABLE 7

DIFFERENCES BETWEEN THE JOB TITLE ON THE PERCEIVED IMPORTANCE
OF WORK ATTITUDES REQUIRED FOR ENTRY-LEVEL OFFICE EMPLOYEES

WORK ATTITUDES	Employers/ Office Supervisors	Entry-Level Office Employees	Job Title
	Mean	Mean	F Ratio Sig. Lvl.
employer/employee relationship: has the ability to get along with supervisors	1.78	1.70	0.209 0.648
understands and observes company policies	1.84	1.66	0.575 0.449
accepts constructive criticism from supervisors	1.91	1.98	0.374 0.542
follows written/oral instructions	1.31	1.41	0.706 0.402
employee-employee relationship: works congenially with co-workers	1.87	1.95	0.355 0.552
develops the ability to plan and work in groups	3.92	2.88	8.768 0.003*
volunteers to help co-workers to complete rush jobs	2.74	2.38	2.228 0.137
accepts constructive criticism from co-workers	3.18	2.53	6.511 0.011*
employee responsibility: can be depended upon to follow a job through its completion	1.26	1.44	1.956 0.163
works independently without supervision	1.88	1.70	0.795 0.374
has the ability to meet deadlines	1.62	1.62	0.011 0.915
is punctual in all office activities	1.74	1.79	0.084 0.772
works well under pressure	1.99	1.81	0.934 0.335
practices care for good personal appearance	1.62	1.62	0.011 0.915

*Significant at .05 level

and incumbent, entry-level office employees in the following work attitudes: "develops the ability to plan and work in groups," and "accepts constructive criticism from co-workers." Entry-level office employees perceived the above mentioned work attitudes as more important than did employers/office supervisors.

Hypothesis 3

Hypothesis 3 states that there are no significant differences regarding the sizes (small, medium, and large) of business offices with respect to the perceived importance of respondents (employers/office supervisors and incumbent, first year, entry-level general office clerical employees) in skills and knowledges required for entry-level general office clerical employees in the following areas:

- a. keyboarding/typing
- b. word processing
- c. data processing
- d. records management
- e. computations
- f. communications

A. Keyboarding/Typing. Table 8 illustrates the differences among the three sizes of business offices as to the perceived importance of skills and knowledges

TABLE 8

DIFFERENCES BETWEEN THE SIZE OF BUSINESS OFFICE ON THE PERCEIVED IMPORTANCE
OF SKILLS AND KNOWLEDGES REQUIRED FOR KEYBOARDING/TYPING

SKILLS/KNOWLEDGES	Small Business Office		Medium Business Office		Large Business Office		Size of Business Office		Sig. Lvl.
	Mean		Mean		Mean		F Ratio		
formatting (typing documents):									
from typewritten copy	2.29		1.95		2.34		1.608		0.203
from handwritten copy	1.80		1.71		2.10		2.517		0.083
from rough draft typewritten copy	2.33		2.10		2.31		0.427		0.653
compose at the typewriter	2.57		2.74		3.00		2.215		0.113
applications:									
long documents (over 10-page length)	3.54		3.05		3.34		1.690		0.187
short reports (3-10 page length)	2.54		2.17		2.31		1.591		0.206
financial statements	2.18		2.90		3.50		4.108		0.018*
memos/correspondence	1.86		1.62		2.03		2.544		0.081
use of equipment:									
manual typewriter	4.00		4.28		4.18		9.451		0.638
electric typewriter	1.98		1.79		1.85		0.698		0.499
electronic typewriter	3.01		3.05		2.67		0.466		0.628

*Significant at .05 level

required for keyboarding/typing. An F ratio was used to test the hypothesis. The analysis of data revealed one difference among the three sizes of business offices as to the perceived importance of 11 skills and knowledges required in keyboarding/typing. The skill/knowledge "typing of financial statements" was found to be significant at .018 level. Therefore, the hypothesis that there are no significant differences regarding the sizes of business offices with respect to the perceived importance on the part of respondents in skills and knowledges required for entry-level general office clerical employees in keyboarding/typing was rejected. Respondents among small, medium, and large business offices varied on the importance of skill/knowledge "typing of financial statements." Regarding all other skills and knowledges required for keyboarding/typing, the perceived importance of respondents was similar among the three sizes of business offices.

There was a statistically significant difference in the mean ratings of the respondents among the three sizes of business offices for the skill/knowledge "typing of financial statements" required in keyboarding/typing. Respondents in large business offices perceived "typing of financial statements" as less important than did respondents in small and medium business offices.

B. Word Processing. Table 9 illustrates the differences among the three sizes of business offices as to the perceived importance of skills and knowledges required for records management. An F ratio was used to test the hypothesis. The analysis of data revealed no significant differences among the three sizes of business offices as to the perceived importance of 12 skills and knowledges required in word processing. Therefore, the hypothesis that there are no significant differences regarding the sizes of business offices with respect to the perceived importance of respondents in skills and knowledges required for entry-level general office clerical employees in word processing cannot be rejected. The perceived importance of the respondents among the three sizes of business offices was similar in all 12 skills and knowledges required for word processing.

C. Data Processing. Table 10 illustrates the differences among the three sizes of business offices as to the perceived importance of skills and knowledges required for data processing. The analysis of data revealed one difference among the three sizes of business offices as to the perceived importance of seven skills and knowledges required in data processing. The skill/knowledge "use of mainframe computer" was found to be significant at .038 level. Therefore, the hypothesis that there are no significant differences regarding the sizes

TABLE 9

DIFFERENCES BETWEEN THE SIZE OF BUSINESS OFFICE ON THE PERCEIVED IMPORTANCE
OF SKILLS AND KNOWLEDGES REQUIRED FOR WORD PROCESSING

SKILLS/KNOWLEDGES	Small Business Office	Medium Business Office	Large Business Office	Size of Business Office	F Ratio	Sig. Lvl.
	Mean	Mean	Mean			
formatting (typing documents):						
from typewritten copy	3.09	2.75	2.60	1.636	0.197	
from handwriten copy	2.82	2.62	2.50	0.709	0.493	
from rough draft typewritten copy	3.17	2.70	2.66	2.197	0.114	
compose at the word processor	3.23	3.20	3.05	0.091	0.913	
applications:						
long documents (over 10-page length)	3.70	3.16	3.21	2.887	0.059	
short reports (3-10 page length)	3.22	3.06	2.70	1.687	0.188	
financial statements	3.53	3.56	3.86	1.074	0.344	
memos/correspondence	2.96	2.98	2.52	0.919	0.401	
use of equipment:						
on-line display stand alone word processor	3.62	3.17	3.20	1.226	0.296	
shared logic systems word processor	3.85	3.75	3.90	0.193	0.824	
portable dictation unit word processor	4.14	4.09	4.06	0.051	0.950	
microcomputer as word processor	3.34	3.94	3.53	1.413	0.246	

*Significant at .05 level

TABLE 10

DIFFERENCES BETWEEN THE SIZE OF BUSINESS OFFICE ON THE PERCEIVED IMPORTANCE
OF SKILLS AND KNOWLEDGES REQUIRED FOR DATA PROCESSING

SKILLS/KNOWLEDGES	Small Business Office	Medium Business Office	Large Business Office	Size of Business Office	Sig. Lvl.
	Mean	Mean	Mean	F Ratio	
competencies:					
data entry and data retrieval	2.40	2.30	2.35	0.112	0.894
computer literacy (ability to manipulate computer with a preestablished program to perform desired tasks)	2.50	2.26	2.40	0.544	0.581
computer fluency (ability to write and analyze a program)	4.06	3.67	4.10	1.282	0.279
use of equipment:					
mainframe computer	3.63	3.08	2.91	3.318	0.038*
microcomputer	2.65	3.18	2.98	1.158	0.316
time-sharing computer	4.14	4.08	4.06	0.006	0.994
computer graphics	4.27	4.44	4.39	0.605	0.547

*Significant at .05 level

of business offices with respect to the perceived importance on the part of respondents in skills and knowledges required for entry-level general office clerical employees in data processing was rejected. Respondents among the three sizes of business offices perceived differently the skill/knowledge "use of mainframe computer." Regarding all other skills and knowledges required in data processing, the perceived importance of respondents among the three sizes of business offices was similar.

There was a statistically significant difference in the mean ratings of the respondents among the three sizes of business offices for the skill/knowledge "use of mainframe computer" required for data processing. Respondents in large business offices perceived "use of mainframe computer" as more important than did respondents in small and medium business offices.

D. Records Management. Table 11 illustrates the differences among the three sizes of business offices as to the perceived importance of skills and knowledges required for records management. An F ratio was used to test the hypothesis. The analysis of data revealed three differences among the three sizes of business offices as to the perceived importance of 13 skills and knowledges required in records management. The following skills and knowledges were found to be significant: "microfilm" at

TABLE 11

DIFFERENCES BETWEEN THE SIZE OF BUSINESS OFFICE ON THE PERCEIVED IMPORTANCE
OF SKILLS AND KNOWLEDGES REQUIRED FOR RECORDS MANAGEMENT

SKILLS/KNOWLEDGES	Small Business Office	Medium Business Office	Large Business Office	Size of Business Office	F Ratio	Sig. Lvl.
	Mean	Mean	Mean			
traditional (hard copy documents):						
alphabetic	1.65	1.59	1.86	0.599	0.550	
numeric	2.08	2.23	2.24	0.299	0.742	
subjective	2.87	2.41	2.75	1.322	0.266	
geographic	3.92	3.50	3.43	2.808	0.063	
nontraditional (electronic--generating entries to store and retrieve data through CRT on word processors and/or data processors):						
alphabetic	2.72	2.67	2.55	0.089	0.915	
numeric	3.03	2.68	2.89	0.724	0.486	
subjective	3.26	3.27	3.10	0.401	0.960	
geographic	3.98	3.86	3.73	0.512	0.600	
use of equipment:						
microfilm	4.59	4.60	3.94	9.923	0.000*	
microfiche	4.31	4.42	3.96	3.460	0.033*	
ultrafiche	4.69	4.89	3.59	3.141	0.046*	
disk storage of records	2.80	2.73	2.89	0.160	0.853	
tape storage of records	4.13	4.00	2.98	2.739	0.067	

*Significant at .05 level

.000 level, "microfiche" at .033 level, and "ultrafiche" at .046 level. Therefore, the hypothesis that there are no significant differences regarding the sizes of business offices with respect to the perceived importance on the part of respondents in skills and knowledges required for entry-level general office clerical employees in records management was rejected.

There were statistically significant differences in the mean ratings of respondents among the three sizes of business offices for the following skills and knowledges: "microfilm," "microfiche," and "ultrafiche." Respondents in large business offices perceived the above mentioned three skills and knowledges as more important than did respondents in small and medium business offices.

Computations. Table 12 illustrates the differences among the three sizes of business offices as to the perceived importance of skills and knowledges required for computations. The analysis of data revealed one difference among the three sizes of business offices as to the perceived importance of five skills and knowledges required in computations. The skill/knowledge "book-keeping" was found to be significant at .007 level. Therefore, the hypothesis that there are no significant differences regarding the sizes of business offices with respect to the perceived importance on the part of

TABLE 12

DIFFERENCES BETWEEN THE SIZE OF BUSINESS OFFICE ON THE PERCEIVED IMPORTANCE
OF SKILLS AND KNOWLEDGES REQUIRED FOR COMPUTATIONS

SKILLS/KNOWLEDGES	Small Business Office	Medium Business Office	Large Business Office	Size of Business Office	F Ratio	Sig. Lvl.
	Mean	Mean	Mean			
business math	2.06	2.31	2.51	1.943	0.146	
bookkeeping	2.20	2.53	2.85	5.048	0.007*	
accounting	2.62	2.83	2.99	1.607	0.203	
use of equipment:						
traditional calculator (ten-key adding machine)	1.91	2.14	1.98	0.968	0.382	
electronic calculator (ten-key adding machine with memory)	1.36	1.45	1.33	0.243	0.785	

*Significant at .05 level

respondents in skills and knowledges required for entry-level general office clerical employees in computations was rejected.

There was a statistically significant difference in the mean ratings of respondents among the three sizes of business offices for the skill/knowledge "bookkeeping" required in computations. Respondents in small business offices perceived "bookkeeping" as more important than did respondents in medium and large business offices.

Communications. Table 13 illustrates the differences among the three sizes of business offices as to the perceived importance of skills and knowledges required for communications. The analysis of data revealed four differences among the three sizes of business offices as to the perceived importance of 20 skills and knowledges required in communications. The following skills and knowledges were found to be significant: "electronic mail and message systems" at .029 level, "telex" at .000 level, "use of PBX" at .000 level, and "use of dictaphone" at .040 level. Therefore, the hypothesis that there are no significant differences regarding the sizes of business offices with respect to the perceived importance on the part of respondents in skills and knowledges required for entry-level general office clerical employees in communications was rejected.

TABLE 13
DIFFERENCES BETWEEN THE SIZE OF BUSINESS OFFICE ON THE PERCEIVED IMPORTANCE
OF SKILLS AND KNOWLEDGES REQUIRED FOR COMMUNICATIONS

	Small Business Office	Medium Business Office	Large Business Office	Size of Business Office	F Ratio	Sig. Lvl.
writing:	Mean	Mean	Mean			
grammar	1.36	1.45	1.33	0.243	0.785	
spelling	1.34	1.39	1.40	0.195	0.823	
basic writing skills	1.51	1.51	1.46	0.017	0.093	
original composition	2.21	2.10	2.17	0.188	0.829	
reading:						
comprehension	1.55	1.39	1.39	1.481	0.230	
vocabulary	1.69	1.58	1.45	1.882	0.155	
proofreading	1.44	1.56	1.39	0.212	0.809	
speaking:						
give directions (in clear and concise manner)	1.65	1.60	1.52	0.496	0.609	
receive directions	1.37	1.24	1.30	1.022	0.362	
listening	1.34	1.24	1.21	1.526	0.220	
transmittal of information:						
conventional mailing	1.48	1.39	1.47	0.294	0.746	
electronic mail and message systems	3.74	4.02	3.08	3.615	0.029*	
telecommunications	3.35	2.73	2.81	2.799	0.063	
teleconferences	3.97	3.84	3.51	1.629	0.199	
telephone procedures	1.45	1.30	1.30	0.623	0.538	
use of equipment:						
telex	4.38	4.20	3.28	13.606	0.000*	
PBX	4.55	4.22	3.60	11.822	0.000*	
fascimile	3.70	3.72	3.43	0.188	0.829	
dictaphone (used for dictation of stored messages)	3.89	3.59	3.26	3.283	0.040*	
electronic an "Intelligent" copier (which accepts messages for later transcription)	4.62	4.34	4.26	1.838	0.162	

*Significant at .05 level

There were statistically significant differences in the mean ratings of respondents among the three sizes of business offices for the following skills and knowledges required in communications: "electronic mail and message systems," "telex," "use of PBX," and "use of dictaphone." Respondents in medium business offices perceived "electronic mail and message systems" as less important than did respondents in small and large business offices. Respondents in large business offices perceived "telex," "use of PBX," and "use of dictaphone" as more important than did respondents in small and medium business offices.

Hypothesis 4

Hypothesis 4 states that there are no significant differences regarding the sizes (small, medium, and large) of business offices with respect to the perceived importance on the part of respondents (employers/office supervisors and incumbent, first year, entry-level general office clerical employees) in work attitudes required for entry-level general office clerical employees.

Work Attitudes. Table 14 illustrates the differences among the three sizes of business offices as to the perceived importance of work attitudes required for entry-level office employees. The analysis of data revealed one

TABLE 14

DIFFERENCES BETWEEN THE SIZE OF BUSINESS OFFICE ON THE PERCEIVED IMPORTANCE
OF WORK ATTITUDES REQUIRED FOR ENTRY-LEVEL OFFICE EMPLOYEES

WORK ATTITUDES	Small Business Office	Medium Business Office	Large Business Office	Size of Business Office	Sig. Lvl.
	Mean	Mean	Mean	F Ratio	
employer-employee relationship: has the ability to get along with supervisors understands and observes company policies accepts constructive criticism from supervisors follows written/oral instructions	1.78 1.82 2.02 1.41	1.74 1.81 1.88 1.20	1.70 1.63 1.80 1.31	0.155 0.503 0.799 0.470	0.857 0.606 0.451 0.626
employee-employee relationship: works congenially with co-workers develops the ability to plan and work in groups volunteers to help co-workers to complete rush jobs accepts constructive criticism from co-workers	1.95 3.78 2.69 3.03	1.95 3.95 2.79 3.00	1.75 2.58 2.25 2.64	0.584 4.793 1.117 1.092	0.559 0.009* 0.329 0.338
employee responsibility: can be depended upon to follow a job through its completion works independently without supervision has the ability to meet deadlines is punctual in all office activities works well under pressure practices care for good personal appearance	1.37 1.82 1.66 1.78 1.90 2.10	1.21 1.78 1.69 1.79 2.08 1.88	1.33 1.81 1.48 1.70 1.86 1.99	0.182 0.029 0.720 0.373 0.428 0.251	0.834 0.972 0.488 0.689 0.652 0.778

*Significant at .05 level

difference among the three sizes of business offices as to the perceived importance of 14 work attitudes required for entry-level office employees. The work attitude "develops the ability to plan and work in groups" was found to be significant at .009 level. Therefore, the hypothesis that there are no significant differences regarding the sizes of business offices with respect to the perceived importance on the part of respondents in work attitudes required for entry-level general office clerical employees was rejected. Regarding all other work attitudes, the perceived importance of the respondents among the three sizes of business offices was similar.

