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An analysis of the importance and learning needs of office competencies as rated by office/information personnel

Rebecca R. Jones

To the Graduate Council:

I am submitting herewith a thesis written by Rebecca R. Jones entitled "An analysis of the importance and learning needs of office competencies as rated by office/information personnel." I have examined the final electronic copy of this thesis for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Master of Science, with a major in Instructional Technology and Educational Studies.

Gregory C. Petty, Major Professor

We have read this thesis and recommend its acceptance:

Ralph Brockett, Bill Radcliff

Accepted for the Council:
Carolyn R. Hodges

Vice Provost and Dean of the Graduate School

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Date

December 1991

AN ANALYSIS OF THE IMPORTANCE AND LEARNING NEEDS OF OFFICE COMPETENCIES AS RATED BY OFFICE/INFORMATION PERSONNEL

A Thesis

Presented for the

Master of Science

Degree

The University of Tennessee, Knoxville

Rebecca R. Jones

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CHAPTER I

INTRODUCTION

Two major transformations have occurred in western industrialized societies. The first involved a transition during which the majority of workers shifted from agricultural to industrial workers. The second transition was a shift away from the factory to the office which occurred in the 1900's (Long, 1987).

From a base of approximately 18 percent, white-collar occupations grew to 31 percent by 1940 and 51 per cent by 1980 (Panko, 1984). By 1987 more than 60 percent of all workers were employed in occupations that were involved in the exchange of information (Feuehling and Weaver, 1987).

Fenner (1989) predicted that by the year 2000, approximately 90 percent of all workers will be employed in office support positions. Technology will continue to develop and expand at a rapid rate that will require lifelong education and retraining to keep pace with changing office technology.

Computer technology has made a great impact in the office setting. The new technologies provided office workers with more time to devote to the responsibilities that required creativity, judgment, and the ability to make decisions.

As a result, many office workers' jobs were expanded. The impact of new technology in the office did not 'do away with' the traditional office workers position. Instead, new

opportunities were created for office workers allowing them to move into expanded, multifuntional roles within the office (Hummel, 1983).

A survey co-sponsored by Professional Secretaries International (PSI) and Minolta Corporation's Business Equipment Division (1983) found that office workers who were willing to develop an understanding of automated systems through both formal and informal education were able to expand their roles significantly to include new career paths which were previously nonexistent to them before.

Automation has created a need for many office workers to pursue a variety of training programs which will allow them to become proficient in the use of office technology equipment. Many continuing education opportunities are available for office workers who desire to learn the new skills required by computerization or develop skills required for the new job tasks created by automation.

This study will endeavor to examine which occupational skills are rated the most important and will identify those areas which office/information workers perceive they have a learning need.

STATEMENT OF THE PROBLEM

Although many of the first digital computers were introduced in the early 1950's, it was not until the advent of minicomputers in 1965 and microcomputers in 1975, that the use of computers revolutionized office work. From small

one-person businesses to large corporations, computers are available to any type of business office.

Technological advances in recent years have made available highly flexible, powerful computing equipment at low and falling cost. Combined with the economic advantage are a wide range of technological ones - reliability, accuracy and the potential for widespread applications, among others. These advances have created a whole new generation of office equipment which analysts have predicted will change skill requirements among clerical and administrative staff (Werneke, 1983).

The development of information technologies has the potential to substantially change job content, skills required, and work organization. Job content can be broadened or curtailed. These changes must be examined to determine the extent to which a new alignment of job competencies has occurred. Consequently, this study was designed to examine how personnel employed by organizations which use technology-based office equipment rated the importance of selected job competencies and their resulting educational needs.

PURPOSE OF THE STUDY

The purpose of this study is to conduct an occupational analysis of office/information workers to determine the importance of selected job competencies and resulting educational needs. This information can assist educators

and trainers with curriculum development or review of office technology programs.

SIGNIFICANCE OF THE STUDY

The role of the secretary has traditionally centered around typing and shorthand skills. Today, many of the traditional skills may be outdated as firms search for personnel who are acquainted with word processing and related skills required by the newer technology-based office equipment.

Today's office equipment has substantially changed job content, skills required, and work organization. In the 1950's, the typical office job titles were secretary, stenographer, clerk typist, file clerk, and receptionist. In the 1980's, the typical office job titles developed into information manager, director of information systems, manager of office planning and services, administrative office manager, telecommunications manager, micrographics manager, word processing operator, and administrative secretary (Tedesdo and Mitchell, 1984).

In those organizations which have incorporated new automated technology in the office, the role of the secretary has increased in significance and responsibility. These secretaries find themselves in positions as information processing specialists where their primary skills are administrative support and their secondary skill is typing (Fruehling and Weaver, 1987).

Many secretaries realized that their past formal education was not relevant for a lifetime due to technological changes. They began looking for additional education to open doors for new or better employment. Leaders in the secretarial field began anticipating changes in the secretarial function and education requirements in the mid-60's. Law (1966) felt that refinements in office equipment would require more than shorthand and typing skills. She predicted that continuing education would play an important role in the future of the secretary. She stated, "From the standpoint of formal education and continuous self-training, the secretary of tomorrow and the day after must undergo dynamic change" (p. 372).

Hamlin wrote in the Handbook of Adult Education in the United States (1960) "Many of the most vital and appreciated programs of adult education are programs which assist full-time workers in adapting to change" (p. 545).

Nineteen years later educators continued to discuss the topic of the adult learner and related instructional methods. Cooley (1979) referred to the "mature learners who in many cases are already engaged in a practical sense in the very skill they may be seeking more knowledge about or are hoping to polish" (p. 27). He encouraged adult educators to consider themselves as facilitators who can help adult learners to achieve specific outcomes or competencies. He advocated the use of competency-based

programs for adults who desire to learn new or upgrade skills which may be required by their employer.

Workers affected by technology changes must be willing to update their job skills or to train for new careers periodically. Stubblefield (1981) stated that "adults need to continue learning not only to adapt to change but also to control its effects and to initiate change projects themselves" (p.19).

The significance of these statements is clear. Technological advances have and will continue to create a need for workers to continually adjust to changes in occupational requirements. In order to provide an effective curriculum review of office technology programs at post-secondary institutions or for in-service training, information about these needs is important.

Tyler (1949) suggested that once occupational data have been gathered and analyzed, there is a need to present the results in a readable non-technical manner which will enable interested persons to utilize the information in ways appropriate to their particular curriculum needs. In addition, the presentation of such findings should give the behavioral and content aspects necessary for a formulation of objectives which would provide clear specifications to indicate what the educational job is.

This study will gather data concerning the competencies required of office/information personnel and the nature of

their educational needs. This data will provide useful information which can enable post-secondary institutions to become more responsive to the needs of adults experiencing changes in the nature of their occupations.

Questions to be answered

Specific questions which will be addressed in this study are:

1. What competencies do office/information workers perceive to be the most important?
2. What are the learning needs expressed by office personnel employed as information workers?

Limitations

This study was limited to the following:

1. The possibility that not all of the respondents would interpret the competencies in the same manner. It is also assumed that the respondents understood each of the competencies.
2. The possibility that not all of the respondents would be completely objective regarding their learning need.
3. All respondents did not hold the same job title or duties. Therefore, the study did not focus on one specific group or title of office workers but examined the perceptions and learning needs of a variety of office personnel who were considered by

office managers as employees who were employed as office/information workers.

4. The analysis is limited to office employees of industries located in East Tennessee.

Definition of Terms

Although the terms used in this study will ordinarily be understood by business educators, certain terms are defined as they are used in this study to ensure clarity of intent.

Competencies - The capability to function with the required knowledge, skills, and/or abilities for satisfactory performance of a specific task.

Integrated Office Systems - The concept of linking separate information systems into a single system.

Office/Information Worker - Personnel who are involved in the routine entry, recording, storage, and transmission of information. These typically include typists, secretaries, clerks, and data entry personnel, etc.

Secretary - An executive assistant who possesses a mastery of office skill, demonstrates the ability to assume responsibility without direction or supervision, exercises initiative and judgment, and makes decisions within the scope of assigned authority. (Professional Secretaries International, PSI, 1988)

Traditional Office - The office in which the secretary usually works for a person often called a boss; the secretary performs a variety of jobs rather than one

specific type of job, and typing is done on a standard typewriter (Bergerud & Gonzalez, 1981).

Word Processing - The use of an organized system of people, machinery, and procedures to process all written communications for an organization (Kaliski & Meggison, 1988). This term is used both as a concept and as a general term used to describe certain office hardware.

Organization of the Study

The study is presented in the following sequence: Chapter I includes the introduction, the statement of the problem, purpose of the study, significance of the study, questions to be answered, limitations of the study, definition of terms, and the organization of the study.

Chapter II includes a review of literature regarding the changes in the job tasks of office/information personnel as well as an overview of literature pertaining to word processing, and technological change as it relates to office/information personnel.

Chapter III includes the method and procedures of the study.

Chapter IV includes the analysis of data and results.

Chapter V includes summary, conclusions, and recommendations made as a result of the study.

CHAPTER II

REVIEW OF LITERATURE

Review of the research literature was focused on relevant data concerning changes in the job tasks of office/information personnel. In addition, the literature pertaining to word processing and technological change as it relates to office/information personnel were reviewed. Studies prior to the mid-1960's were found to be limited to various facets of the business education curriculum rather than the entire area of office education. Although these earlier studies were not concerned with the effects of new technology on office duties and responsibilities, they were used in this study to identify past changes in office positions and the qualifications of office support personnel.

MAJOR STUDIES

Charters and Whitley Study

One of the earliest studies of secretarial duties was conducted by Charters and Whitley in 1924. They investigated 871 duties by having 715 secretaries rank them according to frequency of performance. The main objective of the study was to discover which duties were generally part of a secretary's normal routine. For example, the study found that most secretaries ranked the following 10 duties as the most frequently performed: typewriting letters; answering telephone; dictating letters;

transcribing letters; making local telephone calls; addressing envelopes, and packages; inserting letters in envelopes; folding letters; ordering supplies; and placing telephone memorandums where employer will see it. The researchers used the results of the study to make curriculum suggestions for instructors of secretarial science programs.