There was a statistically significant difference in the mean ratings of respondents for the work attitude "develops the ability to plan and work in groups" required for entry-level office employees. Respondents in large business offices perceived "develops the ability to plan and work in groups" as more important than did respondents in small and medium business offices.

Hypothesis 5

Hypothesis 5 states that there are no significant differences regarding the types (service, manufacturing, finance related, construction, and other) of business organizations with respect to the perceived importance on

the part of respondents (employers/office supervisors and incumbent, first year, entry-level general office clerical employees) in skills and knowledges required for entry-level general office clerical employees in the following areas:

- a. keyboarding/typing
- b. word processing
- c. data processing
- d. records management
- e. computations
- f. communications

A. Keyboarding/Typing. Table 15 illustrates the differences among the five types of business organizations as to the perceived importance of skills and knowledges required for keyboarding/typing. The analysis of data revealed three differences among the five types of business organizations as to the perceived importance of 11 skills and knowledges required in keyboarding/typing. The following skills and knowledges were found to be significant: "compose at the typewriter" at .025 level, "typing of short reports" at .003 level, and "typing of memos/correspondence" at .014 level. Therefore, the hypothesis that there are no significant differences regarding the types of business organizations with respect to the perceived importance on the part of respondents in skills and knowledges required for entry-level general office clerical employees in keyboarding/typing was rejected.

TABLE 15
DIFFERENCES BETWEEN THE TYPE OF BUSINESS ORGANIZATION ON THE PERCEIVED IMPORTANCE
OF SKILLS AND KNOWLEDGES REQUIRED FOR KEYBOARDING/TYPING

SKILLS/KNOWLEDGES	Service		Manufacturing		Finance Related		Construction		Other		Type of Business Organization	
	Mean		Mean		Mean		Mean		Mean		F Ratio	Sig. Lvl.
formatting (typing documents):	2.37		2.19		1.89		2.36		2.29		0.013	0.457
from typewritten copy	1.94		1.72		1.57		1.73		2.02		1.454	0.218
from handwritten copy	2.33		2.26		2.31		2.40		2.31		0.217	0.929
from rough draft typewritten copy	2.54		3.13		2.04		2.80		2.76		2.854	0.025*
compose at the typewriter												
applications:												
long documents (over 10-page length)	3.42		3.15		3.46		3.80		3.50		0.758	0.554
short reports (3-10 page length)	2.74		1.88		2.24		2.18		2.68		4.089	0.003*
financial statements	2.83		3.16		2.66		3.81		3.00		1.100	0.358
Memos/correspondence	2.08		1.58		2.04		2.45		1.78		3.196	0.014*
Use of equipment:												
manual typewriter	4.06		4.07		3.93		4.25		4.24		1.074	0.371
electric typewriter	2.02		1.64		1.56		1.75		2.17		2.105	0.082
electronic typewriter	3.25		2.73		2.55		3.77		2.88		1.315	0.266

*Significant at .05 level

There were statistically significant differences in the mean ratings of respondents among the five types of business organizations for the following skills and knowledges required for keyboarding/typing: "compose at the typewriter," "typing of short reports," and "typing of memos/correspondence." Respondents in manufacturing type of business organizations perceived "compose at the typewriter" as less important, and "typing of short reports" as more important than did respondents in the other four types of business organizations. Respondents in manufacturing and other types of business organizations perceived "typing of memos/correspondence" as more important than did respondents in the other three types of business organizations.

B. Word Processing. Table 16 illustrates the differences among the five types of business organizations as to the perceived importance of skills and knowledges required for word processing. The analysis of data revealed three differences among the five types of business organizations as to the perceived importance of 12 skills and knowledges required in word processing. The following skills and knowledges were found to be significant: "formatting from handwritten copy" at .050 level, "compose at the word processor" at .051 level, and "typing of memos/correspondence" at .021 level.

TABLE 16
DIFFERENCES BETWEEN THE TYPE OF BUSINESS ORGANIZATION ON THE PERCEIVED IMPORTANCE
OF SKILLS AND KNOWLEDGES REQUIRED FOR WORD PROCESSING

SKILLS/KNOWLEDGES	Services		Manufacturing		Finance Related		Construction		Other		Type of Business Organization	
	Mean		Mean		Mean		Mean		Mean		F Ratio	Sig. Lvl.
formatting (typing of documents):												
from typewritten copy	3.34		2.96		2.73		3.00		2.57		1.700	0.152
from handwritten copy	3.14		2.91		2.29		2.83		2.38		2.418	0.050*
from rough draft typewritten copy	3.40		3.00		2.92		2.81		2.58		1.800	0.131
compose at the word processor	3.52		2.47		2.55		3.41		2.88		2.411	0.051*
applications:												
long documents (over 10-page length)	3.72		3.32		3.35		3.92		3.40		0.762	0.551
short reports (3-10 page length)	3.59		2.86		2.66		3.06		2.98		1.880	0.116
financial statements	3.83		3.54		3.50		3.83		3.53		0.512	0.727
memos/correspondence	3.51		2.65		2.31		3.17		2.68		2.970	0.021*
use of equipment:												
on-line display stand alone word processor	3.74		3.05		3.83		3.83		3.33		1.567	0.185
shared logic systems word processor	4.10		3.69		4.08		4.17		3.68		1.259	0.288
portable dictation unit word processor	4.14		3.91		4.31		4.50		4.11		0.679	0.607
microcomputer as word processor	3.35		3.43		3.21		3.41		3.75		0.633	0.639

*Significant at .05 level

Therefore, the hypothesis that there are no significant differences regarding the types of business organizations with respect to the perceived importance on the part of respondents in skills and knowledges required for general office clerical office employees in word processing was rejected.

There were statistically significant differences in the mean ratings of respondents among the five types of business organizations for the following skills and knowledges required in word processing: "formatting from handwritten copy," "compose at the word processor," and "typing of memos/correspondence." Respondents in service type of business organizations perceived "formatting from handwritten copy" as less important than did respondents in the other four types of business organizations. Respondents in service and construction types of business organizations perceived "compose at the word processor," and "typing of memos/correspondence" as less important than did respondents in the other three types of business organizations.

C. Data Processing. Table 17 illustrates the differences among the five types of business organizations as to the perceived importance of skills and knowledges required for data processing. The analysis of data revealed one difference among the five types of business organizations as to the perceived importance of seven

TABLE 17
DIFFERENCES BETWEEN THE TYPE OF BUSINESS ORGANIZATION ON THE PERCEIVED IMPORTANCE
OF SKILLS AND KNOWLEDGES REQUIRED FOR DATA PROCESSING

	Service		Manufacturing		Finance Related		Construction		Other		Type of Business Organization	
	Mean		Mean		Mean		Mean		Mean		F Ratio	Sig. Lvl.
competencies:												
data entry and data retrieval	2.77		2.03		2.57		2.50		2.24		1.853	0.120
computer literacy (ability to manipulate computer with a preestablished program to perform desired tasks)	2.66		2.24		2.47		2.75		2.43		0.670	0.614
computer fluency (ability to write and analyze a program)	3.83		4.06		4.36		4.25		3.90		0.843	0.499
use of equipment:												
mainframe computer	3.35		3.20		3.46		4.34		3.25		1.006	0.406
microcomputer	2.86		2.85		2.60		2.25		2.97		0.322	0.863
time-sharing computer	4.04		3.66		3.37		4.58		4.34		2.776	0.029*
computer graphics	4.10		4.42		4.65		4.33		4.33		1.359	0.250

Significant at .05 level

skills and knowledges required in data processing. The skill/knowledge "use of time-sharing computer" was found to be significant at .029 level. Therefore, the hypothesis that there are no significant differences regarding the types of business organizations with respect to the perceived importance on the part of respondents in skills and knowledges required for entry-level general office clerical employees in data processing was rejected.

There was a statistically significant difference in the mean ratings of respondents among the five types of business organizations for the skill/knowledge "use of time-sharing computer" required in data processing. Respondents in manufacturing and finance related types of business organizations perceived "use of time-sharing computer" as more important than did respondents in the other three types of business organizations.

D. Records Management. Table 18 illustrates the differences among the five types of business organizations as to the perceived importance of skills and knowledges required for records management. The analysis of data revealed three differences among the five types of business organizations as to the perceived importance of 13 skills and knowledges required in records management. The following skills and knowledges were found to be significant: "traditional alphabetic filing system" at

TABLE 18
DIFFERENCES BETWEEN THE TYPE OF BUSINESS ORGANIZATION ON THE PERCEIVED IMPORTANCE
OF SKILLS AND KNOWLEDGES REQUIRED FOR RECORDS MANAGEMENT

SKILLS/KNOWLEDGES	Service		Manufacturing		Finance Related		Construction		Other		Type of Business Organization	
	Mean		Mean		Mean		Mean		Mean		F Ratio	Sig. Lvl.
traditional (hard copy documents):												
alphabetic	1.42		1.97		1.74		2.12		1.63		2.447	0.048*
numeric	1.87		2.16		2.17		1.91		1.97		0.624	0.646
subjective	2.78		2.46		2.85		3.37		2.85		1.115	0.351
geographic	3.74		3.72		3.43		4.28		3.75		0.785	0.536
nontraditional (electronic--generating entries to store and retrieve data through CRT on word processors and/or data processors):												
alphabetic	2.96		2.66		2.46		3.09		2.48		0.801	0.526
numeric	3.22		2.77		3.00		3.09		2.80		0.684	0.604
subjective	3.40		3.07		3.11		3.63		3.21		0.473	0.756
geographic	4.17		3.73		3.73		4.45		3.80		1.269	0.284
use of equipment:												
microfilm	4.21		4.37		3.36		4.59		4.56		1.589	0.179
microfiche	3.77		4.38		4.00		3.98		3.96		4.604	0.001*
ultrafiche	4.50		4.63		4.80		4.91		4.83		3.004	0.020*
disk storage of records	4.50		4.63		4.80		4.91		4.83		3.004	0.102
tape storage of records	4.12		3.58		3.84		4.17		3.96		0.245	0.912

*Significant at .05 level

.048 level, "microfiche" at .001 level, and "ultrafiche" at .020 level. Therefore, the hypothesis that there are no significant differences regarding the types of business organizations with respect to the perceived importance on the part of respondents in skills and knowledges required for entry-level general office clerical employees in records management was rejected.

There were statistically significant differences in the mean ratings of respondents among the five types of business organizations for the following skills and knowledges required for records management: "traditional alphabetic filing," "microfiche," and "ultrafiche." Respondents in construction type of business organizations perceived "traditional alphabetic filing" as less important than did respondents in the other four types of business organizations. Respondents in manufacturing and finance related types of business organizations perceived "microfiche" as less important than did respondents in the other three types of business organizations. The respondents in service type of business organizations perceived "ultrafiche" as more important than did respondents in the other four types of business organizations.

E. Computations. Table 19 illustrates the differences among the five types of business organizations as to the perceived importance of skills and knowledges required

TABLE 19
DIFFERENCES BETWEEN THE TYPE OF BUSINESS ORGANIZATION ON THE PERCEIVED IMPORTANCE
OF SKILLS AND KNOWLEDGES REQUIRED FOR COMPUTATIONS

SKILLS/KNOWLEDGES	Service			Manufacturing			Finance Related			Construction			Other			Type of Business Organization		
	Mean			Mean			Mean			Mean			Mean			F Ratio	Sig.	Lvl.
business math	1.96			2.25			2.63			1.83			2.30			1.493	0.206	
bookkeeping	2.06			2.71			3.20			2.24			2.23			5.687	0.000*	
accounting	2.51			2.97			3.34			3.00			2.50			2.941	0.022*	
use of equipment:																		
traditional calculator (ten-key adding machine)	1.83			2.20			2.35			1.41			1.85			2.433	0.049*	
electronic calculator (ten-key adding machine with memory)	2.28			2.16			2.58			1.84			2.42			0.885	0.474	

*Significant at .05 level

for computations. The analysis of data revealed three differences among the five types of business organizations as to the perceived importance of five skills and knowledges required in computations. The following skills and knowledges were found to be significant: "book-keeping" at .000 level, "accounting" at .022 level, and "use of traditional calculator" at .049 level. Therefore, the hypothesis that there are no significant differences regarding the types of business organizations with respect to the perceived importance on the part of respondents in skills and knowledges required for general office clerical employees in computations was rejected.

There were statistically significant differences in the mean ratings of respondents in the five types of business organizations for the following skills and knowledges: "bookkeeping," "accounting," and "use of traditional calculator." Respondents in finance related type of business organizations perceived "bookkeeping" as less important than did respondents in the other four types of business organizations. Respondents in finance related and construction types of business organizations perceived "accounting" as less important than did respondents in the other three types of business organizations. The respondents in manufacturing and finance related types of business organizations perceived "use of traditional calculator" as less

important than did respondents in the other three types of business organizations.

F. Communications. Table 20 illustrates the differences among the five types of business organizations as to the perceived importance of skills and knowledges required for communications. The analysis of data revealed five differences among the five types of business organizations as to the perceived importance of 20 skills and knowledges required in communications. The following skills and knowledges were found to be significant: "electronic mail and message systems" at .000 level, "telecommunications" at .008 level, "telex" at .000 level, "facsimile" at .000 level, and "use of dictaphone" at .008 level. Therefore, the hypothesis that there are no significant differences regarding the types of business organizations with respect to the perceived importance on the part of respondents in skills and knowledges required for general office clerical employees in communications was rejected.

There were statistically significant differences in the mean ratings of respondents among the five types of business organizations for the following skills and knowledges required for communications: "electronic mail and message systems," "telecommunications," "telex," and "facsimile," and "use of dictaphone." Respondents in finance related type of business organizations perceived

TABLE 20
DIFFERENCES BETWEEN THE TYPE OF BUSINESS ORGANIZATION ON THE PERCEIVED IMPORTANCE
OF SKILLS AND KNOWLEDGES REQUIRED FOR COMMUNICATIONS

SKILLS/KNOWLEDGES	Service		Manufacturing		Finance Related		Construction		Other		Type of Business Organization	
	Mean		Mean		Mean		Mean		Mean		F Ratio	Sig. Lvl.
writing:												
grammar	1.47		1.37		1.24		1.42		1.34		0.612	0.654
spelling	1.49		1.30		1.14		1.42		1.29		1.712	0.149
basic writing skills	1.52		1.54		1.31		1.58		1.52		0.552	0.698
original composition	2.31		2.21		1.83		2.16		2.20		1.313	0.266
reading:												
comprehension	1.55		1.58		1.35		1.39		1.41		1.010	0.403
vocabulary	1.65		1.65		1.63		1.42		1.57		0.425	0.791
proofreading	1.79		1.42		1.35		1.17		1.38		1.724	0.146
speaking:												
give directions (in clear and concise manner)	1.57		1.61		1.50		1.75		1.60		0.331	0.857
receive directions	1.27		1.38		1.35		1.42		1.31		0.367	0.832
listening	1.24		1.33		1.22		1.34		1.31		0.470	0.758
transmittal of information:												
conventional mailing of correspondence	1.48		1.52		1.45		1.75		1.37		0.923	0.451
electronic mail and message systems	3.05		3.19		2.78		4.25		3.76		5.491	0.000*
telecommunications	3.04		2.65		2.82		4.17		3.42		3.521	0.008*
teleconferences	4.00		3.55		3.78		3.91		3.93		0.920	0.453
telephone procedures	1.37		1.46		1.58		1.42		1.31		0.693	0.598
use of equipment:												
telex	4.34		3.29		3.60		4.73		4.51		9.871	0.000*
PBX	4.44		3.83		4.30		4.45		4.45		1.852	0.121
facsimile	4.00		2.67		3.64		4.12		4.07		7.366	0.000*
dictaphone (used for dictation of stored messages)	4.06		3.46		2.89		3.18		3.96		3.581	0.008*
electronic an "intelligent" copier (which accepts messages for later transcription)	4.55		4.12		4.52		4.54		4.68		1.995	0.097

*Significant at .05 level

"electronic mail and message systems," and "use of dictaphone" as more important than did respondents in the other four types of business organizations. Respondents in manufacturing and finance related types of business organizations perceived "telecommunications," and "telex" as more important than did respondents in the other three types of business organizations. Respondents in manufacturing type of business organizations perceived "facsimile" as more important than did respondents in the other four types of business organizations.

Hypothesis 6

Hypothesis 6 states that there are no significant differences regarding the types (service, manufacturing, finance related, construction, and other) of organizations with respect to the perceived importance on the part of respondents (employers/office supervisors and incumbent, first year, entry-level general office clerical employees) in work attitudes required for entry-level general office clerical employees.