Place Study

A study was conducted by Place (1945) to determine the frequency of performance of selected secretarial duties. Over 200 secretarial/employer teams were studied. Twenty-five duties were ranked by secretaries. The 10 most frequently performed duties by a majority of the respondents included: Taking dictation and transcribing; general filing; making appointments; alphabetical filing; answering the telephone and routing callers; reading and sorting mail; placing and making long-distance calls; operating an adding or calculating machine; keeping a record of appointments; and assisting with the preparation of written reports of a general, financial, government, or research nature.

Graham Study

In 1969 Graham conducted a study of the literature published between 1960 and 1968 which examined the preparation and employment of administrative secretaries. He also obtained the opinions of administrative secretarial personnel, businessmen, educators, and authors of material related to the study. He outlined the qualities needed by

the administrative secretary to be successful in the profession and suggested ways post-secondary schools could enhance their administrative secretarial curriculums.

He divided the broad field of important qualities for secretaries into the three categories of knowledge, abilities, and traits. His analysis of the literature on desirable secretarial knowledge included the processes of communication, business knowledge, and human relations. The ability category dealt with decision making, creative thinking, and secretarial skills. The trait category examined the questions of secretarial adaptability, loyalty, and maturity.

Graham recorded numerous lists of qualities in each category that frequently appeared in the surveyed literature. As a result of his study he found that the qualifications needed to perform the functional roles of an administrative secretary included knowledge in the areas of humanities and sciences, communication, business, secretarial, and human relations. He reemphasized the need for secretaries to be completely familiar with general business procedures as well as possessing the abilities of delegation and supervision, decision making, management of time, creative thinking, researching, and performing the technical skills required by their employer.

Weber Study

Weber (1969) conducted a curriculum study of secretarial education at Arizona State. The sample in study included secretaries, employers, and secretarial vocational office education teachers. Respondents of the three groups generally agreed on the relative importance of the skills, knowledge, and personal traits used in the study. Weber felt that because of the consensus, the results of the study could form a firm basis for curriculum construction.

The respondents participating in the study indicated that the statement "acceptance of responsibility, relieving the executive of routine" was the most important. The next four statements ranked in order of importance were: "Dependability, ability to be relied upon; Accuracy in the performance of duties; Initiative or resourcefulness doing things without being told; and, Judgment and common sense" (p. 111). Secretaries rated the statement "Data Processing, working with data processing forms, terminology, or equipment" as the least important.

Weber suggested that the secretarial vocational office education teachers place more emphasis in the following areas: Familiarity with the various functions of management and a knowledge of executive responsibilities; An understanding of the implications of the law affecting work; The need to continually update knowledge and stay current regarding new developments, skills, and knowledge in

business; Organizing filing systems; and Acceptance of responsibility.

Erickson Study

A study designed by Erickson (1971) for the purpose of examining curriculum at UCLA to determine if it was responsive to the common elements of office work. The study involved in-depth interviews with 300 office workers and their supervisors. The objective of the study was to analyze and determine which job characteristics were common to beginning and intermediate level office work. Analysis of the detailed descriptions of conditions, key steps, and criteria for 978 job tasks led to the identification of 10 basic components of office work.

Erickson's study found that the basic components, comprising five percent or more of total job time included: interpersonal relations; sorting, filing, and retrieving; typewriting; and checking, computing, and verifying are the duties which the secretaries ranked the highest. On the basis of his findings, Erickson recommended that the basic courses offered in business education curricula such as typewriting, bookkeeping, general business, and shorthand continue to be offered; but that the content of these courses should be modified to include materials relevant to the needs of beginning and intermediate level office workers.

Kusek Study

In 1974 Kusek conducted an occupational analysis designed to determine the significant differences in the important competencies and continuing education needs of secretarial personnel in both traditional and word processing offices. A secondary purpose of the study was to determine importance of selected job competencies, changes in their importance, resulting educational needs, and the extent to which the needs were met. The purpose was to provide basic guidelines for use in developing continuing education programs for secretarial personnel at community colleges.

The study compared 30 pairs of secretarial personnel and supervisors from traditional offices and 28 pairs of secretarial personnel and supervisors from word processing offices. By using a list of fifty-three competencies he found that eleven of the competencies were ranked the same importance by both groups. Kusek also examined the learning needs of both groups. Secretarial personnel were asked to indicate which job-related subject areas would be of interest to them if they were to continue their education. The word processing group listed "Management Skills" as their highest topic of interest. Traditional secretaries indicated that their greatest interest was "Secretarial Skills (typing and shorthand)". He also found that secretarial personnel with the highest learning needs were

those with one to six years of experience in their present positions.

As a result of his findings, Kusek made five observations and suggestions for the development of continuing education programs of secretarial personnel in both traditional and word processing offices:

1. A new group of clients must be recognized by the community college. Skilled secretarial personnel, in traditional as well as word processing offices, have further learning needs. The greatest need for further learning occurred between the first and sixth years of employment. Community colleges and business organizations should provide more learning opportunities for this group.

2. Continuing education for secretarial personnel should encompass career paths, goals, and goal possibilities available in business.

3. Adult continuing education programs for secretarial personnel presently employed should be based on the areas of learning related to their jobs.

4. Continuing education programs for secretarial personnel should be linked to individual goals and aimed at career advancement. Secretarial personnel wishing to advance into another secretarial position or management position have more of a need for further learning than secretarial personnel planning to develop in their present position.

5. The general subject areas of management skills and secretarial skills should provide the basis for continuing education for secretarial personnel. A background in various business areas such as accounting, budgeting, personnel relations, marketing, business math, and administrative services should be considered relevant to secretarial continuing education.

Kusek's study and the present study both compared the perceptions of office workers in order to identify the competencies ranked most important and to determine resulting educational needs. As in the present study, Kusek's findings had important implications for the revision of existing curriculums. The present study was able to further investigate how technological advances in the office have changed the ranking of competencies as well as perceived educational needs.

Powell Study

Powell (1975) conducted a study designed to compare the perceptions and differences in perceptions of business personnel in order to identify competencies needed by new word processing employees. Specifically, the importance of certain skills, knowledge, and attitudes of new employees hired by organizations with installed word processing equipment was investigated.

Managers of word processing systems, supervisors of word processing centers, and correspondence and administrative

secretaries working in the Metropolitan Denver, Colorado area were surveyed. Forty-five subject areas commonly or possibly included in a secretarial program were evaluated for their importance in training correspondence and administrative secretaries.

As a result of the study, Powell suggested that secretarial programs place greater importance on the areas of English grammar, spelling, proper attitudes toward work, ability to get along with others, and excellence in performing all basic secretarial skills.

As in the present study, Powell sought to compare the perceptions of business personnel to obtain validated data in order to identify competencies used by office/information personnel.

Whelan Study

Whelan (1975) conducted a study designed to assist educators of secretarial programs in the evaluation of their curriculum offerings. The researcher felt that the secretarial profession involved certain duties and traits to be successful, therefore, it was important for graduates of secretarial programs to develop a proper perspective of what "is important or unimportant to occupational success". The study involved the participation of 278 professional secretaries and 211 students from four post-secondary schools.

The primary purpose of the study was to determine whether secretarial traits or duties were relatively more important to professional and prospective secretaries through the administration of a Q-sort. A secondary purpose of the study was to determine which combination of traits and duties were considered most important by secretaries and students. A third purpose of the study was to determine whether there were differences in the responses of secretaries based on selected background data. The background data included the following:

1. Number of individuals to whom the secretary was directly responsible.
2. Age
3. Length of experience
4. Educational level

The study revealed that the professional secretaries and prospective secretaries who responded to the survey did not agree when ranking statements important for success. The professional secretaries ranked the following five statements as the most important: Remains loyal to the employer, determines work priorities intelligently, consistently honest with employer, follows directions and instructions, and adapts to rapidly changing office. The prospective secretaries ranked the following statements as most important: Follows directions and instructions, types with accuracy, transcribes dictated material accurately,

punctual in completing work assignments, and cooperates well with others in the office.

As a result of the data Whelan made the following recommendations for office educators:

1. Office educators should help prospective secretaries aware develop an awareness of the attitudes of the professional secretaries in order to better prepare them for the "world of work".

2. Educators should try to stress the total concept of a professional secretary in addition to emphasizing skill development.

Whelan's study is related to the present study in that both researchers used background data to determine if the data were directly related to certain specific factors that could have an effect on the perceptions of the respondents.

Allred Study

A study was conducted by Allred (1978) to determine which competencies should be taught to prospective word processing employees. Fifty competencies were divided into three sections: "personnel-oriented", "equipment-oriented", and "procedures-oriented".

The data were obtained from a convenience sample of 25 word processing supervisors and 25 business educators. The following recommendations were made as a result of the findings:

1. Prospective word processing employees should develop people-oriented competencies.

2. Prospective word processing employees should develop equipment-oriented competencies as they relate to the identification and proficient operation of equipment.

3. Prospective word processing employees should develop procedures-oriented competencies.

The present study and the Allred study are related in that each researcher used a five-point Likert-type scale for the collection of data.

RELATED STUDIES AND SURVEYS

Fenner (1989) cites a competency study which was conducted by the Professional Secretaries International (PSI) organization to assist in the development of curriculum. Managers, business educators, and experienced and entry-level support workers were asked to indicate the skills for beginning office workers that are important, frequently performed, and essential.

The study investigated the role of the support staff, the changing perception of the term 'secretary', and the differing aspirations of individuals now entering the work force. Results indicated that employers expect support staff to be proficient in managing records, handling telephone calls, mail, and appointments, keyboarding, preparing correspondence, and using language arts skills as well as having the ability to use word processing and

financial software packages; project a professional image (appearance, behavior, oral and written communication skills); and provide self-direction in learning.