Work Attitudes. Table 21 illustrates the differences among the five types of business organizations as to the perceived importance of work attitudes required for entry-level office employees. The analysis of data revealed three differences among the five types of business

TABLE 21
DIFFERENCES BETWEEN THE TYPE OF BUSINESS ORGANIZATION ON THE PERCEIVED IMPORTANCE
OF WORK ATTITUDES REQUIRED FOR ENTRY-LEVEL OFFICE EMPLOYEES

SKILLS/KNOWLEDGES	Services		Manufacturing		Finance Related		Construction		Other		Type of Business Organization	
	Mean		Mean		Mean		Mean		Mean		F Ratio	Sig. Lvl.
employer-employee relationship: has the ability to get along with supervisors	1.65		1.61		2.31		2.18		1.65		2.549	0.040*
understands and observes company policies	1.81		1.77		2.13		2.27		1.53		1.777	0.135
accepts constructive criticism from supervisors	1.73		1.98		2.38		2.09		1.87		1.507	0.201
follows written/oral instructions	1.24		1.18		2.03		1.36		1.36		4.460	0.002*
employee-employee relationship: works congenially with co-workers	1.85		1.68		2.20		2.36		1.92		1.313	0.266
develops the ability to plan and work in groups	4.02		3.33		3.34		4.82		3.15		1.198	0.313
volunteers to help co-workers to complete rush jobs	2.88		2.50		2.42		2.64		2.54		0.350	0.844
accepts constructive criticism from co-workers	2.72		3.23		2.48		3.45		3.96		1.216	0.305
employee responsibility: can be depended upon to follow a job through its completion	1.22		1.28		1.97		1.09		1.24		3.386	0.010*
works independently without supervision	1.64		1.97		2.07		1.79		1.73		0.741	0.565
has the ability to meet deadlines	1.67		1.73		1.81		1.36		1.45		1.195	0.314
is punctual in all office activities	1.60		1.82		2.20		1.50		1.70		1.972	0.100
works well under pressure	1.98		1.99		2.00		1.90		1.80		0.231	0.921
practices care for good personal appearance	1.80		2.07		2.45		2.73		1.91		1.813	0.128

*Significant at .05 level

organizations as to the perceived importance of 14 work attitudes required for entry-level office employees. The following work attitudes were found to be significant: "has the ability to get along with supervisors" at .040 level, "follows written/oral instructions" at .002 level, and "can be depended upon to follow a job through its completion" at .010 level. Therefore, the hypothesis that there are no significant differences regarding the types of business organizations with respect to the perceived importance on the part of respondents in work attitudes required for entry-level general office clerical employees was rejected.

There were statistically significant differences in the mean ratings of respondents for the following work attitudes required for entry-level office employees: "has the ability to get along with supervisors," "follows written/oral instructions," and "can be depended upon to follow a job through its completion." Respondents in finance related and construction types of business organizations perceived "has the ability to get along with supervisors" as less important than did respondents in the other three types of business organizations. Respondents in finance related type of business organizations perceived "follows written/oral instructions," and "can be depended upon to follow a job through its completion" as less important

than did respondents in the other four types of business organizations.

Rank Ordering of Skills, Knowledges, and Work Attitudes
in the Seven Areas

Research Question 7. Does the perceived importance on the part of employers/office supervisors and incumbent, first year, entry-level general office clerical employees differ in the rank ordering of skills, knowledges, and work attitudes in the seven areas required for entry-level general office clerical employees.

In response to the research question, the means of one-way analysis of variance were used to rank order the perceptions of employers/office supervisors and incumbent, entry-level general office clerical employees on the importance of skills, knowledges, and work attitudes required for entry-level general office clerical employees in the seven areas.

Table 22 illustrates the rank ordering of skills and knowledges in keyboarding/typing required for entry-level general office clerical employees as perceived by employers/office supervisors and incumbent, entry-level office employees. Out of 11 skills and knowledges required for keyboarding/typing, the two groups rank ordered five skills and knowledges similarly "formatting from typewritten copy," "formatting from rough draft

TABLE 22

RANK ORDERING OF SKILLS AND KNOWLEDGES IN KEYBOARDING/TYPING REQUIRED
FOR ENTRY-LEVEL OFFICE EMPLOYEES AS PERCEIVED BY EMPLOYERS/OFFICE
SUPERVISORS AND ENTRY-LEVEL OFFICE EMPLOYEES

Employers/Office Supervisors		Entry-Level Office Employees	
Skill/Knowledge	Mean	Skill/Knowledge	Mean
formatting from handwritten copy	1.83	use of memos/correspondence	1.73
use of electric typewriter	1.85	formatting from handwritten copy	1.91
use of memos/correspondence	1.94	use of electric typewriter	2.00
formatting from typewritten copy	2.34	formatting from typewritten copy	2.14
formatting from rough draft copy	2.35	formatting from rough draft copy	2.17
typing of short reports (3-10 page length)	2.39	compose at the typewriter	2.43
use of electronic typewriter	2.82	typing of short reports (3-10 page length)	2.43
compose at the typewriter	2.92	use of electronic typewriter	2.75
typing of financial statements	3.10	typing of financial statements	2.85
typing of long documents (over 10-page length)	3.45	typing of long documents (over 10-page length)	3.31
use of manual typewriter	4.03	use of manual typewriter	4.18

copy," "typing of financial statements," "typing of long documents," and "use of a manual typewriter." Employers/office supervisors and incumbent, entry-level office employees perceived "formatting from typewritten copy," and "formatting from rough draft copy" as "important." Employers/office supervisors further perceived "typing of financial statements," and "typing of long documents" as "somewhat important." Entry-level office employees further perceived "typing of financial statements" as "important," and "typing of long documents" as "somewhat important." Both the groups perceived "use of a manual typewriter" as "not important."

Table 23 illustrates the rank ordering of skills and knowledges in word processing required for entry-level general office clerical employees as perceived by employers/office supervisors and incumbent, entry-level office employees. Out of 12 skills and knowledges required in word processing, the two groups rank ordered four skills and knowledges similarly: "compose at the word processor" was ranked first and was perceived as "important," and the "use of portable dictation unit" was ranked last and was perceived as "not important." The other two skills and knowledges "formatting from handwritten copy" and "formatting from typewritten copy" were ranked fourth and fifth, respectively. Employers/office supervisors perceived "formatting from handwritten

TABLE 23

RANK ORDERING OF SKILLS AND KNOWLEDGES IN WORD PROCESSING REQUIRED
FOR ENTRY-LEVEL OFFICE EMPLOYEES AS PERCEIVED BY EMPLOYERS/
OFFICE SUPERVISORS AND ENTRY-LEVEL OFFICE EMPLOYEES

Employers/Office Supervisors		Entry-Level Office Employees	
Skill/Knowledge	Mean	Skill/Knowledge	Mean
compose at the word processor	2.75	compose at the word processor	2.61
use of memos/correspondence	2.84	formatting from rough draft copy	2.77
formatting from typewritten copy	2.97	formatting from typewritten copy	2.80
formatting from handwritten copy	3.01	formatting from handwritten copy	2.85
typing of short reports (3-10 page length)	3.04	use of memos/correspondence	2.86
use of microcomputer as word processor	3.29	typing of short reports (3-10 page length)	3.10
typing from rough draft copy	3.44	use of on-line display standalone word processor	3.57
use of on-line display standalone word processor	3.50	typing of long documents (over 10-page length)	3.43
typing of long documents (over 10-page length)	3.51	typing of financial statements	3.59
typing of financial statements	3.64	use of shared logic systems word processor	3.74
use of shared logic systems word processor	3.94	use of microcomputer as word processor	3.81
use of portable dictation unit word processor	4.08	use of portable dictation unit word processor	4.16

copy" as "important" and "formatting from typewritten copy as "somewhat important." Entry-level office employees perceived both the skills as "important." The two groups rank ordered and perceived the remaining eight skills and knowledges differently.

Table 24 illustrates the rank ordering of skills and knowledges in data processing required for entry-level general office clerical employees as perceived by employers/office supervisors and incumbent, entry-level office employees. The two groups rank ordered similarly five out of seven skills and knowledges required in data processing. They are: "computer literacy," "use of mainframe computer," "computer fluency," "use of time-sharing computer," and "use of computer graphics." "Computer literacy" was ranked second and was perceived by both the groups as "important." "The use of main-frame computer," "computer fluency," "use of time-sharing computer," and "use of computer graphics" were ranked at the bottom of the list in the order given above. The "use of mainframe computer" was perceived by both the groups as "somewhat important." Even though the employers/office supervisors and entry-level office employees rank ordered the remaining three skills and knowledges similarly, they differed on the importance of "computer fluency." Entry-level employees perceived "computer fluency" as "somewhat important," and the employers/office supervisors perceived

TABLE 24

RANK ORDERING OF SKILLS AND KNOWLEDGES IN DATA PROCESSING REQUIRED
FOR ENTRY-LEVEL OFFICE EMPLOYEES AS PERCEIVED BY EMPLOYERS/
OFFICE SUPERVISORS AND ENTRY-LEVEL OFFICE EMPLOYEES

Employers/Office Supervisors		Entry-Level Office Employees	
Skill/Knowledge	Mean	Skill/Knowledge	Mean
data entry and data retrieval	2.25	use of microcomputer	2.31
computer literacy (ability to manipulate computer with a preestablished program to perform desired tasks)	2.41	computer literacy (ability to manipulate computer with a preestablished program to perform desired tasks)	2.54
use of microcomputer	2.51	data entry and data retrieval	2.56
use of mainframe computer	3.44	use of mainframe computer	3.21
computer fluency (ability to write and analyze a program)	4.07	computer fluency (ability to write and analyze a program)	3.89
use of time-sharing computer	4.15	use of time-sharing computer	4.04
use of computer graphics	4.32	use of computer graphics	4.35

it as "not important." Both the groups perceived "use of time-sharing computer" and "use of computer graphics" as "not important."

Table 25 illustrates the rank ordering of skills and knowledges in records management required for entry-level general office clerical employees as perceived by employers/office supervisors and incumbent, entry-level office employees. The two groups rank ordered similarly 11 out 13 skills and knowledges required in records management. The two skills and knowledges rank ordered differently were "traditional subjective filing" and "use of disk storage of records." Even though the two groups rank ordered the above two skills and knowledges differently, they perceived them both as "important."

Table 26 illustrates the rank ordering of skills and knowledges in computations required for entry-level general office clerical employees as perceived by employers/office supervisors and incumbent, entry-level office employees. The two groups rank ordered similarly two out of five skills and knowledges required in computations "use of traditional calculator" and "accounting," and both the skills and knowledges were perceived as "important." Even though the two groups rank ordered the remaining three skills and knowledges "electronic calculator," "business math," and

TABLE 25

RANK ORDERING OF SKILLS AND KNOWLEDGES IN RECORDS MANAGEMENT REQUIRED
FOR ENTRY-LEVEL OFFICE EMPLOYEES AS PERCEIVED BY EMPLOYERS/
OFFICE SUPERVISORS AND ENTRY-LEVEL OFFICE EMPLOYEES

Employers/Office Supervisors		Entry-Level Office Employees	
Skill/Knowledge	Mean	Skill/Knowledge	Mean
traditional alphabetic filing	1.63	traditional alphabetic filing	1.78
traditional numeric filing	2.11	traditional numeric filing	2.09
electronic alphabetic filing	2.72	electronic alphabetic filing	2.59
traditional subjective filing	2.78	use of disk storage of records	2.64
use of disk storage of records	2.92	traditional subjective filing	2.72
electronic numeric filing	2.94	electronic numeric filing	2.91
electronic subjective filing	3.37	electronic subjective filing	3.02
traditional geographic filing	3.79	traditional geographic filing	3.63
electronic geographic filing	3.91	electronic geographic filing	3.89
use of tape storage of records	3.99	use of tape storage of records	3.93
use of microfiche	3.16	use of microfiche	4.36
use of microfilm	4.45	use of microfilm	4.39
use of ultrafiche	4.65	use of ultrafiche	4.78

TABLE 26

RAN ORDERING OF SKILLS AND KNOWLEDGES IN COMPUTATIONS REQUIRED
FOR ENTRY-LEVEL OFFICE EMPLOYEES AS PERCEIVED BY EMPLOYERS/
OFFICE SUPERVISORS AND ENTRY-LEVEL OFFICE EMPLOYEES

Employers/Office Supervisors		Entry-Level Office Employees	
Skill/Knowledge	Mean	Skill/Knowledge	Mean
use of traditional calculator (ten-key adding machine)	1.96	use of traditional calculator (ten-key adding machine)	1.99
business math	2.00	use of electronic calculator (ten-key adding machine with memory)	2.32
use of electronic calculator (ten-key adding machine with memory)	2.30	bookkeeping	2.38
bookkeeping	2.40	business math	2.56
accounting	2.77	accounting	2.72

"bookkeeping" differently, they perceived them as "important."

Table 27 illustrates the rank ordering of skills and knowledges in communications required for entry-level general office clerical employees as perceived by employers/office supervisors and incumbent, entry-level office employees. The two groups rank ordered similarly eight out of 20 skills and knowledges required in communications. The skill/knowledge "listening," was ranked first and was perceived as "essential"; "use of PBX," "telex," "facsimile," and "use of electronic 'intelligent' copier" were ranked at the bottom of the list and were perceived as "not important." "Conventional mailing of correspondence" and "comprehension" were ranked seventh and eighth, respectively and were perceived as "essential." "Original composition" was ranked twelfth and was perceived as "important." On the rest of 12 skills and knowledges required, the perceived importance and rank ordering of the two groups were not the same.

Table 28 illustrates the rank ordering of work attitudes required for entry-level general office clerical employees as perceived by employers/office supervisors and incumbent, entry-level office employees. The two groups rank ordered similarly three out of 14 work attitudes required for entry-level office employees. Both the

TABLE 27

RANK ORDERING OF SKILLS AND KNOWLEDGES IN COMMUNICATIONS REQUIRED
FOR ENTRY-LEVEL OFFICE EMPLOYEES AS PERCEIVED BY EMPLOYERS/OFFICE
SUPERVISORS AND ENTRY-LEVEL OFFICE EMPLOYEES

Employers/Office Supervisors		Entry-Level Office Employees	
Skill/Knowledge	Mean	Skill/Knowledge	Mean
listening	1.29	listening	1.28
receive directions	1.34	spelling	1.30
spelling	1.35	basic writing skills	1.32
grammar	1.37	receive directions	1.32
telephone procedures	1.40	grammar	1.38
proofreading	1.43	telephone procedures	1.40
conventional mailing of correspondence	1.49	conventional mailing of correspondence	1.41
comprehension	1.52	comprehension	1.42
basic writing skills	1.62	give directions	1.47
vocabulary	1.68	proofreading	1.48
give directions	1.70	vocabulary	1.50
original composition	2.45	original composition	1.76
use of dictaphone (used for dictation of stored messages)	3.62	telecommunications	2.79
telecommunications	3.31	electronic mail and message systems	3.49
electronic mail and message systems	3.71	teleconferences	3.64
teleconferences	3.96	use of dictaphone (used for dictation of of stored messages)	3.77
telex	4.05	telex	4.07
PBX	4.22	PBX	4.35
fascimile	4.22	fascimile	4.35
electronic "intelligent" copier	4.47	electronic "intelligent" copier	4.49

TABLE 28

RANK ORDERING OF WORK ATTITUDES REQUIRED FOR ENTRY-LEVEL OFFICE
EMPLOYEES AS PERCEIVED BY EMPLOYERS/OFFICE SUPERVISORS
AND ENTRY-LEVEL OFFICE EMPLOYEES

Employers/Office Supervisors		Entry-Level Office Employees	
Skill/Knowledge	Mean	Skill/Knowledge	Mean
can be depended upon to follow a job through its completion	1.26	follows written/oral instructions	1.41
follows written/oral instructions	1.31	can be depended upon to follow a job through its completion	1.44
has the ability to meet deadlines	1.62	practices care for good personal appearance	1.62
practices care for good personal appearance	1.61	has the ability to meet deadlines	1.62
is punctual in all office activities	1.74	understands and observes company policies	1.66
has the ability to get along with supervisors	1.78	has the ability to get along with supervisors	1.70
understands and observes company policies	1.84	works independently without supervision	1.70
works congenially with co-workers	1.87	is punctual in all office activities	1.79
works independently without supervision	1.88	works well under pressure	1.81
accepts constructive criticism from supervisors	1.19	work congenially with co-workers	1.95
works well under pressure	1.99	accepts constructive criticism from supervisors	1.98
volunteers to help co-workers to complete rush jobs	2.74	volunteers to help co-workers to complete rush jobs	2.38
accepts constructive criticism from co-workers	3.18	accepts constructive criticism from co-workers	2.53
develops the ability to plan and work in groups	3.92	develops the ability to plan and work in groups	2.88

groups ranked them at the bottom of the list. They are "volunteers to help co-workers to complete rush jobs," "accepts constructive criticism from co-workers," and "develops the ability to plan and work in groups." The employers/office supervisors perceived "volunteers to help co-workers to complete rush jobs" as "important," and the other two work attitudes mentioned above as "somewhat important." The entry-level employees perceived all three work attitudes mentioned above as "important."

Rank Ordering of the Seven Areas

Research Question 8. Does the perceived importance on the part of employers/office supervisors and incumbent, first year, entry-level office employees differ in the rank ordering of the seven areas required for entry-level general office clerical employees.

In response to the research question, the means of one-way analysis of variance of collapsed items were used to rank order the seven areas required for entry-level general office clerical employees as perceived by employers/office supervisors and incumbent, entry-level office employees.

Table 29 illustrates the rank ordering of the seven areas required for entry-level general office clerical employees as perceived by employers/office supervisors.

TABLE 29

RANK ORDERING OF THE SEVEN AREAS REQUIRED FOR ENTRY-LEVEL
OFFICE EMPLOYEES AS PERCEIVED BY EMPLOYERS/
OFFICE SUPERVISORS

SKILLS/KNOWLEDGES/WORK ATTITUDES	Mean
work attitudes	2.087
computations	2.306
communications	2.430
keyboarding/typing	2.642
data processing	3.304
word processing	3.369
records management	3.379

The work attitudes were ranked first as being "important," followed by computations, communications, keyboarding/typing, data processing, word processing, and records management.