Ninety-three percent of the respondents replying to a survey conducted of the Katharine Gibbs School's graduates agreed that the role of the secretary has changed in a five year period. Seventy-five percent of the respondents felt that a knowledge of word processing was the most significant change in the secretary's role. Forty-eight percent stated that secretary's had a need for computer literacy training. More than 60 percent felt that the leading growth area was in the field of computers. Graduates indicated that there was a need in business for writing and communication skills, openmindedness and adaptability, organizational skills, and the ability to analyze and solve problems (The Secretary's Changing, 1988).

Brender (1974) stated that the reasons office personnel seek additional training after being hired results from the presence of one or more of the following situations:

1. The individual is deficient in some skill or knowledge that could have been learned in school.
2. It is necessary for the individual to be trained for the specific nature of the particular job.
3. The individual is given training necessary to advance to a higher level position within the business organization.

4. The individual wishes to revitalize a certain skill which s/he could at one time perform at a higher level.
5. The individual is provided with the opportunity to acquire knowledge concerning updated and/or new office or company procedures.
6. The individual is required to take an orientation training course designed to familiarize the person with operations of the organization.

Development of Office Technology

Automatic paper tape typewriters were invented in the 1930's. These predecessors of today's automated office equipment did not have much of an effect on the office because they were limited to repetitive form letters.

In 1964 International Business Machines Corporation (IBM) introduced the Magnetic Tape Selectric Typewriter (MT/ST), a machine designed to allow play back of repetitive documents which could easily be edited. The MT/ST and other early models of word processing equipment were called text-editing typewriters or magnetic/electronic typewriters.

By the 1970's the concept of word processing was rapidly growing. In 1972, the first video display screen was introduced, and at the same time Comptek Research became the first company to introduce the use of disks, storage devices external to the machine, with a word processor. Manufacturers such as Olivetti, Royal, Xerox, Lanier, and

Digital Equipment Corporation began to manufacture word processing equipment which attributed to more rapid technological advances. By 1980 IBM introduced equipment which merged computer technology and word processing technology together called the Displaywriter (Fruehling & Weaver, 1987).

Hirscheim (1985) and Long (1987) observed that the advent of the microchip spurred a fourth type of technology: the distribution and linking technology, which enables the communication of information between various types of office equipment. As a result, many organizations were able to incorporate an integrated systems approach to automation. Integrated systems are a result of the combination of three previously separate technologies: computers, telecommunications and office equipment (Wohl and Stevenhunt, 1991).

The integrated system allows the linking of devices in a way that supports the objectives of an organization and adds value beyond the contribution of the individual device alone. For example, through a telecommunications network, the telephone can be a vital tool for coordinating information to various geographic locations outside the office (Wohl and Stevenhunt, 1991).

Integrated systems require coordination of data, text, image, and voice technologies. Organizations which utilize

the capabilities of an integrated system are able to improve their productivity and reduce costs (Casady, 1988).

The most common type of communication used by offices with integrated systems is electronic messaging. The most common form of integrated linking is a 'local area network' (LAN) which is a data and text transmission system that enables the linking of computers and associated products within a limited geographical area (Long, 1987).

With integrated office systems, information processing becomes more efficient and convenient. The goal of integrated office systems is for all office personnel - managers, professionals, technicians and clerical workers - to have computer power for a variety of information processing functions at their own workstations or in a nearby location.

Changing Occupational Roles

In the traditional office, relationships usually were structured according to a one-to-one boss-secretary relationship or a typing/steno pool structure. Secretaries typically received promotions from the "pool" to become secretaries of individual bosses. In these positions, secretaries functioned as generalists, performing all duties requested by their bosses. Secretarial duties ranged from traditional, such as correspondence typing to personal favors such as shopping for gifts. The work load of secretaries was determined by the work load of their bosses.

Consequently, work loads in the traditional office were often uneven. Career mobility was often tied to the career progression of their bosses. If the secretary's boss advanced within the organization, the secretary was often promoted too (Ray, Palmer, Wohl 1991).

Technology altered many of the traditional boss-secretary relationships. Many organizations emphasized the teamwork approach for office production. For automated offices the teamwork approach meant that the work of several managers was supported by one or more secretaries and clerks. Advancement for the support staff was based on individual merit rather than on automatic career movement with a boss. Job duties of office workers were often specialized and technically oriented. Work assignments were distributed by an office-supervisor specialist who is able to monitor and ensure even work-flow (Ray, et. al. 1991).

The introduction of word processing equipment in the 1970's changed the role of the secretary. The early focus of word processing was on the capabilities of the equipment and the increased production of office documents to free office workers from repetitious tasks and allow them to assume more managerial responsibilities. Persons who were relieved of typing responsibilities could be available to do some of the tasks formerly performed by a manager (Bergerud and Gonzalez, 1987).

Many large organizations began separating the typing functions from the traditional secretarial administrative assistant functions. Correspondence secretaries were trained to keyboard data at word processing stations on a full-time basis. The other secretarial duties, such as filing, answering telephones, scheduling, and looking up data, were assigned to administrative secretaries.

Many organizations developed large word-processing centers, which involved placing correspondence secretaries in a centralized area designed for all typing-related tasks. The majority of the firms's typing and transcription work was completed by the correspondence secretaries in the word processing center.

However, most organizations were unable to accept the concept. Many of the executives were unwilling to "give up" their secretaries to become part of a "pool". Many secretaries who enjoyed performing a wide variety of tasks which included both typing and nontyping duties were unhappy with the center concept. The center's often provided a dead-end career path, little opportunity for creativity, impersonal work, and a boring routine. As a result, the large word processing pool was broken up into smaller 'puddles', located closer to the people whom they served (Long, 1987).

Some organizations combined decentralized correspondence and centralized administrative word-processing centers.

Minicenters were set up throughout the business to serve the typing needs of individual departments; however, the administrative support services were organized centrally. As a result, many routine tasks such as filing and handling mail were performed by a small group of administrative support secretaries in a centralized location (Kaliski and Meggison, 1988).

A study conducted by Johnson and Associates (1985) revealed that organizations were moving away from centralized word processing centers. Based on a survey of 200 organizations, including in-depth interviews at 60 firms, the researchers concluded that "...in 1983 decentralized word processing began to be the dominant means of organizing this function" (p. 144).

Career Advancement

Office technology has provided the office worker with some important career opportunities as a result of office reorganization (Bergerud and Gonzalez, 1987). Technology not only changed the way in which secretaries performed their jobs but also increased the opportunities for new jobs and career advancement. New technology enabled office employees to take on more work and to expand their jobs (Casady, 1988).

As offices increased their utilization of technology to improve productivity, the role of the secretary increased in significance and responsibility. In many instances,

automation turned a dead-end job with little or no potential for career advancement into one with a career path leading toward management Bergerud and Gonzalez, 1987). In the electronic office, secretaries are skilled operators of highly technical equipment. Responsibilities such as researching, editing, supervising, and hiring other employees which were once considered mid-level management duties may now be considered a secretarial task. These changes allow a secretary to carry out more creative duties and use their own judgment and initiative (Fruehling & Weaver, 1987).

A secretary is expected to be an individual who exercises good judgement combined with a wide range of other qualities, such as resourcefulness, diplomacy, planning, office management skills, communication skills, and integrity. For optimum effectiveness, a secretary should be exposed in depth to the laws, regulations, policies, program goals and objectives, and procedures and practices of the employer. The need for continuing orientation is particularly acute in a secretarial position (Stockard, 1977).

Growing numbers of secretaries have found their careers following the path into computers, finance, desktop publishing, administration, personnel, and management. To make the best choice, employees must consider their natural talents and abilities, continue to develop new interests,

evaluate whether to pursue further education, and be alert to all available opportunities (Long, 1987).

An important consideration of any career path is the learning needs of the personnel already on the job. Many office employees may not have had career paths in mind when they completed their formal training. Advancements in office technology will continually effect learning needs. These needs will be analyzed in this study, and appropriate guidelines for curriculum review will be examined.

CHAPTER III

METHOD AND PROCEDURES

This chapter contains a description of the population and sample surveyed, the design of the study, the instrument used, and the analysis of data obtained from the rating inventory. These procedures were developed and followed to gather and analyze data concerning the importance of selected competencies and related learning needs by office/information workers employed by organizations in East Tennessee. The purpose of the analysis was to determine the learning needs of office/information workers and to suggest basic guidelines which may be used in the evaluation of existing office technology curriculums at post-secondary schools.

Population and Sample

The population for this study were office/information employees of business and industries in East Tennessee. The sample was comprised of 324 office/information workers (primarily secretaries). The sample was a random sample compiled from placement lists of secretarial training programs from community colleges and vocational-technical schools in East Tennessee.

Procedure/Instrumentation

After a review of office competency instruments used in studies by Kusek (1974) and Powell (1975) as well as competency lists obtained from the Occupational Curriculum

Laboratory at East Texas State University, Pellissipppi State Technical Community College, and the State Area Vocational-Technical School - Harriman, it was determined that a new instrument for data collection should be constructed because the instruments and competency lists were too lengthy and/or listed skills which have decreased in importance due to advancements in office equipment. The instrument developed for this study combined elements of previous research with recent literature regarding the competencies most often used by office/information personnel in the office of the 1990's.

Construction of the data-gathering instrument was completed in two phases:

Phase I: The literature of secretarial skills and word processing was studied regarding secretarial positions by reviewing textbooks, published competency lists, and related research. A list of competencies was constructed which covered traditional competencies as well as those pertaining to office technologies and related equipment.

Copies of the competency list were distributed to a committee of secretarial personnel, executives and supervisors, and business educators for review (Appendix A).

Each person was asked to review the competency list and to indicate the appropriateness of each competency as well as the completeness and clarity of each item. In addition to their comments on the items, they were asked to add any

competencies they felt would make the list more complete. The review lists were collected and analyzed. Several minor revisions were made to the existing competencies and two additional competencies were added to the list based on the comments of the committee.

Phase II: A revised list of 49 competencies was developed from the comments and suggestions of the secretarial personnel, executives and supervisors, and business educators.

An Office Competency Skills Rating Inventory was constructed using two Likert-type response scales. The inventory sheet included an area for collection of background information pertaining to job title, type of organization, total years of experience in present job, total years of experience in office work, size of office, age, education, related continuing education interests, and career goals (Appendix B).

Each respondent was asked to rate the importance of each competency in terms of frequency of performance and criticalness. Using a five-point scale, they were instructed to use the following:

Response Code/Degree of Importance

1 = Very Low
2 = Low
3 = Moderate
4 = High
5 = Very High

Additional learning need was rated on the same type of scale and was rated in terms of developing office technology, conditions, and trends.

The inventory was printed in booklet form in order to make it more manageable for the individual completing the form. Simple graphics were added to catch the respondents interest.

A pilot study was conducted to establish the reliability of the instrument and to determine whether the questions were clear and unambiguous.

Thirty secretarial personnel were selected as representative of the group in this study.

Since the inventory was self-administered, the researcher explained the purpose of the pilot test, let the respondents fill out the inventory, and followed up with an interview to determine which questions were unclear to the respondents.

The responses from the interviews were analyzed and appropriate revisions were made. Since the pilot test indicated that only minor revisions were required, a second retest was omitted.

Data Collection

Office managers of each randomly selected company were contacted by phone and received a brief explanation of the importance of the study and informed that enough inventories for the office staff at their company would arrive in one

week. Once the office managers agreed to participate in the study, inventories and summary letters (Appendix C) were mailed within two days after the phone call. A total of 577 inventories were mailed.

Two weeks after the inventories were mailed, a follow-up letter was sent to office manager of non-responding companies (Appendix C). The letter was a reminder to have the personnel in their office complete the inventory and a thank you to those who had already done so. A follow-up telephone call was made to those office managers who did not return the inventories by the deadline date. If necessary, a third letter and questionnaires were mailed (Appendix C).

Analysis of Data

The data were analyzed using the Statistical Analysis Software (SAS) computer analysis program. All responses were tallied and frequency distributions, percentages, and cumulative percentages were reported.

Rank ordering was done to determine the high and low-rated items in both categories. The data were reported in table form and the analysis explained in Chapter IV. Recommendations and guideline were developed from the analysis and are presented in Chapter V.

CHAPTER IV

ANALYSIS OF DATA AND RESULTS

The data were based on the responses to inventories collected from office/information personnel in East Tennessee. Participants responded to an inventory which contained a five-point Likert scale:

1=Very Low
2=Low
3=Moderate
4=High
5=Very High

This information was used to facilitate the analysis of the competency importance and resulting learning need data. This analysis was the basis for the development of curriculum review recommendations for office technology programs at post-secondary schools.

Participants

Out of the 577 inventories mailed 324 were returned to the researcher, a 56.1 percent return. All of the tables do not total 324 because some of the respondents did not answer every item.

The data indicates that respondents were from six different types of organizations with the largest representation from services. Two hundred twenty (67.9%) respondents represented service organizations. Thirty-six (11.1%) respondents were from manufacturing organizations. Twenty-seven (8.3%) respondents were from finance, insurance and real estate organizations while 23 (7.8%) listed their

employer as transportation and utilities. Seventeen respondents were employed by wholesale and retail trade and one respondent was employed with the agriculture, forestry and fishing industry. Table 1 summarizes the types of organizations represented in the sample.

TABLE 1

Summary of Type of Organizations in Sample

Category	Number	Percent
Agriculture, Forestry & Fishing	1	0.3
Transportation & Utilities	23	7.8
Wholesale & Retail Trade	17	5.3
Finance, Insurance & Real Estate	27	8.3
Mining	0	0.0
Manufacturing	36	11.1
Services	220	67.9

The personnel in the sample held a variety of titles. The title of secretary was the most common classification (163); followed by Clerk (Office Clerk, Technical Clerk, or Account Clerk) (58); Thirty-eight were Assistant Manager, Office Manager, Office Assistant, Administrative Assistant or Co-ordinator; Twenty-four were Word or Data Processors, Ten were Typists (Clerk Typist, Transcriptionist, or Typist) and twenty-nine were classified as other (Adjudicator, Employment Counselor, Interviewer, Records Technician, Teller, Loan Representative, Customer Service Representative, Deputy, and Receptionist). The titles held by personnel in this study are summarized in Table 2.

TABLE 2

Summary of Job Titles

Category	Number	Percent
Secretary	163	50.6
Clerk	58	18.0
Manager Office/Assistant/Co-ordinator	38	11.8
Processor - Word & Data Processors	24	7.5
Typist	10	3.1
Other	29	9.0

The majority (41.0%) of the respondents had more than ten years of total office experience. The six to ten years of experience category accounted for 27.0 percent followed by three to five years of experience and less than three years. Table 3 shows the frequency and percentage distributions for total years of office experience.

TABLE 3

Summary of Total Years of Office Experience

Category	Number	Percent
Less than 3 Years	46	14.3
3-5 Years	57	17.7
6-10 Years	87	27.0
More than 10 Years	132	41.0

The largest age group (30.9%) was the 25-35 year-old group followed closely by the 36-45 year-old age group with 30.6 percent. The 21-24 year-old age group was 15.1 percent of all the respondents. Only 1.8 percent of the respondents fell within the less than 20 age group while 17.0 percent of

the respondents fell into the 46+ year old age group. Table 4 is a summary of the ages of the respondents.

TABLE 4

Age of Office/Information Personnel

Category	Number	Percent
Less than 20 Years	6	1.8
21-24 Years	49	15.1
25-35 Years	100	30.9
36-45 Years	99	30.6
46+ Years	55	17.0
No Response	15	4.6

Table 5 shows the areas related to work in which respondents would consider continuing their education. Automated office equipment had the highest response followed by administrative/organizational skills, secretarial skills and financial responsibilities. A number of other business and non-business subject areas were indicated by the respondents as areas of interest to them. The other business areas were technical writing, time management, marketing, medical transcription, and computer science.

TABLE 5

Continuing Education Areas

Category	Number	Percent
Secretarial Skills	12	3.7
Automated Office Equipment	158	48.8
Financial Responsibilities	10	3.0
Administrative/Organizational Skills	101	31.2
Other	12	3.7
No Response	31	9.6

The largest percentage (36.4%) of respondents indicated their career goal was to develop in their present position. To advance to a management position was the goal of 33.4 percent while to move to another secretarial position was the goal of 11.1 percent. Other goals mentioned included return to school for advanced degree, change careers, and self-employment. Table 6 summarizes the career goals of the respondents.

TABLE 6

Summary of Career Goals

Category	Number	Percentage
Develop in present position	118	36.4
Move to another secretarial position	36	11.1
Advance to a management position	108	33.4
Other	62	19.1

All of the respondents had a high school education. One hundred ninety-eight (61.6%) of the respondents have completed some level of post-secondary training. Table 7 details the educational levels achieved by the respondents.

TABLE 7

Summary of Education Levels

Category	Number	Percentage
High School	324	100
Business School	99	30.5
A.S. Degree or equal	71	21.9
B.S. Degree or equal	27	8.3
Other (M.A. Degree)	1	0.3

The respondents indicated that they continue job-related learning through many methods. One hundred ninety (58.6%) of the respondents indicated that they learned from co-workers followed by 149 (45.9%) who attended seminars or workshops. Adult education classes were attended by 73, or 22.5 percent, while 61 (18.8%) indicated they were involved in professional development programs. Other job-related learning respondents participated in were attending college level classes, U.S. military clerical training, cosmetology school, and home study. Seven of the respondents indicated they had achieved their CPS certification. Table 8 shows the numbers and percentage distribution of respondents who participated in some form of job-related learning.

TABLE 8

Job-Related Continuing Education Participation

Category	Number	Percentage
Adult education	73	22.5
Learning from co-workers	190	58.6
Professional development	61	18.8
Seminars or workshops	149	45.9
Other	29	8.9

Statistical Analysis

The Office Competency Skills Rating Inventory was created to collect responses from office/information workers regarding their opinion concerning the importance of individual competencies in relationship to the criticalness and overall operation of their job as well as their

resulting learning needs. The inventory contained 49 competencies which were subdivided into ten major categories:

1. Performs keyboarding duties
2. Formats documents
3. Performs transcription duties
4. Proofreads documents
5. Operates automated office equipment
6. Operates office equipment
7. Handles financial responsibilities
8. Communicates with others
9. Performs other office functions
10. Performs administrative functions

Data were analyzed with the Statistical Analyses System (SAS), a software system designed specifically for mathematical analysis.

Performs Keyboarding Duties - Category 1

Table 9 includes the keyboarding competencies performed by office/information workers. Responses are reported by percentages in the table.

COMPETENCY ITEM 1 - Operates standard typewriter keyboards. The data reveal that 14, or 4.4 percent, of the respondents considered the importance of the competency "very low" and 25 of the respondents (7.8%) rated it "low". Eighty-three, or 25.9 percent, rated the competency to be

TABLE 9

Percentage Comparison of Importance and Learning Need Expressed by Office/Information Workers in Category 1 - Performs Keyboarding Duties of Office/Information Workers

Competency		Very Low 1	2	3	4	Very High 5
Operates standard typewriter keyboards	Impt	4.4	7.8	25.9	19.4	42.5
	L Need	36.2	19.7	21.3	9.8	13.0
Demonstrates procedures necessary in preparing mailable letters, envelopes, and packages	Impt	5.3	5.3	23.3	26.1	39.9
	L Need	35.6	17.8	20.6	11.1	14.9
Types business correspondence, reports, forms, and memoranda, etc.	Impt	8.8	5.3	16.0	19.5	50.3
	L Need	32.4	19.4	19.0	13.0	16.2
Composes letters, memoranda, and messages at typewriter	Impt	16.7	12.9	23.9	19.2	27.4
	L Need	33.7	16.2	23.5	14.0	12.7

"moderate" while 62 of the respondents (19.4%) considered it "high". One hundred thirty-six office/information workers (42.5%) indicated the competency was "very high".