Table 30 illustrates the rank ordering of the seven areas required for entry-level general office clerical employees as perceived by incumbent, entry-level office employees. The work attitudes were ranked first as "essential," followed by communications, computations, keyboarding/typing, word processing, records management, and data processing.

Summary

In this chapter, the analysis of data gathered from the responses to the survey questionnaires were presented. A One-Way ANOVA (One-Way Analysis of Variance) was used to analyze the data. The analysis of data determined the effects of the three independent variables on the perceived importance of skills and knowledges (keyboarding/typing, word processing, data processing, records management, computations, and communications) and work attitudes. The means were used to compare differences between the job titles (employers/office supervisors and incumbent, first year, entry-level general office clerical employees), among the three sizes (small,

TABLE 30

RANK ORDERING OF THE SEVEN AREAS REQUIRED FOR ENTRY-LEVEL
OFFICE EMPLOYEES AS PERCEIVED BY ENTRY-LEVEL
OFFICE EMPLOYEES

SKILLS/KNOWLEDGES/WORK ATTITUDES	Mean
work attitudes	1.943
communications	2.350
computations	2.450
keyboarding/typing	2.506
word processing	3.279
records management	3.312
data processing	3.439

medium, and large) of business offices, and among the five types (service, manufacturing, finance related, construction, and other) of business organizations. The means were also used for rank ordering of skills, knowledges, and work attitudes in the seven areas required for entry-level general office clerical employees as perceived by employers/office supervisors and incumbent, entry-level office employees. The means of one-way analysis of variance of collapsed items were used for rank ordering of the seven areas required for entry-level general office clerical employees as perceived by employers/office supervisors and incumbent, entry-level office employees. The results were summarized and presented through the discussion and tables.

CHAPTER 5

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

This chapter presents the summary, conclusions, and recommendations that resulted from this study. The summary reviews the purpose, procedures, and the findings indicated by the analysis of data. The conclusions are inferences derived from the reported findings. The recommendations were based on the findings of the analysis of data, and the conclusions of this study.

Summary

This study was designed to determine if significant differences existed between the perceptions of employers/office supervisors and incumbent, first year, entry-level general office clerical employees, among the three sizes of business offices, and among the five types of business organizations towards skills, knowledges, and work attitudes required of entry-level general office clerical employees. The purpose of this study was to supply information for developing innovative and relevant curriculum in the office education field.

Participants for this study were selected from the two membership lists of the Lansing Regional Chamber of Commerce. They are the Greater Lansing Business, Industry, and Professions membership list and the Greater Lansing Industries membership list. Members of Lansing Regional Chamber of Commerce were selected because they hire local office graduates and they keep abreast with the office technology. The greater Lansing area includes Ingham, Eaton, and Clinton counties.

Two separate questionnaires were developed to obtain data for this study. One questionnaire was designed to obtain data from the employers/office supervisors. Copies of this questionnaire were mailed to employers/office supervisors of 300 businesses and industries randomly selected from the two Lansing Regional Chamber of Commerce membership lists. The second questionnaire was designed to obtain data from the incumbent, first year, entry-level office employees. Copies of this questionnaire were mailed to 300 incumbent, first year, entry-level office employees in the same 300 businesses and industries. In response to the initial and two follow-up mailings, altogether 142 employers/office supervisors and 92 incumbent, first year, entry-level office employees completed and returned the questionnaire.

The data were collected and the six hypotheses identified for this study were tested using the

Statistical Package for the Social Sciences, Release X, (SPSSx). An F ratio was selected as the method of statistical analysis to test the hypotheses for the following reasons: it shows differences between the independent variables on the perceived importance, it gives means for the subgroups of independent variables, and it gives an F value and the significant level for each item in the questionnaires.

The means were based on the scale used for the two questionnaires. A mean of 1 = essential, 2 = important, 3 = somewhat important, 4 = not important, and 5 = not applicable.

A .05 level of significance was used to test the hypotheses. The hypotheses and results are as follows:

Testing of Hypotheses

Hypothesis 1. There are no significant differences regarding the job titles with respect to the perceived importance on the part of employers/office supervisors and incumbent, first year, entry-level general office clerical employees in skills and knowledges required for entry-level general office clerical employees in the following areas:

- a. keyboarding/typing
- b. word processing

- c. data processing
- d. records management
- e. computations
- f. communications

The statistical analysis of data revealed significant differences between employers/office supervisors and incumbent, entry-level general office clerical employees as to the perceived importance of skills and knowledges required for entry-level general office clerical employees in the following areas:

- a. keyboarding/typing: compose at the typewriter
- b. word processing: use of microcomputer as a word processor
- c. data processing: use of microcomputer
- d. records management: none
- e. computations: business math
- f. communications: basic writing skills, original composition, and telecommunications

Therefore, the hypothesis was rejected for keyboarding/typing, word processing, data processing, computations, and communications; but could not be rejected for records management. The perceived importance of the two groups was similar for records management.

The two groups perceived differently the importance of above mentioned skills and knowledges. A summary of

differences found between the two groups for skills and knowledges, in the six areas, is given below. The perceived importance for each difference, in comparison to the other groups, is shown in parentheses.

Employers/Office Supervisors

use of microcomputer as a word processor (more important)

business math (more important)

Entry-Level Office Employees

compose at the typewriter (more important)

use of microcomputer (more important)

basic writing skills (more important)

original composition (more important)

telecommunications (more important)

Hypothesis 2. There are no significant differences regarding the job titles with respect to the perceived importance on the part of employers/office supervisors and incumbent, entry-level general office clerical employees in work attitudes required for entry-level general office clerical employees.

The statistical analysis of data showed significant differences between employers/office supervisors and incumbent, entry-level general office clerical employees as to the perceived importance of work attitudes required

for entry-level general office clerical employees in the area of

work attitudes: develops the ability to plan and work in groups, and accepts constructive criticism from co-workers.

Therefore, the hypothesis was rejected. Entry-level office employees perceived the above mentioned work attitudes as more important than did employers/office supervisors.

Hypothesis 3. There are no significant differences regarding the sizes (small, medium, and large) of business offices with respect to the perceived importance on the part of respondents (employers/office supervisors and incumbent, first year, entry-level general office clerical employees) in skills and knowledges required for entry-level general office clerical employees in the following areas:

- a. keyboarding/typing
- b. word processing
- c. data processing
- d. records management
- e. computations
- f. communications

The statistical analysis of data showed significant differences among the three sizes of business offices with respect to the perceived importance on the part of

respondents in skills and knowledges required for entry-level general office clerical employees in the following areas:

- a. keyboarding/typing: typing of financial statements
- b. word processing: none
- c. data processing: use of mainframe computer
- d. records management: microfilm, microfiche, and ultrafiche
- e. computations: bookkeeping
- f. communications: electronic mail and message systems, telex, use of PBX, and use of dictaphone (used for dictation of stored messages)

Therefore, the hypothesis was rejected for keyboarding/typing, data processing, records management, computations, and communications; but could not be rejected for word processing. The perceived importance of the respondents among the three sizes of business offices was similar for word processing.

Respondents among the three sizes of business offices perceived differently the importance of above mentioned skills and knowledges. A summary of differences found among the three sizes of business offices for skills and knowledges, in the six areas, is given below. The perceived importance of respondents for

each difference, in comparison to the other sizes, is shown in parentheses.

Small Business Office

bookkeeping (more important)

Medium Business Office

electronic mail and message systems (less important)

Large Business Office

bookkeeping (less important)

use of mainframe computer (more important)

microfilm (more important)

microfiche (more important)

ultrafiche (more important)

telex (more important)

use of PBX (more important)

use of dictaphone (more important)

typing of financial statements (less important)

Hypothesis 4. There are no significant differences regarding the sizes (small, medium, and large) of business offices with respect to the perceived importance on the part of respondents (employers/office supervisors and incumbent, first year, entry-level general office clerical employees) in work attitudes required for entry-level general office clerical employees.

The statistical analysis of data showed a significant difference among the three sizes of business offices with

respect to the perceived importance on the part of respondents in work attitudes required for entry-level general office clerical employees in the area of

work attitudes: develops the ability to plan and work in groups

Therefore, the hypothesis was rejected. Respondents in large business offices perceived the above mentioned work attitude as more important than did respondents in small and medium business offices.

Hypothesis 5. There are no significant differences regarding the types (service, manufacturing, finance related, construction, and other) of business organizations with respect to the perceived importance on the part of respondents (employers/office supervisors and incumbent, first year, entry-level general office clerical employees) in skills and knowledges required for entry-level general office clerical employees in the following areas:

- a. keyboarding/typing
- b. word processing
- c. data processing
- d. records management
- e. computations
- f. communications

The statistical analysis of data revealed significant differences among the five types of business organizations

with respect to the perceived importance on the part of respondents in skills and knowledges required for entry-level general office clerical employees in the following areas:

a. keyboarding/typing: compose at the typewriter, typing of short reports, and typing of memos/correspondence

b. word processing: formatting from handwritten copy, compose at the word processor, and typing of memos/correspondence

c. data processing: use of time-sharing computer

d. records management: traditional alphabetic filing system, microfiche, and ultrafiche

e. computations: bookkeeping, accounting, and use of traditional calculator (ten-key adding machine)

f. communications: electronic mail and message systems, telecommunications, telex, and facsimile, and use of dictaphone (used for dictation of stored messages)

Therefore, the hypothesis was rejected for all six areas. Respondents among the five types of business organizations perceived differently the importance of above mentioned skills and knowledges. A summary of differences found among the five types of business organizations for skills and knowledges, in the six areas, is given below. The perceived importance of respondents

for each difference, in comparison to the other types of business organizations, is shown in parentheses.

Service Type of Business Organization

typing from handwritten copy (less important)
compose at the word processor (less important)
typing of memos/correspondence on word processor
(less important)
ultrafiche (more important)

Manufacturing Type of Business Organization

compose at the typewriter (less important)
typing of short reports (more important)
typing of memos/correspondence (more important)
use of time-sharing computer (more important)
microfiche (less important)
use of traditional calculator (less important)
telecommunications (more important)
telex (more important)
facsimile (more important)

Finance Related Type of Business Organization

use of time-sharing computer (more important)
microfiche (less important)
bookkeeping (less important)
accounting (less important)
use of traditional calculator (less important)
electronic mail and message systems (more
important)

use of dictaphone (more important)
telecommunications (more important)
telex (more important)

Construction Type of Business Organization

compose at the word processor (less important)
typing of memos/correspondence (less important)
use of traditional calculator (less important)
accounting (less important)

Other Types of Business Organizations

typing of memos/correspondence (more important)

Hypothesis 6. There are no significant differences regarding the types (service, manufacturing, finance related, construction, and other) of business organizations with respect to the perceived importance on the part of respondents (employers/office supervisors and incumbent, first year, entry-level general office clerical employees) in work attitudes required for entry-level general office clerical employees.

The statistical analysis of data showed significant differences among the five types of business organizations with respect to the perceived importance on the part of respondents in work attitudes required for entry-level general office clerical employees in the area of

work attitudes: has the ability to get along with supervisors, follows written/oral instructions, and

can be depended upon to follow a job through its completion.

Therefore, the hypothesis was rejected. Respondents among the five types of business organizations perceived differently the importance of above mentioned work attitudes. A summary of differences found among the five types of business organizations in work attitudes is given below. The perceived importance of respondents, in comparison to the other types of business organizations, is shown in parentheses.

Finance Related Type of Business Organization

has the ability to get along with supervisors (less important)

follows written/oral instructions (less important)

can be depended upon to follow a job through its completion (less important)

Construction Type of Business Organization

has the ability to get along with supervisors (less important)

Rank Ordering of Skills, Knowledges, and Work Attitudes in the Seven Areas

Research Question 7. Does the perceived importance on the part of employers/office supervisors and incumbent, first year, entry-level general office clerical employees

differ in the rank ordering of skills, knowledges, and work attitudes in the seven areas required for entry-level general office clerical employees. In response to the research question, the means of one-way analysis of variance were used to rank order the perceptions of employers/office supervisors and incumbent, entry-level general office clerical employees on the importance of skills, knowledges, and work attitudes required for entry-level general office clerical employees in the seven areas.

Table 22 (see pg. 124) illustrates the rank ordering of skills and knowledges in keyboarding/typing required for entry-level general office clerical employees as perceived by employers/office supervisors and incumbent, entry-level office employees. Out of 11 skills and knowledges required for keyboarding/typing, the two groups rank ordered five skills and knowledges similarly "formatting from typewritten copy" "formatting from rough draft copy," "typing of financial statements," "typing of long documents," and "use of a manual typewriter." Employers/office supervisors and incumbent, entry-level office employees perceived "formatting from typewritten copy," and "formatting from rough draft copy" as "important." Employers/office supervisors further perceived "typing of financial statements," and "typing of long documents as "somewhat important." Entry-level

office employees further perceived "typing of financial statements as "important," and "typing of long documents" as "somewhat important." Both the groups perceived "use of a manual typewriter" as "not important."

Table 23 (see pg. 126) illustrates the rank ordering of skills and knowledges in word processing required for entry-level general office clerical employees as perceived by employers/office supervisors and incumbent, entry-level office employees. Out of 12 skills and knowledges required in word processing, the two groups rank ordered four skills and knowledges similarly: "compose at the word processor" was ranked first and was perceived as "important," and the "use of portable dictation unit" was ranked last and was perceived as "not important." The other two skills and knowledges "formatting from handwritten copy" and "formatting from typewritten copy" were ranked fourth and fifth, respectively. Employers/office supervisors perceived "formatting from handwritten copy" as "important" and "formatting from typewritten copy" as "somewhat important." Entry-level office employees perceived both the skills as "important." The two groups rank ordered and perceived the remaining eight skills and knowledges differently.

Table 24 (see pg. 128) illustrates the rank ordering of skills and knowledges in data processing required for entry-level general office clerical employees as perceived

by employers/office supervisors and incumbent, entry-level office employees. The two groups rank ordered similarly five out of seven skills and knowledges required in data processing. They are: "computer literacy," "use of mainframe computer," "computer fluency," "use of time-sharing computer," and "use of computer graphics."

"Computer literacy" was ranked second and was perceived by both the groups as "important." "The use of main-frame computer," "computer fluency," "use of time-sharing computer," and "use of computer graphics" were ranked at the bottom of the list in the order given above. The "use of mainframe computer" was perceived by both the groups as "somewhat important." Even though the employers/office supervisors and entry-level office employees rank ordered the remaining three skills and knowledges similarly, they differed on the importance of "computer fluency." Entry-level employees perceived "computer fluency" as "somewhat important," and the employers/office supervisors perceived it as "not important." Both the groups perceived "use of time-sharing computer" and "use of computer graphics" as "not important."

Table 25 (see pg. 130) illustrates the rank ordering of skills and knowledges in records management required for entry-level general office clerical employees as perceived by employers/office supervisors and incumbent, entry-level office employees. The two groups rank ordered

similarly 11 out 13 skills and knowledges required in records management. The two skills and knowledges rank ordered differently were "traditional subjective filing" and "use of disk storage of records." Even though the two groups rank ordered the above two skills and knowledges differently, they perceived them both as "important."

Table 26 (see pg. 131) illustrates the rank ordering of skills and knowledges in computations required for entry-level general office clerical employees as perceived by employers/office supervisors and incumbent, entry-level office employees. The two groups rank ordered similarly two out of five skills and knowledges required in computations "use of traditional calculator" and "accounting," and both the skills and knowledges were perceived as "important." Even though the two groups rank ordered the remaining three skills and knowledges "electronic calculator," "business math," and "book-keeping" differently, they perceived them as "important."

Table 27 (see pg. 133) illustrates the rank ordering of skills and knowledges in communications required for entry-level general office clerical employees as perceived by employers/office supervisors and incumbent, entry-level office employees. The two groups rank ordered and perceived similarly the importance of eight out of 20 skills and knowledges required in communications. The skill/knowledge "listening" was ranked first and was

perceived as "essential"; "use of PBX," "telex," "facsimile," and "use of electronic 'intelligent' copier" were ranked at the bottom of the list and were perceived as "not important." "Conventional mailing of correspondence" and "comprehension" were ranked seventh and eighth, respectively and were perceived as "essential." "Original composition" was ranked twelfth and was perceived as "important." On the rest of 12 skills and knowledges required, the perceived importance and rank ordering of the two groups were not the same.

Table 28 (see pg. 134) illustrates the rank ordering of work attitudes required for entry-level general office clerical employees as perceived by employers/office supervisors and incumbent, entry-level office employees. The two groups rank ordered similarly three out of 14 work attitudes required for entry-level office employees. Both the groups ranked them at the bottom of the list. They are "volunteers to help co-workers to complete rush jobs," "accepts constructive criticism from co-workers," and "develops the ability to plan and work in groups." The employers/office supervisors perceived "volunteers to help co-workers to complete rush jobs" as "important," and the other two work attitudes mentioned above as "somewhat important." The entry-level office employees perceived all three work attitudes mentioned above as "important."

Rank Ordering of the Seven Areas

Research Question 8. Does the perceived importance on the part of employers/office supervisors and incumbent, first year, entry-level general office clerical employees differ in the rank ordering of the seven areas required for entry-level general office clerical employees. In response to the research question, the means of one-way analysis of variance of collapsed items were used to rank order the seven areas required for entry-level general office clerical employees as perceived by employers/office supervisors and incumbent, entry-level office employees.