One hundred fourteen, or 36.2 percent, responded that the learning need for this competency was "very low" and 62 (19.7%) rated it "low". Sixty-seven, or 21.3 percent, indicated the competency "moderate" and 9.8 percent (31) rated it as "high" and 41, or 13.0 percent selected the "very high" rating.

COMPETENCY ITEM 2 - Demonstrates procedures necessary in preparing mailable letters, envelopes, and packages. The responses "very low" and "low" both received the same rating of 5.3 percent or 17 of the respondents when indicating the importance of the competency. Seventy-four, or 23.3 percent, rated the competency "moderate" and 83, or 26.1

percent selected "high". One hundred twenty-seven, or 39.9 percent, chose "very high".

Learning need for the competency was rated by 112, or 35.6 percent, as "very low" and 56 (17.8%) as "low". Sixty-five (20.6%) responded with "moderate" while 35, or 11.1 percent and 47, or (14.9%) rated it as "high" and "very high".

COMPETENCY ITEM 3 - Types business correspondence, reports, forms, and memoranda, etc. Twenty-eight, or 8.8 percent, rated the importance of the competency as "very low" and 17, or 5.3 percent, selected "low". Fifty-one respondents (16.0%) selected "moderate" and 62, or 19.5 percent, "high". One hundred sixty (50.3%) rated the competency "very high".

One hundred two of the respondents (32.4%) indicated that the learning need for the competency was "very low" and 61, or 19.4 percent as "low". The "moderate" rating was marked by 60, or 19.0 percent. Forty-one (13.0%) and 51 (16.2%) rated the competency as "high" and "very high".

COMPETENCY ITEM 4 - Composes letters, memoranda, and messages at typewriter. This competency was rated by 53 respondents, or 16.7 percent, as "very low" in importance. Forty-one (12.9%) rated it as "low" and 76 (23.9%) as "moderate". Sixty-one, or 19.2 percent, selected "high" and 87 (27.4%) as "very high".

One hundred six (33.7%) marked the "very low" rating for learning need of the competency and "low" was selected by 51, or 16.2 percent of the respondents. Seventy-four (23.5%) chose "moderate" while 44 (14.0%) and 40 (12.7%) selected "high" and "very high".

Formats Document - Category 2

Table 10 includes the formatting competencies performed by office/information workers. Responses are reported by percentages in the table.

COMPETENCY ITEM 5 - Uses standard formats for letters, memoranda, reports, tables and outlines. The data indicate that the importance of this competency was rated by 29 (9.1%) of the respondents as "very low" and 19 (6.0%) as "low". The "moderate" rating was selected by 73, or 23.0 percent and 78 (24.5%) chose "high". One hundred nineteen, or 37.4%, selected "very high".

Ninety-six of the respondents (30.5%) chose the "very low" rating for the learning need of this competency and 68 (21.6%) as "low". Seventy-two, or 22.9 percent rated the need as "moderate" and 38, or 12.1 percent, as "high" and 41 (13.0%) as "very high".

TABLE 10

Percentage Comparison of Importance and Learning Need Expressed by Office/Information Workers in Category 2 - Formats Documents

Competency		Very Low 1	2	3	4	Very High 5
Uses standard formats for letters, memoranda, reports tables and outlines	Impt	9.1	6.0	23.0	24.5	37.4
	L Need	30.5	21.6	22.9	12.1	13.0
Uses universal and in-house standard format manuals	Impt	17.6	11.0	26.4	21.4	23.6
	L Need	34.0	21.9	23.2	9.8	11.1
Suggests and implements unique formats	Impt	24.2	17.3	27.7	17.9	12.9
	L Need	32.7	18.7	28.9	12.7	7.0

COMPETENCY ITEM 6 - Uses universal and in-house standard format manuals. Fifty-six, or 17.6 percent, of the respondents rated the importance of the competency as "very low" and 35, or 11.0 percent as "low". Eighty-four (26.4%) chose the "moderate" response and 68 (21.4%) and 75 (23.6%) as "high" and "very high".

The "very low" response was marked by 107, or 34.0 percent, for the learning need of the competency and 69 (21.9%) "low". Seventy-three (23.2%) selected "moderate" and 31 (9.8%) and 35 (11.1%) "high" and "very high".

COMPETENCY ITEM 7 - Suggests and implements unique formats. The "very low" rating for the importance of the competency was marked by 77, or 24.2 percent of the respondents and 55 (17.3%) marked "low". The "moderate" rating was selected by 88, or 27.7 percent and 57 (17.9%) and 41 (12.9%) marked "high" and "very high".

One hundred three of the respondents (32.7%) selected the "very low" response for the learning need of the competency and 59, or 18.7 percent, chose "low". Ninety-one (28.9%) marked "moderate" and 40 (12.7%) selected "high". Seven percent, or 22 respondents, marked "very high".

Performs Transcription Duties - Category 3

Table 11 includes the transcription competencies performed by office/information workers. Responses are reported by percentages in the table.

COMPETENCY ITEM 8 - Transcribes from dictation equipment and/or shorthand notes. One hundred seventy-nine, or 56.3 percent, rated the importance of the competency "very low" and 32 (10.1%) rated it "low". Sixteen percent (51) marked the "moderate" response while 20, or 6.3 percent, and 36 (11.3%) responded with "high" and "very high".

One hundred fifty-five, or 49.2 percent, of the respondents marked the "very low" response for the learning need of the competency and 39 (12.4%) selected "low". "Moderate" was chosen by 61 or 19.4 percent. "High" and "very high" was marked by 37 (11.7%) and 23 (7.3%).

COMPETENCY ITEM 9 - Transcribes from handwritten or edited copy. Twenty-three percent, or 73 of the respondents, rated the importance of the competency as "very low". Twenty-four (7.5%) marked "low" and 54 (17.0%) "moderate". Sixty-six, or 20.8 percent, and 101 (31.8%) selected "high" and "very high".

The "very low" rating was chosen by one 133, or 42.2 percent, for the learning need of the competency and 50 (15.8%) selected "low". Fifty-seven (18.1%) marked "moderate" and 32 (10.2%) marked "high". Forty-three (13.7%) respondents chose the "very high" rating.

TABLE 11

Percentage Comparison of Importance and Learning Need Expressed by Office/Information Workers in Category 3 - Performs Transcription Duties

Category		Very Low 1	2	3	4	Very High 5
Transcribes from dictation equipment and/or shorthand notes	Impt	56.3	10.1	16.0	6.3	11.3
	L Need	49.2	12.4	19.4	11.7	7.3
Transcribes from handwritten copy	Impt	23.0	7.5	17.0	20.8	31.8
	L Need	42.2	15.8	18.1	10.2	13.7

Proofreads Documents - Category 4

Table 12 includes the proofreading competencies performed by office/information workers. Responses are reported by percentages in the table.

COMPETENCY ITEM 10 - Recognizes proofreader's marks and uses them in editing. The importance of the competency was rated as "very low" by 79, or 24.8 percent of the respondents. Thirty-two (10.1%) rated it "low" and 60 (18.9%) as "moderate". "High" and "very high" were marked by 65 (20.4%) and 82 (25.8%).

One hundred three (32.7%) respondents marked the learning need of the competency as "very low" and 62 (19.7%)

as "low". Sixty-nine, or 21.9 percent, chose the "moderate" rating. Thirty-seven (11.7%) and 44 (14.0%) selected the "high" and "very high" responses.

COMPETENCY ITEM 11 - Uses correct grammar, punctuation, capitalization, spelling, word usage, and vocabulary. Seventeen, or 5.3 percent of the respondents rated the importance of the competency "very low" and 5 (1.6%) as "low". Thirty-four, or 10.7 percent, marked "moderate" while 71 (22.3%) chose "high". The "very high" response was selected by 191, or 60.1 percent of the respondents.

TABLE 12

Percentage Comparison of Importance and Learning Need Expressed by Office/Information Workers in Category 4 - Proofreads Documents

		Very Low				Very High
Competency		1	2	3	4	5
Recognizes proofreader's marks and uses them in editing	Impt	24.8	10.1	18.9	20.4	25.8
	L Need	32.7	19.7	21.9	11.7	14.0
Uses correct grammar, punctuation, capitalization, spelling, word usage, and vocabulary	Impt	5.3	1.6	10.7	22.3	60.1
	L Need	16.8	14.6	27.3	10.8	30.5
Checks documents for format consistencies	Impt	12.6	6.9	13.9	23.3	43.2
	L Need	29.9	20.7	19.1	13.4	16.9
Identifies typographical errors	Impt	7.6	4.7	6.9	19.9	60.9
	L Need	29.9	20.7	15.3	9.2	24.8
Examines documents for visual appeal	Impt	12.9	7.6	13.9	19.9	45.7
	L Need	34.4	19.7	19.7	11.5	14.6
Rewrites sentences to obtain correct structure	Impt	14.5	7.9	16.7	26.2	34.7
	L Need	21.7	22.9	19.7	16.6	19.1
Prepares error-free final copy	Impt	10.4	4.1	8.5	15.5	61.5
	L Need	21.7	22.9	19.7	11.8	25.5

Fifty-three, of 16.8 percent, rated the learning need of the competency "very low" and 46 (14.6%) as "low". Eighty-six (27.3%) rated it as "moderate" and 34 (10.8%) and 96 (30.5%) as "high" and "very high".

COMPETENCY ITEM 12 - Checks documents for format consistencies. The importance of the competency was rated as "very low" by 40, or 12.6 percent of the respondents. Twenty-two (6.9%) rated it as "low" and 44 (13.9%) as "moderate". Seventy-four (23.3%) rated the competency as "high" and 137, or 43.2 percent, as "very high".

The learning need of the competency was rated "very low" by 94, or 29.9 percent, and "low" by 65, or 20.7 percent of the respondents. The "moderate" response was marked by 60, or 19.1 percent, while 42 (13.4%) marked "high" and 53 (16.9%) selected "very high".

COMPETENCY ITEM 13 - Identifies typographical errors. Twenty-four, or 7.6 percent, of the respondents chose "very low" as the response to the importance of the competency. Fifteen, or 4.7 percent, marked "low" and 22 (6.9%) selected "moderate". Sixty-three (19.9%) chose "high" and 193 (60.9%) marked "very high".

The learning need of the competency was "very low" for 94, or 29.9 percent of the respondents. Sixty-five (20.7%) rated it as "low" and 48, or 15.3 percent, chose "moderate". The "high" response was selected by 29, or 9.2 percent, and "very high" by 78 or 24.8 percent.

COMPETENCY ITEM 14 - Examines documents for visual appeal. The data reveal that 41, or 12.9 percent, of the respondents chose the response "very low" to the importance of the competency and twenty-four (7.6%) selected "low". The "moderate" response was marked by 44, or 13.9 percent, while 63 (19.9%) chose "high" and 145 (45.7%) "very high".

The rating "very low" was marked by 108, or 34.4 percent, in response to the learning need of the competency. The response "low" and "moderate" were selected by 62 respondents, or 19.7 percent. The "high" and "very high" responses were marked by 36 (11.5%) and 46 (14.6%) of the respondents.

COMPETENCY ITEM 15 - Rewrites sentences to obtain correct structure. Forty-six, or 14.5 percent of the respondents rate the importance of the competency as "very low" and 25 (7.9%) as "low". Fifty-three, or 16.7 percent rated the response "moderate" while 83 (26.2%) marked "high". One hundred ten (34.7%) selected "very high".

Sixty-eight, or 21.7 percent, chose the "very low" response to the learning need of the competency and 72 (22.9%) as "low". Sixty-two (19.7%) marked "moderate" while 52 (16.6%) and 60 (19.1%) were "high" and "very high".

COMPETENCY ITEM 16 - Prepares error-free final copy. The importance of the competency was rated "very low" by 33, or 10.4 percent of the respondents and "low" by 13 (4.1%). Twenty-seven, or 8.5 percent selected "moderate". Forty-

nine (15.5%) rated the competency "high" while 195, or 61.5 percent chose "very high".

The learning need of the competency was marked "very low" by 85, or 21.7 percent of the respondents and "low" by 72 (22.9%). Sixty-two, or 19.7 percent, selected "moderate" and 37 (11.8%) and 80 (25.5%) chose "high" and "very high".

Operates Automated Office Equipment - Category 5

Table 13 includes the automated office competencies performed by office/information workers. Responses are reported by percentages in the table.

COMPETENCY ITEM 17 - Operates computer type keyboards utilizing numeric and function keys. Fifteen, or 4.7 percent of the respondents chose the "very low" when responding to the importance of this competency and 8 (2.5%) selected "low". Twenty-four, or 7.5 percent marked the "moderate" response while 57 (17.8%) marked "high". The "very high" response was selected by 216 or 67.5 percent of the respondents.

Seventy (22.2%) respondents marked "very low" when rating the learning need of the competency and 44 (13.9%) rated it as "low". Forty-nine (15.5%) used the "moderated" rating while 54 (17.1%) and 99 (31.3%) rated it "high" and "very high".

COMPETENCY ITEM 18 - Utilizes appropriate hardware and software features required of job tasks (word or data processing, records management, spreadsheet, etc.) Thirty-

TABLE 13

Percentage Comparison of Importance and Learning Need Expressed by Office/Information Workers in Category 5 - Operates Automated Office Equipment

Competency		Very Low 1	2	3	4	Very High 5
Operates computer type keyboards utilizing numeric and function keys	Impt	4.7	2.5	7.5	17.8	67.5
	L Need	22.2	13.9	15.5	17.1	31.3
Utilizes appropriate hardware and software features required of job tasks (word or data processing records management, spread sheet, etc.)	Impt	10.4	5.0	12.0	21.5	51.1
	L Need	14.2	11.4	11.4	20.9	30.7
Uses some form of magnetic media fixed disks to store, retrieve and/or duplicate information	Impt	16.1	6.6	20.3	21.5	51.1
	L Need	23.5	14.6	26.0	16.2	19.7
Initializes/formats disks	Impt	28.2	17.4	17.1	12.0	25.3
	L Need	37.1	16.5	21.9	11.4	13.0
Operates output devices (printer, telecommunications etc.)	Impt	8.5	2.8	15.1	20.8	52.7
	L Need	26.9	15.2	19.0	15.8	23.1
Performs operator maintenance to determine sources for malfunctions; corrects or reports malfunction	Impt	8.5	2.8	15.1	20.8	52.7
	L Need	29.1	16.5	23.4	13.6	17.4
Operates optical character recognition (OCR) equipment	Impt	67.5	12.6	10.7	4.1	5.0
	L Need	56.0	12.0	16.1	79.0	79.0
Revises documents	Impt	21.8	6.6	16.8	20.9	33.9
	L Need	30.8	18.1	19.4	16.8	14.9
Uses editing capabilities of equipment	Impt	20.6	5.4	13.9	17.4	42.7
	L Need	32.7	15.2	18.1	16.8	17.1

three, or 10.4 percent, of the respondents marked "very low" as the response to the competency and 15 (5.0%) rated it "low". Thirty-eight, or 12 percent, selected the "moderate" response and 68 (21.5%) marked "high". One hundred sixty two (51.1%) chose "very high" .

The "very low" response was marked by 45, or 14.2 percent, of the respondents when rating the learning need of the competency and 36 (11.4%) marked "low". Thirty-six (11.4%) selected "moderate" while 66 (20.9%) and 97 (30.7%) chose "high" and "very high".

COMPETENCY ITEM 19 - Uses some form of magnetic media, fixed disks to store, retrieve and/or duplicate information. "Very low" response was chosen by 51 respondents (16.1%) when rating the importance of the competency and 21 (6.6%) marked "low". "Moderate" was selected by 64 (20.3%), "high" and was marked by 68 (21.5%). One hundred sixty-two, or 51.1 percent chose "very high" as a response.

Seventy-four, or 23.5 percent, rated the learning need for the competency as "very low" and 46 (14.6%) as "low". Eighty-two (26.0) selected "moderate" and 51 (16.2%) and 62 (19.7%) chose "high" and "very high".

COMPETENCY ITEM 20 - Initializes/formats disks. When rating responses to the importance of the competency, 89, or 28.2 percent marked "very low", 55 (17.4%) "low" and 54 (17.1%) "moderate". Twelve percent, or 38 of the

respondents, rated the competency as "high" and 80 (25.3%) as "very high".

One hundred seventeen, or 37.1 percent, used the "very low" when responding to the learning need of the competency and 52 (16.5%) marked "low". The "moderate" response was selected by 69, or 21.9 percent of the respondents and 36 (11.4%) and 41 (13.0%) chose "high" and "very high".

COMPETENCY ITEM 21 - Operates output devices (printer, telecommunications, etc.) The importance of the competency was rated by 27, or 8.5 percent of the respondents as "very low" and 9 (2.8%) as "low". Forty-eight, or 15.1 percent marked the "moderate" response while 66 (20.8%) selected "high". One hundred sixty-seven, or 52.7 percent, chose "very high" as a response.

The learning need response for the competency was rated as "very low" by 85, or 26.9 percent, and "low" by 48 (15.2%). Sixty, or 19.0 percent selected the "moderate" rating and 50 (15.8%) respondent marked it "high". Seventy-three, or 23.1 percent marked the "very high" rating.

COMPETENCY ITEM 22 - Performs operator maintenance to determine sources for malfunctions; corrects or reports malfunctions. Twenty-seven, or 8.5 percent, of the respondents rated the importance of the competency as "very low" and 9 (2.8%) as "low". Forty-eight, or 15.1 percent, selected the "moderate" rating and 66 (20.8%) chose "high".

"Very high" was the rating used by 167, or 52.7 percent of the respondents.

The "very low" response was selected by 92, or 29.1 percent of the respondents when rating the learning need of the competency and "low" was marked by 52 (16.5%). The "moderate" response was chosen by 74, or 23.4 percent, while 43 (13.6%) and 55 (17.4%) selected "high" and "very high".

COMPETENCY ITEM 23 - Operates optical character recognition (OCR) equipment. Two hundred fourteen, or 67.5 percent, marked the "very low" when rating the importance of the competency. Forty (12.6%) marked "low" and 34 (10.7%) marked "moderate". Thirteen (4.1%) respondents rated the competency as "high" and 16, or 5.0 percent rated it as "very high".

The learning need of the competency was rated by 177, or 56.0 percent as "very low" and by 38 (12.0%) as "low". Fifty-one (16.1%) rated it "moderate". The "high" and "very high" categories were rated equally by 25, or 79 percent, of the respondents.

COMPETENCY ITEM 24 - Revises documents. Sixty-nine, or 21.8 percent, rated the importance of the competency as "very low" and 21 (6.6%) as "low". The "moderate" rating was chosen by 53, or 16.8 percent, and "high" was selected by 66 (20.9%). The "very high" rating was marked by 107 or 33.9 percent.

Ninety-seven, or 30.8, of the respondents selected the "very low" rating for learning need and 57 (18.1%) chose "low". Sixty-one, or 19.4 percent, marked "moderate" while 53 (16.8%) and 47 (14.9%) chose "high" and "very high".

COMPETENCY ITEM 25 - Uses editing capabilities of equipment. The importance of the competency was rated "very low" by 65 (20.6%) and "low" by 17 (5.4%) of the respondents. The "moderated" rating was selected by 44 (13.9%) and "high" by 55, or 17.4 percent. One hundred thirty five, or 42.7 percent, marked the "very high" response.

One hundred three, or 32.7 percent, marked the "very low" response for rating the learning need of the competency. Forty-eight (15.2%) selected the "low" response and 57 (18.1%) marked "moderate". The "high" and "very high" responses where marked by 53, or 16.8 percent and 54, or 17.1 percent.

Operates Office Equipment - Category 6

Table 14 includes the operation of office equipment competencies performed by office/information workers. Responses are reported by percentages in the table.