Table 29 (see pg. 136) illustrates the rank ordering of the seven areas required for entry-level general office clerical employees as perceived by employers/office supervisors. The work attitudes were ranked first as being "important," followed by computations, communications, keyboarding/typing, data processing, word processing, and records management.

Table 30 (see pg. 138) illustrates the rank ordering of the seven areas required for entry-level general office clerical employees as perceived by incumbent, entry-level office employees. The work attitudes were ranked first as "essential", followed by communications, computations, keyboarding/typing, word processing, records management, and data processing.

Conclusions

The following conclusions were based on the findings from the statistical analysis of data collected for this study.

1. Not all skills and knowledges in keyboarding/typing were ranked similarly or perceived to be equally important. Therefore, some skills should be emphasized over the others.

2. Only five skills and knowledges were perceived as "important" in word processing "compose at the word processor," "use of memos/correspondence," "formatting from typewritten copy," "formatting from rough draft copy," and "formatting from handwritten copy." These skills and knowledges should be included in the curriculum.

3. In data processing three skills and knowledges were perceived as "important" even though they were not ranked similarly "data entry and retrieval," "computer literacy," and "use of computer." Therefore, these skills and knowledges are important enough to be included in data processing courses.

4. Eleven skills and knowledges were rank ordered similarly, but only six of these skills and knowledges were perceived as "essential" or "important." "Traditional alphabetic filing" was ranked first and

perceived as "essential." The remaining five skills and knowledges "traditional numeric filing," "electronic alphabetic filing," "traditional subjective filing," "use of disk storage of records," and "use of electronic numeric filing" were perceived as "important." These skills and knowledges should be emphasized over the others in records management courses.

5. All of the skills and knowledges in computations were perceived as "important," even though they were not ranked similarly; therefore, these skills should be emphasized in computation courses.

6. Eight of 20 skills and knowledges in communications were ranked similarly. Out of these eight skills and knowledges, "listening," "conventional mailing of correspondence," and "comprehension" were perceived as "essential," and "original composition" as "important." The remaining four skills and knowledges were perceived as "not important." Therefore, some of the skills and knowledges required in communications need more emphasis over others.

7. All of the fourteen work attitudes surveyed in this study are important enough to be included in human relations courses since none was rated "not important" by either employers/office supervisors or incumbent, entry-level office employees.

8. Both employers/office supervisors and incumbent, entry-level office employees ranked work attitudes, communications, computations, and keyboarding/typing at the top of the list and perceived them as "important." Therefore, these four areas should be emphasized over word processing, data processing, and records management.

9. Employers/office supervisors and incumbent, entry-level office employees vary in the requirements of skills and knowledges for keyboarding/typing, word processing, data processing, computations, and communications for employment. The two groups also vary in the requirements for work attitudes. Therefore, potential entry-level general office clerical employees will find differences in the above mentioned areas when applying for jobs. It will be counterproductive to train students for office employment based on the perceptions of any one group.

10. Respondents in small, medium, and large sized business offices were responsible for a variance in the requirements of skills and knowledges required for keyboarding/typing, data processing, records management, computations, communications. Respondents were also responsible for a variance in the requirements for work attitudes. Therefore, potential entry-level general office clerical employees will find the requirements will vary from one size of business office to another in the

above mentioned areas. Placing emphasis on the requirements of any one size of business office is not supported, unless employment can be guaranteed in that size.

11. Respondents in service, manufacturing, finance related, construction, and other business organizations vary in the requirements of skills and knowledges for keyboarding/typing, word processing, data processing, records management, computations, communications. Respondents also vary in the requirements for work attitudes. Therefore, potential entry-level general office clerical employees will find the requirements for employment will vary from one type of business organization to another. It will be counterproductive to train students for entry-level office employment based on the requirements of any one type of business organization, unless employment is assured.

Recommendations

This section provides recommendations for curriculum development in the office field as well as implications for additional research.

1. It is recommended that even though job titles, sizes of business offices, and types of business organizations, influence the skills, knowledges, and work

attitudes required for the training of entry-level general office clerical employees, curriculum should not be limited to the requirements of any one group of job titles, to any one size of business offices, and to any one type of business organizations. The training should be based on the requirements of the entry-level general office clerical employees.

2. It is recommended that in-depth studies should be conducted on the types of office equipment being used in businesses and industries, including brand names. Since office technology is changing rapidly and office equipment is being updated constantly, it is important to obtain information on office equipment before buying new equipment for a classroom.

3. It is recommended that in-depth studies in word processing and data processing should be conducted. The data gathered and analyzed should be used when planning curriculum and instructional programs for the training of entry-level general office clerical employees.

4. Employers/office supervisors and incumbent, entry-level office employees focus great importance on work attitudes to obtain employment and to function efficiently on the job. It is recommended that office educators should incorporate the work attitudes, perceived to be important in this study in their office block programs.

5. It is recommended that office educators should continue to place major emphasis on communication skills, and computation skills. Even though the offices are being automated, according to this study, employers/office supervisors and incumbent, entry-level general office clerical employees place great importance on these skills.

6. It is recommended that office educators should continue to place emphasis on keyboarding/typing skills. These skills can be transferred to use word processing and data processing equipment.

7. It is recommended that office educators should continue to teach the four types of traditional filing systems, along with electronic alphabetic and numeric filing systems.

8. It is recommended that office educators should introduce telecommunications equipment and procedures into the classroom. If funding does not permit the purchase of such equipment, then students should be taken on field trips to see the working of telecommunications equipment.

9. It is recommended that the perceptions of employers/office supervisors and incumbent, entry-level office employees be evaluated in skills, knowledges, and work attitudes periodically when making curriculum changes or developing instructional programs for the training of entry-level general office clerical employees.

10. It is recommended that office educators should include in the curriculum skills, knowledges, and work attitudes perceived as "essential" or "important" by employers/office supervisors and incumbent, entry-level office employees for training of entry-level general office clerical employees in greater Lansing area.

11. It is recommended that office educators should exclude from the curriculum or place less emphasis on skills, knowledges, and work attitudes perceived as "not important" "not applicable" by employers/office supervisors and incumbent, entry-level office employees for training of entry-level general office clerical employees in greater Lansing area.

12. It is recommended that office educators should set up or continue to work with advisory committees comprised of members of the business community drawn from the fields in which they are designing instructional programs for the training of entry-level general office clerical employees.

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APPENDIX A

EMPLOYER/OFFICE CLERICAL SUPERVISOR QUESTIONNAIRE

THE QUESTIONNAIRE

For the Employer or Office Supervisor

This questionnaire is primarily concerned with determining the skills, knowledges, and work attitudes required for entry-level **general office clerical employees** in the greater Lansing area.

GENERAL OFFICE CLERK: According to the Dictionary of Occupational Titles (1977) a general office clerk performs any combination of the following and similar clerical tasks requiring limited knowledge of systems or procedures; writes or types bills, statements, letters, manuscripts, checks or other documents, copying information from one record to another. Proofreads records or forms. Counts, weighs, or measures material. Sorts and files records. Receives money from customers and deposits money in bank. Addresses envelopes or packages by hand or with envelope stuffing machine. Answers telephone, conveys messages, and runs errands. Stamps, sorts, and distributes mail. Stamps or numbers by hand or machine. Copies documents, using office duplicating equipment. Their day-to-day duties vary daily according to the needs of the office.

Please place a check mark (✓) in the appropriate blank for the following questions:

1. Title of the person completing the questionnaire? (prefer a person who supervises office clerical staff or who does office work).

☐ president
☐ vice president
☐ owner
☐ personnel manager
☐ office supervisor
☐ office manager
☐ business manager
☐ other, please specify _____

2. What is the nature of your business?

☐ agriculture	☐ transportation
☐ communications	☐ utilities
☐ construction	☐ law
☐ education	☐ banking
☐ federal government	☐ health care
☐ finance	☐ wholesale trade
☐ insurance	☐ other, please specify _____
☐ local government	_____
☐ manufacturing	_____
☐ real estate	
☐ service	
☐ state government	

3. What is the approximate number of office employees in your business?
(Office employees include: administrative assistants, secretaries, stenographers, typists, receptionists, legal, medical, and general office clerical employees, and others who perform office duties).

_____ 1 to 5

_____ 6 to 10

_____ over 10

As you respond to the following items, please keep in mind that the items contain skills and knowledges that are often found in job descriptions for entry-level general office clerical employees. Please place a check mark (✓) in the appropriate blank for each of the following skills and knowledges as it applies in your work place.

- 1 - essential
- 2 - important
- 3 - somewhat important
- 4 - not important
- 5 - does not apply

SKILLS AND KNOWLEDGES

	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
4. <u>Keyboarding/Typing</u>					
formatting (typing documents)					
from typewritten copy	_____	_____	_____	_____	_____
from handwritten copy	_____	_____	_____	_____	_____
from rough draft typewritten copy	_____	_____	_____	_____	_____
compose at the typewriter	_____	_____	_____	_____	_____
other: _____	_____	_____	_____	_____	_____
applications:					
long documents (over 10-page length)	_____	_____	_____	_____	_____
short reports (3-10 page length)	_____	_____	_____	_____	_____
financial statements	_____	_____	_____	_____	_____
memos/correspondence	_____	_____	_____	_____	_____
other: _____	_____	_____	_____	_____	_____
use of equipment:					
manual typewriter	_____	_____	_____	_____	_____
electric typewriter	_____	_____	_____	_____	_____
electronic typewriter	_____	_____	_____	_____	_____
other: _____	_____	_____	_____	_____	_____
5. <u>Word Processing</u>					
formatting (typing documents)					
from typewritten copy	_____	_____	_____	_____	_____
from handwritten copy	_____	_____	_____	_____	_____
from rough draft typewritten copy	_____	_____	_____	_____	_____
compose at the word processor	_____	_____	_____	_____	_____
other: _____	_____	_____	_____	_____	_____

5. Word Processing (contd.)

	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
applications:					
long documents (over 10-page length)	_____	_____	_____	_____	_____
short reports (3-10 page length)	_____	_____	_____	_____	_____
financial statements	_____	_____	_____	_____	_____
memos/correspondence	_____	_____	_____	_____	_____
other: _____	_____	_____	_____	_____	_____
use of equipment:					
on-line display stand alone word processor	_____	_____	_____	_____	_____
shared logic systems word processor	_____	_____	_____	_____	_____
portable dictation unit word processor	_____	_____	_____	_____	_____
microcomputer as word processor	_____	_____	_____	_____	_____
other: _____	_____	_____	_____	_____	_____

6. Data Processing

competencies:					
data entry and data retrieval	_____	_____	_____	_____	_____
computer literacy (ability to manipulate computer with a preestablished program to perform desired tasks)	_____	_____	_____	_____	_____
computer fluency (ability to write and analyze a program)	_____	_____	_____	_____	_____
other: _____	_____	_____	_____	_____	_____
use of equipment:					
mainframe computer	_____	_____	_____	_____	_____
microcomputer	_____	_____	_____	_____	_____
time-sharing computer	_____	_____	_____	_____	_____
computer graphics	_____	_____	_____	_____	_____
other: _____	_____	_____	_____	_____	_____

7. Records Management

traditional (hand copy documents)					
alphabetic	_____	_____	_____	_____	_____
numeric	_____	_____	_____	_____	_____
subjective	_____	_____	_____	_____	_____
geographic	_____	_____	_____	_____	_____
other: _____	_____	_____	_____	_____	_____
nontraditional (electronic--generating entries to store and retrieve data through CRT on word processors and/or data processors)					
alphabetic	_____	_____	_____	_____	_____
numeric	_____	_____	_____	_____	_____
subjective	_____	_____	_____	_____	_____
geographic	_____	_____	_____	_____	_____
other: _____	_____	_____	_____	_____	_____

7. Records Management (contd.)

use of equipment:

microfilm

microfiche

ultrafiche

disk storage of records

tape storage of records

other: _____

12345

_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

8. Computations

business math

bookkeeping

accounting

other: _____

_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

use of equipment:

traditional calculator (ten-key adding machine)

electronic calculator (ten-key with memory)

other: _____

_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

9. Communications

writing:

grammar

spelling

basic writing skills

original composition

other: _____

_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

reading:

comprehension

vocabulary

proofreading

other: _____

_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

speaking:

give directions (in clear and concise manner)

receive directions

listening

other: _____

_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

transmittal of information:

conventional mailing of correspondence

electronic mail and message systems

telecommunications

teleconferences

telephone procedures

other: _____

_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

9. Communications (contd.)

	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
use of equipment:					
telex	_____	_____	_____	_____	_____
PBX	_____	_____	_____	_____	_____
fascimile	_____	_____	_____	_____	_____
dictaphone (used for dictation of stored messages)	_____	_____	_____	_____	_____
electronic an "intelligent" copier (which accepts messages for later transcription)	_____	_____	_____	_____	_____
other: _____	_____	_____	_____	_____	_____

10. WORK ATTITUDES

As you respond to the following items, please keep in mind that the items contain work attitudes that are often found in job descriptions for entry-level general office clerical employees. Please rate the following work attitudes on a scale of 1 to 10 (1 for most important and 10 not important). Circle the correct number.

	most important										not important
employer-employee relationship:											
has the ability to get along with supervisors	1	2	3	4	5	6	7	8	9	10	
understands and observes company policies	1	2	3	4	5	6	7	8	9	10	
accepts constructive criticism from supervisors	1	2	3	4	5	6	7	8	9	10	
follows written/oral instructions	1	2	3	4	5	6	7	8	9	10	
other: _____											
employee-employee relationship:											
works congenially with co-workers	1	2	3	4	5	6	7	8	9	10	
develops the ability to plan and work in groups	1	2	3	4	5	6	7	8	9	10	
volunteers to help co-workers to complete rush jobs	1	2	3	4	5	6	7	8	9	10	
accepts constructive criticism from co-workers	1	2	3	4	5	6	7	8	9	10	
other: _____	1	2	3	4	5	6	7	8	9	10	
employee responsibility:											
can be depended upon to follow a job through its completion	1	2	3	4	5	6	7	8	9	10	
works independently without supervision	1	2	3	4	5	6	7	8	9	10	
has ability to meet deadlines	1	2	3	4	5	6	7	8	9	10	
is punctual in all office activities	1	2	3	4	5	6	7	8	9	10	
works well under pressure	1	2	3	4	5	6	7	8	9	10	
practices care for good personal appearance	1	2	3	4	5	6	7	8	9	10	
other: _____	1	2	3	4	5	6	7	8	9	10	

PLEASE MAIL COMPLETED QUESTIONNAIRE TO

GNANI RUTH MOSES

1567C SPARTAN VILLAGE

EAST LANSING, MI 48823

APPENDIX B

FIRST YEAR OFFICE EMPLOYEE QUESTIONNAIRE

THE QUESTIONNAIRE

For the First Year Office Clerical Employee

This questionnaire is primarily concerned with determining the skills, knowledges, and work attitudes required for entry-level **general office clerical** employees in the greater Lansing area.

GENERAL OFFICE CLERK: According to the Dictionary of Occupational Title (1977) a general office clerk performs any combination of the following and similar clerical tasks requiring limited knowledge of systems or procedures; writes or types bills, statements, letters, manuscripts, checks or other documents, copying information from one record to another. Proofreads records or forms. Counts, weighs, or measures material. Sorts and files records. Receives money from customers and deposits money in bank. Addresses envelopes or packages by hand or with envelope stuffing machine. Answers telephone, conveys messages, and runs errands. Stamps, sorts, and distributes mail. Stamps or numbers by hand or machine. Copies documents, using office duplicating equipment. Their day-to-day duties vary daily according to the needs of the office.

Please place a check mark (✓) in the appropriate blank for the following questions:

1. Title of the person completing the questionnaire?

- ☐ secretary
- ☐ stenographer
- ☐ office clerk
- ☐ desk clerk
- ☐ general office clerk
- ☐ receptionist/clerk
- ☐ typist
- ☐ other, please specify _____

2. What is the nature of your business?

- | | |
|---|--|
| ☐ agriculture | ☐ transportation |
| ☐ communications | ☐ utilities |
| ☐ construction | ☐ law |
| ☐ education | ☐ banking |
| ☐ federal government | ☐ health care |
| ☐ finance | ☐ wholesale trade |
| ☐ insurance | ☐ other, please specify _____ |
| ☐ local government | |
| ☐ manufacturing | |
| ☐ real estate | |
| ☐ service | |
| ☐ state government | |

3. What is the approximate number of office employees in your business?
(Office employees include: administrative assistants, secretaries, stenographers, typists, receptionists, legal, medical, and general office clerical employees, and others who perform office duties).

_____ 1 to 5 _____ 6 to 10 _____ over 10

As you respond to the following items, please keep in mind that the items contain skills and knowledges that are often found in job descriptions for entry-level general office clerical employees. Please place a check mark (✓) in the appropriate blank for each of the following skills and knowledges as it applies in your work place.