COMPETENCY ITEM 26 - Demonstrates basic knowledge and usage of business machines. The "very low" rating was chosen by 11, or 3.4 percent, of the respondents when rating the importance of the competency. The "low" and "moderate" ratings were marked by 7 (2.2%) and 54 (16.9%) respondents.

Eighty-one, or 25.3 percent, selected "high" and 187 (52.2%) marked "very high".

Eighty (25.3%) rated the learning need of the competency as "very low" and 63 (19.9%) marked "low". "Moderate" was selected by 57, or 18.0 percent, while 44 (13.9%) and 72 (22.8%) chose "high" and "very high".

COMPETENCY ITEM 27 - Transmits information electronically. The importance of the competency was rated "very low" by 58, or 18.3 percent, and "low" by 31 (9.8%) of the respondents. Fifty-nine (18.6%) selected "moderate" and 58 (18.3%) chose "high". The "very high" response was marked by 111, or 35.0 percent of the respondents.

TABLE 14

Percentage Comparison of Importance and Learning Need Expressed by Office/Information Workers in Category 6 - Operates Office Equipment

		Very Low				Very High
Competency		1	2	3	4	5
Demonstrates basic knowledge and usage of business machines	Impt	3.4	2.2	16.9	25.3	52.2
	L Need	25.3	19.9	18.0	13.9	22.8
Transmits information electronically	Impt	18.3	9.8	18.6	18.3	35.0
	L Need	31.0	18.4	18.0	15.8	16.8
Photocopies, collates, and distributes copies	Impt	3.4	4.1	12.5	23.1	56.9
	L Need	42.4	13.0	11.1	12.7	20.9

The learning need of the competency was rated as "very low" by 98 (31.0%) and "low" by 58 (18.4%) of the respondents. Fifty-seven (18.0%) marked the "moderate" response while 50 (15.8%) and 53 (16.8%) chose "high" and "very high".

COMPETENCY ITEM 28 - Photocopies, collates, and distributes copies. Eleven, or 3.4 percent, responded "very low" when rating the importance of the competency and 13, or 4.1 percent as "low". The "moderate" rating was marked by 40 (12.5%) respondents. The "high" response was chosen by 74, or 23.1 percent while 182 (56.9%) selected the "very high" rating.

One hundred thirty-four (42.4%) respondents selected the "very low" category when rating the learning need of the competency and 41 (13.0%) rated it as "low". Thirty-five (11.1%) chose "moderate" while 40 (12.7%) and 66 (20.9%) selected "high" and "very high".

Handles Financial Responsibilities - Category 7

Table 15 includes financial competencies performed by office/information workers. Responses are reported by percentages in the table.

COMPETENCY ITEM 29 - Uses the electronic calculator for computation of simple and complex mathematical problems. The importance of the competency was rated "very low" by 68, or 21.3 percent, and "low" by 24, or 7.5 percent of the respondents. "Moderate" was marked by 68 (21.3%), "high" by 60 (18.8%), and "very high" by 100 (31.3%).

One hundred twenty-nine (40.8%) selected the "very low" response when rating the learning need of the competency. Twelve percent, or 57 of the respondents, selected the "low"

response. "Moderate" was selected by 47 (14.9%), "high" by 28 (8.9%), and "very high" 55 (17.4%)

COMPETENCY ITEM 30 - Maintains a job related checking account, including making deposits, writing checks, reconciling bank statements, and filing canceled checks. Two hundred, or 62.5 percent, marked the "very low" category when rating the importance of the competency. Twenty-eight (8.8%) selected "low" and 29 (9.1%) chose "moderate". Twenty (6.3%) selected the "high" rating and 43 (13.4%) chose "very high".

TABLE 15

Percentage Comparison of Importance and Learning Need Expressed by Office/Information Workers in Category 7 - Handles Financial Responsibilities

		Very Low				Very High
Competency		1	2	3	4	5
Uses the electronic calculator for computation of simple and complex mathematical problems	Impt	21.3	7.5	21.3	18.8	31.3
	L Need	40.8	12.0	14.9	8.9	17.4
Maintains a job related checking account, including making deposits, writing checks, reconciling bank statements, & filing canceled checks	Impt	62.5	8.8	9.1	6.3	13.4
	L Need	58.9	13.3	12.0	6.0	9.8
Keeps accurate records and budgets, files and assists with records	Impt	28.8	8.8	13.8	17.2	31.6
	L Need	39.2	14.9	16.5	10.4	19.0

The learning need of the competency was rated "very low" by 186 (58.9%) and "low" by 42 (13.3%) respondents. Twelve percent, or 38, selected "moderate" while six percent (19)

chose "high". Thirty-one, or 9.8 percent marked the "very high" category.

COMPETENCY ITEM 31 - Keeps accurate records and budgets, files and assists with records. The importance of the competency was rated "very low" by 92 (28.8%) and "low" by 28 (8.8%) respondents. Forty-four, or 13.8 percent, marked "moderate" and 55 (17.2%) marked "high". The "very high" response was chosen by 101, or 31.6 percent of the respondents.

One hundred twenty four (39.2%) respondents marked "very low" when rating the learning need of the competency and 47 (14.9%) marked "low". Fifty-two, or 16.5 percent, marked "moderate" while 33 (10.4%) and 60 (19.0%) chose "high" and "very high"

Communicates with Others - Category 8

Table 16 includes the communication competencies performed by office/information workers. Responses are reported by percentages in the table.

COMPETENCY ITEM 32 - Schedules appointments and greets visitors. Fifty, or 15.8 percent, chose the "very low" when rating the importance of the competency and 31 (9.8%) marked "low". The "moderate" response was marked by 45, or 14.2 percent and 66 (20.8%) selected "high". One hundred twenty-five (39.4%) picked the "very high" category.

The learning need of the competency was rated "very low" by 138, or 43.7 percent of the respondents. "Low" was

marked by 46 (14.6%), "moderate" by 51 (16.1%), "high" by 32 (10.1%), and "very high" by 49 (15.5%).

COMPETENCY ITEM 33 - Interacts with co-workers and supervisors. The importance of the competency was rated "very low" by 3 (0.9%) and "low" by 1 (0.3%) respondents. Eighteen, or 5.6 percent, marked the "moderate" rating while 79 (24.7%) selected "high". The "very high" response was chosen by 219, or 68.4 percent.

The learning need of the competency was rated "very low" by 99 (31.3%) and "low" by 51 (16.1%) respondents. Forty-six, or 14.6 percent, selected "moderate" while 30 (9.5%) and 90 (28.5%) chose "high" and "very high".

TABLE 16

Percentage Comparison of Importance and Learning Need Expressed by Office/Information Workers in Category 8 - Communicates with Others

		Very Low				Very High
Competency		1	2	3	4	5
Schedules appointments and greets visitors	Impt	15.8	9.8	14.2	20.8	39.4
	L Need	43.7	14.6	16.1	10.1	15.5
Interacts with co-workers and supervisors	Impt	0.9	0.3	5.6	24.7	68.4
	L Need	31.3	16.1	14.6	9.5	28.5
Follows job instructions	Impt	0.0	0.3	2.2	23.1	74.4
	L Need	34.5	14.9	13.3	8.2	29.1
Arranges meetings and Conferences	Impt	29.0	13.2	16.1	15.1	26.5
	L Need	43.0	19.0	17.1	7.9	13.0
Arranges travel for others and prepares travel expense forms	Impt	50.2	8.8	12.9	11.4	16.7
	L Need	51.6	15.8	14.9	6.3	11.4

COMPETENCY ITEM 34 - Follows job instructions. No one selected the "very low" category when rating the importance of the competency. One respondent (0.3%) rated the competency as "low" while 7 (2.2%) rated it as "moderate". Seventy-four (23.1%) marked the "high" category and 238, or 74.4 percent selected "very high".

The "very low" rating of the learning need of the competency was marked by 109 (34.5%) respondents. The "low" and "moderate" ratings were selected by 47 (14.9%) and 42 (13.3%). The "high" category was selected by 26 (8.2%) and "very high" by 92 (29.1%) respondents.

COMPETENCY ITEM 35 - Arranges meetings and conferences. Twenty-nine percent, or 92 respondents, marked the "very low" category while 42 (13.2%) selected "low". Fifty-one (16.1%) marked "moderate", 48 (15.1%) selected "high", and 84 (26.5%) chose "very high".

One hundred thirty-six, or 43.0 percent, rated the learning need of the competency "very low" while 60 (19.0%) rated it as "low". The "moderate" rating was selected by 54 respondents, or 17.1 percent. Twenty-five (7.9%) marked it as "high" and 41 (13.0%) as "very high".

COMPETENCY ITEM 36 - Arranges travel for others and prepares travel expense forms. The importance of the competency was rated "very low" by 159, or 50.2 percent, and "low" by 28 (8.8%). Forty-one (12.9%) selected the

"moderate" rating while 36 (11.4%) chose "high" and 53 (16.7%) selected "very high".

The learning need of the competency was rated "very low" by 163 (51.6%) and "low" by 50 (15.8%) respondents. Forty-seven, or 14.9 percent rated it as "moderate" while 20 (6.3%) and 36 (11.4%) chose "high" and "very high".

Performs Other Office Functions - Category 9

Table 17 includes the other office function competencies performed by office/information workers. Responses are reported by percentages in the table.

COMPETENCY 41 - Answers telephone and routes calls, takes messages. Nine respondents, or 2.8 percent, rated the importance of the competency as "very low" and 12 (3.8%) as "low". Twenty-four, or 7.5 percent, marked the "moderate" response and 50 (15.6%) marked "high". Two hundred twenty-five (70.3%) chose the "very high" category.

One hundred twenty-five, or 39.6 percent, of the respondents rated the learning need of the competency as "very low" while 43 (13.6%) rated it as "low". Thirteen percent, or 41 respondents, rated the competency as "moderate" and 23 (7.3%) and 84 (26.6%) marked the "high" and "very high" responses.

COMPETENCY ITEM 38 - Receives and sorts mail, prepares outgoing mail. Forty-six, or 14.4 percent, of the respondents rated the importance of the competency as "very low" and 13 (4.1%) as "low". Forty-seven (14.7%) selected

the "moderate" category and 58 (18.1%) chose "high". One hundred fifty-six, or 48.8 percent, rated the competency importance as "very high".