- 1 - essential
2 - important
3 - somewhat important
4 - not important
5 - does not apply

SKILLS AND KNOWLEDGES

	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
4. <u>Keyboarding/Typing</u>					
formatting (typing documents)					
from typewritten copy	_____	_____	_____	_____	_____
from handwritten copy	_____	_____	_____	_____	_____
from rough draft typewritten copy	_____	_____	_____	_____	_____
compose at the typewriter	_____	_____	_____	_____	_____
other: _____	_____	_____	_____	_____	_____
applications:					
long documents (over 10-page length)	_____	_____	_____	_____	_____
short reports (3-10 page length)	_____	_____	_____	_____	_____
financial statements	_____	_____	_____	_____	_____
memos/correspondence	_____	_____	_____	_____	_____
other: _____	_____	_____	_____	_____	_____
use of equipment:					
manual typewriter	_____	_____	_____	_____	_____
electric typewriter	_____	_____	_____	_____	_____
electronic typewriter	_____	_____	_____	_____	_____
other: _____	_____	_____	_____	_____	_____
5. <u>Word Processing</u>					
formatting (typing documents)					
from typewritten copy	_____	_____	_____	_____	_____
from handwritten copy	_____	_____	_____	_____	_____
from rough draft typewritten copy	_____	_____	_____	_____	_____
compose at the word processor	_____	_____	_____	_____	_____
other: _____	_____	_____	_____	_____	_____

5. Word Processing (contd.)

	1	2	3	4	5
applications:					
long documents (over 10-page length)	_____	_____	_____	_____	_____
short reports (3-10 page length)	_____	_____	_____	_____	_____
financial statements	_____	_____	_____	_____	_____
memos/correspondence	_____	_____	_____	_____	_____
other: _____	_____	_____	_____	_____	_____
use of equipment:					
on-line display stand alone word processor	_____	_____	_____	_____	_____
shared logic systems word processor	_____	_____	_____	_____	_____
portable dictation unit word processor	_____	_____	_____	_____	_____
microcomputer as word processor	_____	_____	_____	_____	_____
other: _____	_____	_____	_____	_____	_____

6. Data Processing

competencies:					
data entry and data retrieval	_____	_____	_____	_____	_____
computer literacy (ability to manipulate computer with a preestablished program to perform desired tasks)	_____	_____	_____	_____	_____
computer fluency (ability to write and analyze a program)	_____	_____	_____	_____	_____
other: _____	_____	_____	_____	_____	_____
use of equipment:					
mainframe computer	_____	_____	_____	_____	_____
microcomputer	_____	_____	_____	_____	_____
time-sharing computer	_____	_____	_____	_____	_____
computer graphics	_____	_____	_____	_____	_____
other: _____	_____	_____	_____	_____	_____

7. Records Management

traditional (hand copy documents)					
alphabetic	_____	_____	_____	_____	_____
numeric	_____	_____	_____	_____	_____
subjective	_____	_____	_____	_____	_____
geographic	_____	_____	_____	_____	_____
other: _____	_____	_____	_____	_____	_____
nontraditional (electronic--generating entries to store and retrieve data through CRT on word processors and/or data processors)					
alphabetic	_____	_____	_____	_____	_____
numeric	_____	_____	_____	_____	_____
subjective	_____	_____	_____	_____	_____
geographic	_____	_____	_____	_____	_____
other: _____	_____	_____	_____	_____	_____

7. Records Management (contd.)

	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
use of equipment:					
microfilm	_____	_____	_____	_____	_____
microfiche	_____	_____	_____	_____	_____
ultrafiche	_____	_____	_____	_____	_____
disk storage of records	_____	_____	_____	_____	_____
tape storage of records	_____	_____	_____	_____	_____
other: _____	_____	_____	_____	_____	_____

8. Computations

business math	_____	_____	_____	_____	_____
bookkeeping	_____	_____	_____	_____	_____
accounting	_____	_____	_____	_____	_____
other: _____	_____	_____	_____	_____	_____
use of equipment:					
traditional calculator (ten-key adding machine)	_____	_____	_____	_____	_____
electronic calculator (ten-key with memory)	_____	_____	_____	_____	_____
other: _____	_____	_____	_____	_____	_____

9. Communications

writing:					
grammar	_____	_____	_____	_____	_____
spelling	_____	_____	_____	_____	_____
basic writing skills	_____	_____	_____	_____	_____
original composition	_____	_____	_____	_____	_____
other: _____	_____	_____	_____	_____	_____
reading:					
comprehension	_____	_____	_____	_____	_____
vocabulary	_____	_____	_____	_____	_____
proofreading	_____	_____	_____	_____	_____
other: _____	_____	_____	_____	_____	_____
speaking:					
give directions (in clear and concise manner)	_____	_____	_____	_____	_____
receive directions	_____	_____	_____	_____	_____
listening	_____	_____	_____	_____	_____
other: _____	_____	_____	_____	_____	_____
transmittal of information:					
conventional mailing of correspondence	_____	_____	_____	_____	_____
electronic mail and message systems	_____	_____	_____	_____	_____
telecommunications	_____	_____	_____	_____	_____
teleconferences	_____	_____	_____	_____	_____
telephone procedures	_____	_____	_____	_____	_____
other: _____	_____	_____	_____	_____	_____

9. Communications (contd.)

	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
use of equipment:					
telex	_____	_____	_____	_____	_____
PBX	_____	_____	_____	_____	_____
facsimile	_____	_____	_____	_____	_____
dictaphone (used for dictation of stored messages)	_____	_____	_____	_____	_____
electronic an "intelligent" copier (which accepts messages for later transcription)	_____	_____	_____	_____	_____
other: _____	_____	_____	_____	_____	_____

10. WORK ATTITUDES

As you respond to the following items, please keep in mind that the items contain work attitudes that are often found in job descriptions for entry-level general office clerical employees. Please rate the following work attitudes on a scale of 1 to 10 (1 for most important and 10 not important). Circle the correct number.

	most important										not important
employer-employee relationship:											
has the ability to get along with supervisors	1	2	3	4	5	6	7	8	9	10	
understands and observes company policies	1	2	3	4	5	6	7	8	9	10	
accepts constructive criticism from supervisors	1	2	3	4	5	6	7	8	9	10	
follows written/oral instructions	1	2	3	4	5	6	7	8	9	10	
other: _____											
employee-employee relationship:											
works congenially with co-workers	1	2	3	4	5	6	7	8	9	10	
develops the ability to plan and work in groups	1	2	3	4	5	6	7	8	9	10	
volunteers to help co-workers to complete rush jobs	1	2	3	4	5	6	7	8	9	10	
accepts constructive criticism from co-workers	1	2	3	4	5	6	7	8	9	10	
other: _____	1	2	3	4	5	6	7	8	9	10	
employee responsibility:											
can be depended upon to follow a job through its completion	1	2	3	4	5	6	7	8	9	10	
works independently without supervision	1	2	3	4	5	6	7	8	9	10	
has ability to meet deadlines	1	2	3	4	5	6	7	8	9	10	
is punctual in all office activities	1	2	3	4	5	6	7	8	9	10	
works well under pressure	1	2	3	4	5	6	7	8	9	10	
practices care for good personal appearance	1	2	3	4	5	6	7	8	9	10	
other: _____	1	2	3	4	5	6	7	8	9	10	

PLEASE MAIL COMPLETED QUESTIONNAIRE TO

GNANI RUTH MOSES

1567C SPARTAN VILLAGE

EAST LANSING, MI 48823

APPENDIX C

COVER LETTERS

July 15, 1987

Dear Employer or Office Clerical Supervisor:

SUBJECT: A Survey of Skills, Knowledges, and Work Attitudes

In our constantly changing office environment, do you feel office educators are providing the right type of training for the entry-level office employees? I am currently undertaking a research study which will provide an answer to this question. The information gathered for this study will be of value to administrators and office educators who are developing curriculum and instructional programs for the training of your future office employees. The end result of this study should be better prepared potential office employees for your company. Any information you provide will be kept confidential.

You and your organization have been selected from the Lansing Regional Chamber of Commerce membership lists to participate in this research study.

1. If you are in charge of office clerical staff, will you kindly take a few minutes of your valuable time to complete the attached questionnaire and return it by July 31, 1987. A self-addressed stamped envelope is enclosed for your convenience in returning the questionnaire.

2. If you are not in charge of office clerical staff, will you kindly ask your office supervisor to complete the attached questionnaire. All the necessary information he/she needs is in the questionnaire.

3. Also, for this study I am gathering data from the first year (a person who has been on the job from three months to 15 months) office employees to do a comparative study. Will you kindly ask your first year office employee/s to complete the enclosed questionnaire. All the necessary information he/she needs is in the questionnaire.

Your assistance in this study is greatly appreciated. If you are interested in the survey results, please place your name and address in the upper left-hand corner of the enclosed self-addressed stamped envelope.

Cordially yours,

Gnani Ruth Moses
Survey Coordinator

Enclosures: A questionnaire
A self-addressed stamped envelope
A copy of letter from the President of Lansing Regional
Chamber of Commerce

July 15, 1987

Dear First Year Office Clerical Employee:

SUBJECT: A Survey of Skills, Knowledges, and Work Attitudes

Do you feel office educators are providing the right type of training for entry-level office employees? I am currently undertaking a research study that will provide the answer to this question. The information you provide will be of value to administrators and office educators who are developing curriculum and instructional programs for the training of future office clerical employees.

Your organization has been selected from The Lansing Regional Chamber of Commerce membership list to participate in this research study, and you have been selected by your employer to help with the study. Any information you provide for this study will be kept confidential. Please take a few minutes of your valuable time to complete the attached questionnaire and return it by July 31, 1987. After completing the questionnaire, please enclose it in the self-addressed stamped envelope, seal it, and mail it separately to safeguard your identity and your work place.

Your assistance in this study is greatly appreciated. If you are interested in receiving the survey results, kindly place your name and address in the upper left-hand corner of the enclosed self-addressed envelope.

Cordially yours,

Gnani Ruth Moses
Survey Coordinator

Enclosures: A questionnaire
A self-addressed stamped envelope

LANSING REGIONAL CHAMBER OF COMMERCE



510 WEST WASHINGTON
CIVIC CENTER
LANSING MICHIGAN
P O BOX 14030 48901
PHONE (517) 487-6340

July 14, 1987

TO: SELECTED BUSINESSES IN THE TRI-COUNTY AREA

This is by way of introducing Ms. Ruth Moses, a graduate student in the College of Education at Michigan State University.

Ms. Moses will be asking your help to complete a questionnaire to prepare her doctoral thesis.

I am working with Clark DeHaven, Director of Executive Programs in the Graduate School of Business at Michigan State University. We will receive the findings of the survey and anticipate that the survey will help us develop programs of benefit to this community.

Jim Jordan, EVP

JJ/rac



APPENDIX D

FOLLOW-UP COVER LETTERS

August 6, 1987

Dear Employer or Office Clerical Supervisor:

SUBJECT: A Survey of Skills, Knowledges, and Work Attitudes

In mid July a questionnaire was mailed to you to gather data for my research study in office education. The information yielded from this study will be very valuable to administrators and office educators who are developing curriculum and instructional programs for the training of your office employees.

Your input is very important to this study. If you have not already returned the questionnaire, please take a few minutes of your valuable time to complete a copy of the questionnaire that is attached and return it by August 21, 1987. A self-addressed stamped envelope is enclosed for your convenience.

Also, I have enclosed a separate questionnaire to be completed by the first year office employee (a person who has been on the job from three months to 15 months) to do a comparative study. Will you kindly remind your first year office employee/s to complete it. All the necessary information he/she needs is in the questionnaire.

Your response to this study is greatly appreciated.

Cordially yours,

Gnani Ruth Moses
Survey Coordinator

Enclosures: A questionnaire
A self-addressed stamped envelope
A copy of letter from the President of Lansing
Regional Chamber of Commerce

August 6, 1987

Dear First Year Office Clerical Employee:

SUBJECT: A Survey of Skills, Knowledges, and Work Attitudes

In mid July a questionnaire was mailed to you to gather data for my research study in office education. The information yielded will be of value to administrators and office educators who are developing curriculum and instructional programs for the training of office clerical employees.

Your input is very important to this study. If you have not already returned your questionnaire, will you please take a few minutes of your valuable time to complete a copy of the questionnaire and return it by August 21, 1987. A self-addressed stamped envelope is enclosed for your convenience.

Your response to this study is greatly appreciated.

Cordially yours,

Gnani Ruth Moses
Survey Coordinator

Enclosures: A questionnaire
A self-addressed stamped envelope

LANSING REGIONAL CHAMBER OF COMMERCE



310 WEST WASHINGTON
CIVIC CENTER
LANSING MICHIGAN
P O BOX 14030 48901
PHONE (517) 487-6340

July 14, 1987

TO: SELECTED BUSINESSES IN THE TRI-COUNTY AREA

This is by way of introducing Ms. Ruth Moses, a graduate student in the College of Education at Michigan State University.

Ms. Moses will be asking your help to complete a questionnaire to prepare her doctoral thesis.

I am working with Clark DeHaven, Director of Executive Programs in the Graduate School of Business at Michigan State University. We will receive the findings of the survey and anticipate that the survey will help us develop programs of benefit to this community.

Jim Jordan, EVP

JJ/rac



APPENDIX E

SECOND FOLLOW-UP COVER LETTERS

September 2, 1987

Dear Employer or Office Clerical Supervisor:

SUBJECT: A Survey of Skills, Knowledges, and Work Attitudes

In mid July and again in early August, I mailed you a questionnaire to gather data for my research study in office education. As of this date I have not received your completed questionnaire.

Your input is very important to this study. If you have not already mailed your questionnaire, will you please take a few minutes of your valuable time to complete a copy of the questionnaire that is enclosed and return it by September 18, 1987. A self-addressed stamped envelope is enclosed for your convenience.

Also, a separate questionnaire is enclosed to be completed by your first year office employee (a person who has been on the job from three months to 15 months) to do a comparative study. Will you kindly remind your first year office employee/s to complete it. All the necessary information he/she needs is in the questionnaire.

Your response to this study is greatly appreciated.

Cordially yours,

Gnani Ruth Moses
Survey Coordinator

Enclosures: A questionnaire
A self-addressed stamped envelope
A copy of letter from the President of
Lansing Regional Chamber of Commerce

September 2, 1987

Dear First Year Office Clerical Employee:

SUBJECT: A Survey of Skills, Knowledges, and Work Attitudes

In mid July and again in early August, I mailed you a questionnaire to gather data for my research study in office education. As of this date I have not received your completed questionnaire.

Your input is very important to this study. If you have not already mailed your questionnaire, please take a few minutes of your valuable time to complete a copy of the questionnaire that is enclosed and return it by September 18, 1987. A self-addressed stamped envelope is enclosed for your convenience.

Your response to this study is greatly appreciated.

Cordially yours,

Gnani Ruth Moses
Survey Coordinator

Enclosures: A questionnaire
A self-addressed stamped envelope

LANSING REGIONAL CHAMBER OF COMMERCE



510 WEST WASHTEAW
CIVIC CENTER
LANSING MICHIGAN
P O BOX 14030 48901
PHONE :517/487-6340

July 14, 1987

TO: SELECTED BUSINESSES IN THE TRI-COUNTY AREA

This is by way of introducing Ms. Ruth Moses, a graduate student in the College of Education at Michigan State University.

Ms. Moses will be asking your help to complete a questionnaire to prepare her doctoral thesis.

I am working with Clark DeHaven, Director of Executive Programs in the Graduate School of Business at Michigan State University. We will receive the findings of the survey and anticipate that the survey will help us develop programs of benefit to this community.

Jim Jordan, EVP

JJ/rac



APPENDIX F

THE SAMPLE

THE SAMPLE

Greater Lansing Business, Industry, and Profession

ABC Word Processing

*Accident Fund of Michigan

Adams Tool & Engineering

*Aerovent Industrial Fan Co.

Alexanians Carpets

Allstate Insurance Company

Ameri-Can Rental

*American Homecraftors, Inc.

American Speedy Printing Centers

Anthony's (Rick) Flower Shoppe

*Arts Council Center of Greater Lansing

*Associated Risk Managers of Michigan

*Auto-Owners Insurance Co.

Aviso Inc.

Babcock Clutch Brake Inc.

Barker-Fowler Electric Co.

*Bekum America Corporation

*Benefits Design Inc.

*Bev's Custom Draperies

*Birchfield Foodsystems, Inc.

Boarshead-Michigan Public Theater

*Bollert's Hardware
 *Boyd Insurance Agency
 *Brutsche Concrete Products, Inc.
 *Buick-Oldsmobile-Cadillac Group
 *Business Resources, Inc.
 Calkins Paint Company
 *Canada Dry Bottling Co.
 *Capital Area United Way
 *Capital City Mortgage Company
 *Capitol Barricading, Inc.
 *Capitol Consultants, Inc.
 Careers Services
 *Cathey Company
 Center for Furnishings and Design
 Century 21 Gaskin Realty, Ltd.
 Chapman, (David) Agency, Inc.
 *Cheney, DDS, MS
 *Christy Associates
 *Clark Construction Company, Inc.
 Clinton Memorial Hospital
 Coleman Rent to Own
 *Communicating Network Systems, Inc.
 Community News Center, Inc.
 Computer Consignments
 Continental Cablevision
 *Cooley Law School

Credit Bureau of Greater Lansing
Curtis Pharmacy
D.B.I. Business Interiors, Inc.
*Darling Builder's Supply Co.
Dekker, Individual Member
*Delta Dental Plan of Michigan
*Demmer Corporation
*Design Irrigation Inc.
Dickinson, Wright, Moon,
VanDusen & Freeman
*Dinkel & Associates (R.A.)
*Domino's Pizza
*Drolet's Travel Unlimited
*Dunnings, Attorney-at-Law
Earegood Private Detective Agency
Eckhart (H.A. & Associates, Inc.)
E.D.S.
*Ehinger Realty Company
Emil's East Restaurant
*Ernst & Whinney
*Executive Programs
Executone - Lansing
*Fabri-Tech
*Farhat, Story, & Kraus, P.C.
*Federal Express Corporation
*First Americal Title Insurance

*First of Michigan Corp.
 *Flap Jack Shack
 *Fox's Jewelers
 Freedom Software
 Fuller's Sport & Lawn Center
 *Gadaletto/Ramsby & Associates
 *General Aviation, Inc.
 *German Automotive
 *Goffs of Haslett & Carriage Hills
 *Gordon Food Service
 *Grande Supper Club
 Greater Lansing Board of Realtors
 H & H Restaurants, Inc.
 *Hager Fox Company
 *Harley Hotel
 Hasselbring Clark Company
 Hazen Lumber Company
 Health Central
 *Heritage Enterprises Inc.
 *Hobart Sales & Services
 Holloway's Real Estate
 *Home Health Care of Sparrow
 Houlinan's Olds Place
 *Hudson (J.L.) Company-Lansing Mall
 *Hunt's Body Shop
 *Image Centre, Inc.
 *Indian Trails, Incorp.

***Ingham Medical Center**

***Institute for Advancement of
Prosthetics**

Invitation Shoppe

***J.C. Penney, Lansing Mall**

***Jarboe & Associates**

Jeffries, (Law Firm of)

***Joe's Furnance Cleaning**

Johnson, DDS

***Jostens Printing & Publishing**

Karber Realty

Kellogg Realty Inc.

Kevwitch, DDS

***Kirk & Fitzgerald, CPA**

KMart West

***Koerts Glass & Paint Co., Inc.**

Laz-Z-Boy Showcase Shoppes

Lansing Area Safety Council

***Lansing Community College**

***Lansing Corrugated Products**

Lansing Ford Tractor, Inc.

Lansing Housing Commission

***Lansing Lumber Company**

***Lansing Roofing Co.**

***Lansing Shop-Rite Supermarkets**

***Larry's Body Shop**

Leavenworth Photographics, Inc.

***Leonard Melse Associates**

***Liebermann's**
Logan Hardware Do It Center

***Lyman & Sheets Agency, Inc.**

***Magna Electric**
Management Recruiters/Office Mates

Market Masters

Mary Kay Cosmetics, Inc.

Maurer's Lansing Industrial

MBDS, Inc. Architects

MCI Telecommunications Corporation

Mead Merchants

***Meijer, Incorp.**

***Meridian Instruments**

***Merra Research Corp.**

***Metro Auto Sales Inc.**

**Michigan Association of School
Boards, Inc.**

Michigan Biotechnology Institute

Michigan Harness Horsemen's Association

Michigan Merchants Council

***Michigan National Bank, Corp.**

***Michigan Programmers Insurance**
Michigan State Chamber of Commerce

Michigan 4-H Foundation

Mid-Michigan Rehabilitation Associates

***Midway Motor Lodge (Best Western)**

MJK Architects Engineers Planners, Inc.

Mooney Oil Corporation
Morgan Jewelry Company-
Meridian Mall
MPC Cashway Lumber, Inc.
Myers Printing, Inc.
*National Yellow Pages Co.
*New Hampshire Insurance
*New York Life Securities
*North American Floor Design
Olds Country Caterers
Omni Technical Services, Inc.
P.A.L. Reporting
*Paper Eater Print Shop
*Parrinello's
Payfone Sales & Services
*Pen & Inc.
Phillips Company (The)
Pierce Brothers Beauty
Platinum Vacations of Michigan
Pollack Glass Co.
Practical Money Management
Precision Tune of Lansing
*Principal Management
*Pro-Tel, Incorporated
Provincial House South
*Publicom Inc.
*Quick-Tabs

Radisson Hotel Lansing
 Raven Enterprises of Lansing, Inc.
 Realty World-North Central Region
 *Regal 8 Motel
 Residence Inn East Lansing
 *Riversedge Marketing Inc.
 *Roberts Corporation
 Roney & Company
 Russell Corporation Inc.
 Sales & Marketing Executives
 Schmidt's Super Markets
 Seagull Productions
 Sederburg-Michigan Senate
 *Seven-Eleven Food Stores
 Shepard Shoes
 *Silver Lead Paint Company
 *Skinner, RT Advertising Specialties
 Smith, (Al & Son), Inc.
 *Sonitrol Security Services Inc.
 *Sparrow (Edward W.) Hospital
 Spartan Paper & Office Supply Inc.
 Special Transportation, Inc.
 Square D. Company
 *Stardust Nite Club, Inc.
 Stein Hinkle Dave Wood
 Stewart Title of Lansing, Inc.
 Stratton & Stebbins Inc.

*Sturk Development Co.
Surgi-Med, Inc.
Teacher Teacher, Inc.
Terrell Associates Signs & Displays
*Thrun, Maatsch & Nordberg
*Topsy Turvi Janitorial Services
Transamerica Title Insurance Co.
Itriton Industries, Inc.
U.S. Army Recruiting Commander
*Unique Foods of Indian, Inc.
Unity of Greater Lansing
U.S. Potal Service
*Variable Analysis Group
Vogl (Jack) P.C.
*Walter (Sandra & Associates)
Washburne Travel Center, Inc.
Waverly Vision Center
WFMK Radio Station
*Wickens Builders
*Willis & Willis, P.C., CPA's
WKAR-TV
*Wolverine Development Corporation
Yeo & Yeo
24 KT. Diamond Boutique Ltd.

*Questionnaires were returned from the employers/office supervisors and the first year entry-level office employees

Greater Lansing Industries

Abrams Aerial Survey Corp.
Ad-Tech Plastic Systems Corp.
*Air-Way Manufacturing Company
*Aluminum Division Hoover Universal
&Atmosphere Annealing, Inc.
*Auto-Air Industries, Inc.
Barnard Mgf. Co., Inc.
Brunete Chemical Co.
*Build-Oldsmobile-Cadillac
C.R.C. Industrial Phosphating Co.
Campbell, Inc.
*Central Advertising Co.
Charlotte Chair/Tinicum
*Cheney Limestone Co.
*Coca-Cola Bottling Co. of Michigan
Contractors Sand & Gravel
Cutler Plastics Corp.
*Dart Container Corp.
Dental ART Lab, Inc.
*Douglas Steel Fabricating
*ETM Enterprises, Inc.
*Eaton Stamping Company
*Efficiency Production, Inc.
Electro-Wire Products, Inc.
*Fasteners, Inc.

***Federal-Mogul Corporation**

Franchino Mold & Engineering

***General Aluminum Products, Inc.**

Grable & Sons Metal Products, Inc.

Green Bay Food Co./Dean Foods**Heart Truss & Engineering Corp.*****Holt Products Co., Inc.*****Industrial Metal Products Corp.**

Industrial Welding, Inc.

***Itt Hancock**

Jet Die & Engineering, Inc.

Johnson Iron Industries, Inc.

Johnson (L.L.) Lumber Mfg. Co.**Kiebcos Foods, Inc.**

Lans Corporation

Lansing Plating Co.

Lens Industry, Inc.

Lindell Drop Forge Co.

Maeward, Inc.**Martin Systems**

Melling Forging Co.

Michigan Bell Telephone

Michigan Electric Supply

Michigan Magnetics, Inc.

Michigan Packaging Co.

Midwest Bridge Co.**Molded Plastics Ind., Inc.**

*Nelson (Homer) Cut Stone
*Oloffson Corporation
*Owens Illinois Glass, Inc.
Paul Auto Parts
Precision Boring Tool Co.
R. L. Polk & Company
Rapids Tumble Finish
*Saylor-Beall Mfg. Co., Inc.
*Sealed Power Corp.
Spartan Motors, Inc.
Spartan Plastics, Inc.
Speaker Hines & Thomas, Inc.
*Suburban Wood Products
Tevilo Industries, Inc.
Union Colloids Co.
*Uptilt, Incorporated
Wagenvoord-Riegel, Inc.
Wohlert Corporation
Wyeth Labs, Inc.

*Questionnaires were returned from employers/office supervisors and first year entry-level office employees

APPENDIX G

PILOT STUDY SAMPLE

PILOT STUDY SAMPLE

Executive Programs
Rm. 7 Olds Hall
Michigan State University
East Lansing, MI 48824

First of Michigan Corp.
1427 West Saginaw
East Lansing, MI 48823

Lansing Community College
P. O. Box 40010
Lansing, MI 48901

Regal 8 Motel
8501 South Cedar
Lansing, MI 48911

Roberts Corporation
3001 West Main St.
Lansing, MI 48907

Sparrow (Edward W.) Hospital
1215 E. Michigan Avenue
P. O. Box 30480
Lansing, MI 48909

APPENDIX H

SURVEY RESULTS

EMPLOYER/OFFICE CLERICAL SUPERVISOR QUESTIONNAIRE

THE QUESTIONNAIRE

For the Employer or Office Supervisor

This questionnaire is primarily concerned with determining the skills, knowledges, and work attitudes required for entry-level **general office clerical employees** in the greater Lansing area.

GENERAL OFFICE CLERK: According to the Dictionary of Occupational Titles (1977) a general office clerk performs any combination of the following and similar clerical tasks requiring limited knowledge of systems or procedures; writes or types bills, statements, letters, manuscripts, checks or other documents, copying information from one record to another. Proofreads records or forms. Counts, weighs, or measures material. Sorts and files records. Receives money from customers and deposits money in bank. Addresses envelopes or packages by hand or with envelope stuffing machine. Answers telephone, conveys messages, and runs errands. Stamps, sorts, and distributes mail. Stamps or numbers by hand or machine. Copies documents, using office duplicating equipment. Their day-to-day duties vary daily according to the needs of the office.

Please place a check mark (✓) in the appropriate blank for the following questions:

1. Title of the person completing the questionnaire? (prefer a person who supervises office clerical staff or who does office work).

<u>16</u>	president
<u>8</u>	vice president
<u>13</u>	owner
<u>14</u>	personnel manager
<u>9</u>	office supervisor
<u>38</u>	office manager
<u>6</u>	business manager
<u>37</u>	other, please specify _____

2. What is the nature of your business?

<u>1</u>	agriculture	<u>1</u>	transportation
<u>5</u>	communications	<u>--</u>	utilities
<u>10</u>	construction	<u>1</u>	law
<u>3</u>	education	<u>--</u>	banking
<u>2</u>	federal government	<u>5</u>	health care
<u>5</u>	finance	<u>1</u>	wholesale trade
<u>12</u>	insurance	<u>27</u>	other, please specify _____
<u>--</u>	local government		
<u>39</u>	manufacturing		
<u>1</u>	real estate		
<u>27</u>	service		
<u>--</u>	state government		

3. What is the approximate number of office employees in your business?
 (Office employees include: administrative assistants, secretaries, stenographers, typists, receptionists, legal, medical, and general office clerical employees, and others who perform office duties).

86 1 to 523 6 to 1033 over 10

As you respond to the following items, please keep in mind that the items contain skills and knowledges that are often found in job descriptions for entry-level general office clerical employees. Please place a check mark (✓) in the appropriate blank for each of the following skills and knowledges as it applies in your work place.

- 1 - essential
 2 - important
 3 - somewhat important
 4 - not important
 5 - does not apply

SKILLS AND KNOWLEDGES

	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
4. <u>Keyboarding/Typing</u>					
formatting (typing documents)					
from typewritten copy	<u>49</u>	<u>36</u>	<u>24</u>	<u>9</u>	<u>18</u>
from handwritten copy	<u>69</u>	<u>44</u>	<u>13</u>	<u>3</u>	<u>9</u>
from rough draft typewritten copy	<u>43</u>	<u>47</u>	<u>19</u>	<u>7</u>	<u>19</u>
compose at the typewriter	<u>24</u>	<u>28</u>	<u>28</u>	<u>28</u>	<u>19</u>
other: _____	_____	_____	_____	_____	_____
applications:					
long documents (over 10-page length)	<u>16</u>	<u>21</u>	<u>25</u>	<u>29</u>	<u>42</u>
short reports (3-10 page length)	<u>44</u>	<u>42</u>	<u>19</u>	<u>9</u>	<u>20</u>
financial statements	<u>26</u>	<u>25</u>	<u>26</u>	<u>21</u>	<u>35</u>
memos/correspondence	<u>59</u>	<u>48</u>	<u>19</u>	<u>1</u>	<u>10</u>
other: _____	_____	_____	_____	_____	_____
use of equipment:					
manual typewriter	<u>14</u>	<u>3</u>	<u>18</u>	<u>19</u>	<u>70</u>
electric typewriter	<u>79</u>	<u>24</u>	<u>20</u>	<u>7</u>	<u>8</u>
electronic typewriter	<u>36</u>	<u>22</u>	<u>16</u>	<u>8</u>	<u>46</u>
other: _____	_____	_____	_____	_____	_____
5. <u>Word Processing</u>					
formatting (typing documents)					
from typewritten copy	<u>38</u>	<u>26</u>	<u>17</u>	<u>6</u>	<u>46</u>
from handwritten copy	<u>49</u>	<u>26</u>	<u>15</u>	<u>3</u>	<u>44</u>
from rough draft typewritten copy	<u>35</u>	<u>28</u>	<u>18</u>	<u>4</u>	<u>48</u>
compose at the word processor	<u>23</u>	<u>19</u>	<u>21</u>	<u>18</u>	<u>53</u>
other: _____	_____	_____	_____	_____	_____

5. Word Processing (contd.)

	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
applications:					
long documents (over 10-page length)	<u>21</u>	<u>17</u>	<u>26</u>	<u>11</u>	<u>58</u>
short reports (3-10 page length)	<u>33</u>	<u>29</u>	<u>19</u>	<u>3</u>	<u>48</u>
financial statements	<u>18</u>	<u>22</u>	<u>16</u>	<u>11</u>	<u>66</u>
memos/correspondence	<u>44</u>	<u>27</u>	<u>16</u>	<u>3</u>	<u>45</u>
other: _____	_____	_____	_____	_____	_____
use of equipment:					
on-line display stand alone word processor	<u>27</u>	<u>19</u>	<u>11</u>	<u>6</u>	<u>66</u>
shared logic systems word processor	<u>14</u>	<u>14</u>	<u>10</u>	<u>16</u>	<u>72</u>
portable dictation unit word processor	<u>11</u>	<u>10</u>	<u>15</u>	<u>14</u>	<u>77</u>
microcomputer as word processor	<u>32</u>	<u>21</u>	<u>11</u>	<u>7</u>	<u>58</u>
other: _____	_____	_____	_____	_____	_____

6. Data Processing

competencies:					
data entry and data retrieval	<u>51</u>	<u>43</u>	<u>15</u>	<u>3</u>	<u>21</u>
computer literacy (ability to manipulate computer with a preestablished program to perform desired tasks)	<u>44</u>	<u>43</u>	<u>15</u>	<u>8</u>	<u>22</u>
computer fluency (ability to write and analyze a program)	<u>5</u>	<u>7</u>	<u>22</u>	<u>36</u>	<u>60</u>
other: _____	_____	_____	_____	_____	_____
use of equipment:					
mainframe computer	<u>32</u>	<u>12</u>	<u>12</u>	<u>11</u>	<u>60</u>
microcomputer	<u>43</u>	<u>39</u>	<u>15</u>	<u>6</u>	<u>28</u>
time-sharing computer	<u>9</u>	<u>7</u>	<u>16</u>	<u>17</u>	<u>76</u>
computer graphics	<u>5</u>	<u>3</u>	<u>14</u>	<u>28</u>	<u>75</u>
other: _____	_____	_____	_____	_____	_____

7. Records Management

traditional (hand copy documents)					
alphabetic	<u>74</u>	<u>47</u>	<u>11</u>	<u>6</u>	<u>--</u>
numeric	<u>56</u>	<u>43</u>	<u>15</u>	<u>7</u>	<u>14</u>
subjective	<u>30</u>	<u>36</u>	<u>27</u>	<u>13</u>	<u>27</u>
geographic	<u>9</u>	<u>19</u>	<u>17</u>	<u>24</u>	<u>56</u>
other: _____	_____	_____	_____	_____	_____
nontraditional (electronic--generating entries to store and retrieve data through CRT on word processors and/or data processors)					
alphabetic	<u>43</u>	<u>34</u>	<u>11</u>	<u>5</u>	<u>39</u>
numeric	<u>35</u>	<u>32</u>	<u>15</u>	<u>6</u>	<u>44</u>
subjective	<u>21</u>	<u>24</u>	<u>20</u>	<u>12</u>	<u>51</u>
geographic	<u>7</u>	<u>19</u>	<u>17</u>	<u>18</u>	<u>64</u>
other: _____	_____	_____	_____	_____	_____

7. Records Management (contd.)

	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
use of equipment:					
microfilm	<u>2</u>	<u>7</u>	<u>9</u>	<u>22</u>	<u>86</u>
microfiche	<u>6</u>	<u>19</u>	<u>6</u>	<u>17</u>	<u>83</u>
ultrafiche	<u>--</u>	<u>4</u>	<u>6</u>	<u>20</u>	<u>97</u>
disk storage of records	<u>33</u>	<u>35</u>	<u>14</u>	<u>12</u>	<u>39</u>
tape storage of records	<u>13</u>	<u>14</u>	<u>10</u>	<u>17</u>	<u>76</u>
other: _____	_____	_____	_____	_____	_____

8. Computations

business math	<u>56</u>	<u>43</u>	<u>25</u>	<u>5</u>	<u>7</u>
bookkeeping	<u>47</u>	<u>30</u>	<u>34</u>	<u>18</u>	<u>11</u>
accounting	<u>29</u>	<u>31</u>	<u>36</u>	<u>18</u>	<u>20</u>
other: _____	_____	_____	_____	_____	_____
use of equipment:					
traditional calculator (ten-key adding machine)	<u>72</u>	<u>28</u>	<u>14</u>	<u>10</u>	<u>11</u>
electronic calculator (ten-key with memory)	<u>53</u>	<u>29</u>	<u>26</u>	<u>11</u>	<u>15</u>
other: _____	_____	_____	_____	_____	_____

9. Communications

writing:					
grammar	<u>97</u>	<u>36</u>	<u>6</u>	<u>1</u>	<u>--</u>
spelling	<u>103</u>	<u>29</u>	<u>5</u>	<u>3</u>	<u>--</u>
basic writing skills	<u>79</u>	<u>36</u>	<u>24</u>	<u>1</u>	<u>--</u>
original composition	<u>31</u>	<u>43</u>	<u>41</u>	<u>17</u>	<u>6</u>
other: _____	_____	_____	_____	_____	_____
reading:					
comprehension	<u>85</u>	<u>37</u>	<u>16</u>	<u>1</u>	<u>--</u>
vocabulary	<u>67</u>	<u>52</u>	<u>18</u>	<u>2</u>	<u>--</u>
proofreading	<u>97</u>	<u>28</u>	<u>10</u>	<u>1</u>	<u>--</u>
other: _____	_____	_____	_____	_____	_____
speaking:					
give directions (in clear and concise manner)	<u>66</u>	<u>55</u>	<u>12</u>	<u>6</u>	<u>--</u>
receive directions	<u>96</u>	<u>36</u>	<u>5</u>	<u>6</u>	<u>--</u>
listening	<u>101</u>	<u>34</u>	<u>3</u>	<u>--</u>	<u>--</u>
other: _____	_____	_____	_____	_____	_____
transmittal of information:					
conventional mailing of correspondence	<u>82</u>	<u>49</u>	<u>6</u>	<u>--</u>	<u>2</u>
electronic mail and message systems	<u>8</u>	<u>33</u>	<u>12</u>	<u>15</u>	<u>64</u>
telecommunications	<u>22</u>	<u>32</u>	<u>11</u>	<u>14</u>	<u>51</u>
teleconferences	<u>7</u>	<u>13</u>	<u>24</u>	<u>18</u>	<u>66</u>
telephone procedures	<u>95</u>	<u>34</u>	<u>4</u>	<u>--</u>	<u>3</u>
other: _____	_____	_____	_____	_____	_____

9. Communications (contd.)

	1	2	3	4	5
use of equipment:					
telex	6	18	16	10	77
PBX	8	13	6	16	84
fascimile	23	25	6	7	66
dictaphone (used for dictation of stored messages)	21	16	14	20	60
electronic an "intelligent" copier (which accepts messages for later transcription)	4	8	3	18	89
other: _____					

10. WORK ATTITUDES

As you respond to the following items, please keep in mind that the items contain work attitudes that are often found in job descriptions for entry-level general office clerical employees. Please rate the following work attitudes on a scale of 1 to 10 (1 for most important and 10 not important). Circle the correct number.

	most important							not important
employer-employee relationship:								
has the ability to get along with supervisors	1 ¹⁰⁷ 2	3 ³¹ 4	5 ² 6	7 ⁸ 8	9	10		
understands and observes company policies	1 ¹⁰⁴ 2	3 ³⁴ 4	5 ⁶ 6	7 ¹ 8	9	10		
accepts constructive criticism from supervisors	1 ¹³⁰ 2	3 ⁸ 4	5 ⁶ 6	7 ⁸ 8	9	10		
follows written/oral instructions	1 ¹¹¹ 2	3 ²⁵ 4	5 ⁴ 6	7 ⁸ 8	9	10		
other: _____	1 2	3 4	5 6	7 8	9	10		
employee-employee relationship:								
works congenially with co-workers	1 ¹⁰⁹ 2	3 ²⁸ 4	5 ³ 6	7 ⁸ 8	9	10		
develops the ability to plan and work in groups	1 ⁵³ 2	3 ⁴⁰ 4	5 ³⁴ 6	7 ⁹ 8	9	11	10	
volunteers to help co-workers to complete rush jobs	1 ⁷⁵ 2	3 ⁴⁶ 4	5 ⁹ 6	7 ⁸ 8	9	2	10	
accepts constructive criticism from co-workers	1 ⁵⁸ 2	3 ⁵³ 4	5 ²² 6	7 ⁴ 8	9	2	10	
other: _____	1 2	3 4	5 6	7 8	9	10		
employee responsibility:								
can be depended upon to follow a job through its completion	1 ¹³⁴ 2	3 ⁶ 4	5 ⁶ 6	7 ⁸ 8	9	10		
works independently without supervision	1 ¹⁰⁴ 2	3 ³⁰ 4	5 ² 6	7 ² 8	9	10		
has ability to meet deadlines	1 ¹²¹ 2	3 ¹⁵ 4	5 ² 6	7 ⁸ 8	9	1	10	
is punctual in all office activities	1 ¹⁰⁵ 2	3 ²⁶ 4	5 ⁶ 6	7 ⁸ 8	9	2	10	
works well under pressure	1 ¹¹² 2	3 ²⁵ 4	5 ¹ 6	7 ⁸ 8	9	10		
practices care for good personal appearance	1 ⁹⁶ 2	3 ³⁵ 4	5 ⁴ 6	7 ² 8	9	10		
other: _____	1 2	3 4	5 6	7 8	9	10		

PLEASE MAIL COMPLETED QUESTIONNAIRE TO

GNANI RUTH MOSES

1567C SPARTAN VILLAGE

EAST LANSING, MI 48823

APPENDIX I

SURVEY RESULTS

FIRST YEAR OFFICE EMPLOYEE QUESTIONNAIRE

THE QUESTIONNAIRE

For the First Year Office Clerical Employee

This questionnaire is primarily concerned with determining the skills, knowledges, and work attitudes required for entry-level general office clerical employees in the greater Lansing area.

GENERAL OFFICE CLERK: According to the Dictionary of Occupational Titles (1977) a general office clerk performs any combination of the following and similar clerical tasks requiring limited knowledge of systems or procedures; writes or types bills, statements, letters, manuscripts, checks or other documents, copying information from one record to another. Proofreads records or forms. Counts, weighs, or measures material. Sorts and files records. Receives money from customers and deposits money in bank. Addresses envelopes or packages by hand or with envelope stuffing machine. Answers telephone, conveys messages, and runs errands. Stamps, sorts, and distributes mail. Stamps or numbers by hand or machine. Copies documents, using office duplicating equipment. Their day-to-day duties vary daily according to the needs of the office.

Please place a check mark (✓) in the appropriate blank for the following questions:

1. Title of the person completing the questionnaire?

<u>8</u>	secretary
<u>--</u>	stenographer
<u>42</u>	office clerk
<u>16</u>	desk clerk
<u>28</u>	general office clerk
<u>--</u>	receptionist/clerk
<u>--</u>	typist
<u>8</u>	other, please specify _____

2. What is the nature of your business?

<u>--</u>	agriculture	<u>2</u>	transportation
<u>3</u>	communications	<u>--</u>	utilities
<u>8</u>	construction	<u>2</u>	law
<u>5</u>	education	<u>--</u>	banking
<u>1</u>	federal government	<u>5</u>	health care
<u>10</u>	finance	<u>1</u>	wholesale trade
<u>5</u>	insurance	<u>23</u>	other, please specify _____
<u>--</u>	local government		
<u>18</u>	manufacturing		
<u>2</u>	real estate		
<u>17</u>	service		
<u>--</u>	state government		

3. What is the approximate number of office employees in your business?
(Office employees include: administrative assistants, secretaries, stenographers, typists, receptionists, legal, medical, and general office clerical employees, and others who perform office duties).

46 1 to 5 21 6 to 10 25 over 10

As you respond to the following items, please keep in mind that the items contain skills and knowledges that are often found in job descriptions for entry-level general office clerical employees. Please place a check mark (✓) in the appropriate blank for each of the following skills and knowledges as it applies in your work place.

- 1 - essential
2 - important
3 - somewhat important
4 - not important
5 - does not apply

SKILLS AND KNOWLEDGES

4. <u>Keyboarding/Typing</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
formatting (typing documents)					
from typewritten copy	37	26	13	5	7
from handwritten copy	43	22	14	3	5
from rough draft typewritten copy	34	24	14	4	9
compose at the typewriter	28	20	24	4	11
other: _____					
applications:					
long documents (over 10-page length)	14	10	26	4	30
short reports (3-10 page length)	27	24	18	2	14
financial statements	24	13	23	6	21
memos/correspondence	46	25	12	1	3
other: _____					
use of equipment:					
manual typewriter	10	3	4	9	54
electric typewriter	45	20	7	4	10
electronic typewriter	26	23	3	5	25
other: _____					
5. <u>Word Processing</u>					
formatting (typing documents)					
from typewritten copy	28	20	7	3	28
from handwritten copy	31	23	1	3	25
from rough draft typewritten copy	26	19	5	7	26
compose at the word processor	26	20	9	3	25
other: _____					

5. Word Processing (contd.)

	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
applications:					
long documents (over 10-page length)	<u>14</u>	<u>16</u>	<u>15</u>	<u>3</u>	<u>39</u>
short reports (3-10 page length)	<u>19</u>	<u>20</u>	<u>13</u>	<u>2</u>	<u>52</u>
financial statements	<u>16</u>	<u>5</u>	<u>17</u>	<u>8</u>	<u>40</u>
memos/correspondence	<u>30</u>	<u>18</u>	<u>4</u>	<u>2</u>	<u>32</u>
other: _____	_____	_____	_____	_____	_____
use of equipment:					
on-line display stand alone word processor	<u>19</u>	<u>14</u>	<u>8</u>	<u>3</u>	<u>39</u>
shared logic systems word processor	<u>11</u>	<u>12</u>	<u>7</u>	<u>5</u>	<u>47</u>
portable dictation unit word processor	<u>4</u>	<u>9</u>	<u>8</u>	<u>9</u>	<u>51</u>
microcomputer as word processor	<u>10</u>	<u>15</u>	<u>3</u>	<u>4</u>	<u>48</u>
other: _____	_____	_____	_____	_____	_____

6. Data Processing

competencies:					
data entry and data retrieval	<u>36</u>	<u>17</u>	<u>8</u>	<u>1</u>	<u>25</u>
computer literacy (ability to manipulate computer with a preestablished program to perform desired tasks)	<u>33</u>	<u>18</u>	<u>11</u>	<u>1</u>	<u>22</u>
computer fluency (ability to write and analyze a program)	<u>6</u>	<u>7</u>	<u>17</u>	<u>18</u>	<u>38</u>
other: _____	_____	_____	_____	_____	_____
use of equipment:					
mainframe computer	<u>25</u>	<u>11</u>	<u>5</u>	<u>2</u>	<u>38</u>
microcomputer	<u>19</u>	<u>13</u>	<u>6</u>	<u>5</u>	<u>37</u>
time-sharing computer	<u>9</u>	<u>5</u>	<u>10</u>	<u>4</u>	<u>50</u>
computer graphics	<u>1</u>	<u>5</u>	<u>13</u>	<u>6</u>	<u>54</u>
other: _____	_____	_____	_____	_____	_____

7. Records Management

traditional (hand copy documents)					
alphabetic	<u>54</u>	<u>18</u>	<u>4</u>	<u>2</u>	<u>9</u>
numeric	<u>40</u>	<u>27</u>	<u>7</u>	<u>1</u>	<u>13</u>
subjective	<u>27</u>	<u>20</u>	<u>12</u>	<u>4</u>	<u>23</u>
geographic	<u>12</u>	<u>13</u>	<u>9</u>	<u>10</u>	<u>40</u>
other: _____	_____	_____	_____	_____	_____
nontraditional (electronic--generating entries to store and retrieve data through CRT on word processors and/or data processors)					
alphabetic	<u>37</u>	<u>10</u>	<u>9</u>	<u>2</u>	<u>24</u>
numeric	<u>28</u>	<u>15</u>	<u>9</u>	<u>3</u>	<u>30</u>
subjective	<u>25</u>	<u>13</u>	<u>14</u>	<u>2</u>	<u>31</u>
geographic	<u>11</u>	<u>6</u>	<u>11</u>	<u>9</u>	<u>47</u>
other: _____	_____	_____	_____	_____	_____

7. Records Management (contd.)

	1	2	3	4	5
use of equipment:					
microfilm	3	5	9	5	60
microfiche	3	5	12	3	62
ultrafiche	1	5	5	71	10
disk storage of records	36	15	10	1	27
tape storage of records	8	13	8	4	52
other: _____					

8. Computations

business math	23	28	18	2	17
bookkeeping	25	29	17	16	5
accounting	21	21	24	4	17
other: _____					
use of equipment:					
traditional calculator (ten-key adding machine)	39	25	19	5	3
electronic calculator (ten-key with memory)	32	23	19	1	13
other: _____					

9. Communications

writing:					
grammar	66	20	2	2	1
spelling	68	20	1	1	2
basic writing skills	64	24	1	1	2
original composition	39	38	6	--	4
other: _____					
reading:					
comprehension	57	30	2	1	--
vocabulary	51	33	4	1	--
proofreading	61	22	3	1	3
other: _____					
speaking:					
give directions (in clear and concise manner)	55	28	3	1	1
receive directions	66	21	2	1	2
listening	70	16	3	1	2
other: _____					
transmittal of information:					
conventional mailing of correspondence	58	24	6	--	--
electronic mail and message systems	12	19	12	4	41
telecommunications	29	23	6	2	30
teleconferences	8	14	18	7	39
telephone procedures	63	22	1	1	2
other: _____					

9. Communications (contd.)

	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
use of equipment:					
telex	<u>6</u>	<u>10</u>	<u>11</u>	<u>5</u>	<u>55</u>
PBX	<u>4</u>	<u>6</u>	<u>9</u>	<u>5</u>	<u>64</u>
fascimile	<u>14</u>	<u>10</u>	<u>13</u>	<u>3</u>	<u>49</u>
dictaphone (used for dictation of stored messages)	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>61</u>
electronic an "intelligent" copier (which accepts messages for later transcription)	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>61</u>
other: _____					

10. WORK ATTITUDES

As you respond to the following items, please keep in mind that the items contain work attitudes that are often found in job descriptions for entry-level general office clerical employees. Please rate the following work attitudes on a scale of 1 to 10 (1 for most important and 10 not important). Circle the correct number.

	most important									not important
employer-employee relationship:										
has the ability to get along with supervisors	1 <u>75</u> 2	3 <u>12</u> 4	5	6	7	8	9 <u>2</u> 10			
understands and observes company policies	1 <u>78</u> 2	3 <u>10</u> 4	5	6	7	8	9 <u>2</u> 10			
accepts constructive criticism from supervisors	1 <u>85</u> 2	3 <u>3</u> 4	5	6	7	8	9 <u>2</u> 10			
follows written/oral instructions	1 <u>85</u> 2	3 <u>3</u> 4	5	6	7	8	9 <u>2</u> 10			
other: _____										
employee-employee relationship:										
works congenially with co-workers	1 <u>70</u> 2	3 <u>17</u> 4	5 <u>1</u> 6	7 <u>1</u> 8	9 <u>2</u> 10					
develops the ability to plan and work in groups	1 <u>50</u> 2	3 <u>29</u> 4	5 <u>5</u> 6	7 <u>1</u> 8	9 <u>5</u> 10					
volunteers to help co-workers to complete rush jobs	1 <u>60</u> 2	3 <u>23</u> 4	5 <u>4</u> 6	7 <u>1</u> 8	9 <u>2</u> 10					
accepts constructive criticism from co-workers	1 <u>56</u> 2	3 <u>22</u> 4	5 <u>8</u> 6	7 <u>1</u> 8	9 <u>2</u> 10					
other: _____	1	2	3	4	5	6	7	8	9	10
employee responsibility:										
can be depended upon to follow a job through its completion	1 <u>85</u> 2	3 <u>1</u> 4	5 <u>2</u> 6	7	8	9 <u>2</u> 10				
works independently without supervision	1 <u>78</u> 2	3 <u>10</u> 4	5	6	7	8	9 <u>2</u> 10			
has ability to meet deadlines	1 <u>78</u> 2	3 <u>11</u> 4	5 <u>3</u> 6	7 <u>1</u> 8	9 <u>1</u> 10					
is punctual in all office activities	1 <u>74</u> 2	3 <u>12</u> 4	5 <u>3</u> 6	7 <u>1</u> 8	9	10				
works well under pressure	1 <u>72</u> 2	3 <u>13</u> 4	5 <u>4</u> 6	7 <u>1</u> 8	9	10				
practices care for good personal appearance	1 <u>74</u> 2	3 <u>12</u> 4	5 <u>2</u> 6	7	8	9 <u>2</u> 10				
other: _____	1	2	3	4	5	6	7	8	9	10

PLEASE MAIL COMPLETED QUESTIONNAIRE TO

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