TABLE 17

Percentage Comparison of Importance and Learning Need Expressed by Office/Information Workers in Category 9 - Performs Other Office Functions

Competency		Very Low 1	2	3	4	Very High 5
Answers telephone and routes calls, takes messages	Impt	2.8	3.8	7.5	15.6	70.3
	L Need	39.6	13.6	13.0	7.3	26.6
Receives and sorts mail, prepares outgoing mail	Impt	14.4	4.1	14.7	18.1	48.8
	L Need	48.7	13.6	13.0	7.6	26.6
Manages office supplies, equipment, library resources, and references	Impt	23.2	11.9	19.4	11.9	33.5
	L Need	47.2	16.1	14.9	4.1	17.7
Maintains records of equipment repairs	Impt	53.3	12.2	16.3	7.2	11.0
	L Need	60.1	13.3	14.2	4.4	7.9

The learning need of the competency was rated "very low" by 154 or 48.7 percent of the respondents. Forty-three (13.6%) rated it as "low" and 41 (13.0%) as "moderate". Twenty-four (7.6%) and 84 (26.6%) marked the "high" and "very high" categories.

COMPETENCY ITEM 39 - Manages office supplies, equipment, library resources, and references. The importance of the competency was rated "very low" by 74 (23.2%) and "low" by 38 (11.9%) respondents. Sixty-two, or 19.4 percent, chose the "moderate" rating and 38 (11.9%) selected "high". One hundred seven, or 33.5 percent, marked it "very high".

One hundred forty-nine, or 47.2 percent, chose "very low" when rating the learning need for the competency. Fifty-one (16.1%) rated it "low", 47 (14.9%) "moderate", 13 (4.1%) "high" and 56 (17.7%) "very high".

COMPETENCY ITEM 40 - Maintains records of equipment repairs. One hundred seventy, or 53.3 percent, rated the importance of the competency as "very low" while 39 (12.2%) rated it "low". Fifty-two, or 16.3 percent, selected the "moderate" rating and 23 (7.2%) chose "high". Eleven percent, or 35 of the respondents, rated it as "very high".

One hundred ninety, or 60.1 percent, rated the learning need of the competency as "very low" and 42 (13.3%) as "low". Forty-five (14.2%) responded to the "moderate" category while 14 (4.4%) and 25 (7.9%) selected "high" and "very high".

Performs Administrative Functions - Category 10

Table 18 includes the administrative function competencies performed by office/information workers. Responses are reported by percentages in the table.

COMPETENCY 41 - Functions effectively on committees by accepting assigned responsibilities. The importance of the competency was rated "very low" by 99, or 31.2 percent, and "low" by 37 (11.7%) of the respondents. Sixty-seven, or 21.1 percent, selected "moderate" while 56 (17.7%) and 58 (18.3%) chose "high" and "very high".

One hundred twenty-five, or 39.6 percent, rated the learning need of the competency as "very low" and 58 (18.4%) selected "low". Sixty-nine (21.8%) marked the "moderated" category while 29 (9.2%) and 35 (11.1%) marked "high" and "very high".

TABLE 18

Percentage Comparison of Importance and Learning Need Expressed by Office/Information Workers in Category 10 - Performs Administrative Functions

Competency		Very Low 1	2	3	4	Very High 5
Functions effectively on committees by accepting assigned responsibilities	Impt	31.2	11.7	21.1	17.7	18.3
	L Need	39.6	18.4	21.8	9.2	11.1
Plans and conducts effective group leadership activities	Impt	45.7	18.6	17.0	9.5	9.1
	L Need	42.4	16.8	21.8	7.9	11.1
Prioritizes and organizes work efficiently	Impt	5.7	0.6	13.9	30.3	49.5
	L Need	27.5	15.5	18.7	13.0	25.3
Collects data and performs research	Impt	30.4	14.7	21.6	16.6	16.6
	L Need	35.4	19.0	25.0	10.1	10.4
Speaks to company personnel and to professional groups	Impt	64.4	13.6	10.7	6.0	5.4
	L Need	49.7	15.2	16.1	8.5	10.4
Plans, organizes, directs, and evaluates a project	Impt	46.7	15.1	15.1	7.6	9.1
	L Need	42.1	14.6	24.1	11.1	8.2
Reviews qualifications and interviews job applicants	Impt	70.3	11.0	7.9	5.0	5.7
	L Need	37.6	13.9	12.0	5.4	11.1
Provides orientation and in-service training programs	Impt	66.9	12.3	10.1	4.4	6.3
	L Need	56.3	13.3	14.9	5.4	10.1
Delegates work to others	Impt	38.5	17.4	21.8	9.8	12.6
	L Need	43.2	14.9	21.0	9.2	11.7

COMPETENCY ITEM 42 - Plans and conducts effective group leadership activities. One hundred forty-five, or 45.7 percent, marked "very low" when rating the learning need of the competency. Fifty-nine (18.6%) and 54 (17.0%) chose "low" and "moderate". Thirty, or 9.5 percent, selected "high" and 29 (9.1%) "very high".

The learning need of the competency was rated as "very low" by 134 or 42.4 percent of the respondents. Fifty-three (16.8%) rated it "low" and 69 (21.8%) "moderate". Twenty-five, or 7.9 percent marked the "high" response and 35 (11.1%) "very high".

COMPETENCY ITEM 43 - Prioritizes and organizes work efficiently. The importance of the competency was rated as "very low" by 18 (5.7%) and "low" by 2 (.6%) respondents. Forty-four, or 13.9 percent marked the "moderate" response while 96 (30.3%) and 157 (49.5%) chose "high" and "very high".

Eighty-seven, or 27.5 percent, of the respondents marked the learning need of the competency as "very low" and 49, or 15.5 percent marked "low". Fifty-nine (18.7%) selected "moderate". Thirteen percent, or 41 of the respondents, selected the "high" rating and 80 (25.3%) chose "very high".

COMPETENCY ITEM 44 - Collects data and performs research. The importance of the competency was rate "very low" by 97 or 30.4 percent of the respondents. Forty-seven (14.7%) rated it "low" and 69 (21.6%) rated it as

"moderate". The responses "high" and "very high" were rated equally by 53 or 16.6 percent of the respondents.

One hundred twelve, or 35.4 percent, of the respondents rated the learning need of the competency as "very low". Nineteen percent, or 60 respondents, selected the "low" category and 79 (25.0%) chose "moderate". Thirty-two (10.1%) marked "high" and 33 (10.4%) selected "very high".

COMPETENCY ITEM 45 - Speaks to company personnel and to professional groups. The importance of the competency was rated "very low" by 204, or 64.4 percent, and "low" by 43 (13.6%) respondents. Thirty-four (10.7%) selected the "moderate" response while 19 (6.0%) and 17 (5.4%) marked "high" and "very high".

One hundred fifty-seven, or 49.7 percent, chose "very low" when rating the learning need of the competency. The "low" category was chosen by 48, or 15.2 percent, while 51 (16.1%) chose "moderate". Twenty-seven (8.5%) and 33 (10.4%) rated it as "high" and "very high".

COMPETENCY ITEM 46 - Plans, organizes, directs, and evaluates a project. One hundred forty-eight, or 46.7 percent, rated the importance of the competency as "very low" and 48 (15.1%) as "low". The "moderate" response was marked by 48 (15.1%), "high" by 24 (7.6%), and "very high" by 29 (9.1%).

The learning need of the competency was rated as "very low" by 133 or 42.1 percent. The "low" category was marked

by 46 (14.6%) and "moderate" by 76 or 24.1 percent. The "high" and "very high" ratings were selected by 35 (11.1%) and 26 (8.2%).

COMPETENCY ITEM 47 - Reviews qualifications and interviews job applicants. The importance of the competency was rated as "very low" by 223 or 70.3 percent. Eleven percent, or 35 respondents, rated it "low", 25 (7.9%) as "moderate", 16 (5.0%) as "high" and 18 (5.7%) as "very high".

One hundred eighty-two, or 37.6 percent, of the respondents chose the "very low" category when rating the learning need of the competency. Forty-four (13.9%) chose "low", 38 (12.0%) as "moderate", 17 (5.4%) as "high", and 35 (11.1%) as "very high".

COMPETENCY ITEM 48 - Provides orientation and in-service training programs. Two hundred twelve, or 66.9 percent, rated the importance of the competency as "very low" while 39 (12.3%) rated it "low". Thirty-two (10.1%) marked the "moderate" category and 14 (4.4%) and 20 (6.3%) selected "high" and "very high".

The learning need of the competency was rated "very low" by 178, or 56.3 percent and "low" by 42 (13.3%). The "moderate" category was selected by 47 (14.9%) while the "high" and "very high" categories were chosen by 17 (5.4%) and 32 (10.1%).

COMPETENCY ITEM 49 - Delegates work to others. The importance of the competency was rated "very low" by 122, or 38.5 percent, and "low" by 55 (17.4%). Sixty-nine (21.8%) marked "moderate" and 31 (9.8%) selected "high". Forty, or 12.6 percent, selected the "very high" category.

One hundred thirty-six, or 43.2 percent rated the learning need of the competency as "very low" and 47 (14.9%) as "low". Twenty-one percent, or 66 of the respondents, selected the "moderate" response and 29 (9.2%) and 37 (11.7%) chose "high" and "very high".

Ranking of Competencies

The frequency data were further analyzed to determine the most important competencies as ranked by office/information workers. Rank data were obtained by calculating frequency of selection by the rating values of 1 to 5. Frequency distribution was used to determine the upper and lower quartiles of importance and learning need. Table 19 shows the 49 competencies ranked in order of high competency by importance and learning need.

The data in Table 20 show that of the 13 competencies ranked in the upper quartile of importance eight (61.5%) appear in the upper quartile of the learning need. Five, or 38.5 percent, of the highest ranked competencies did not have learning needs ranked in the upper quartile.

Of the eight competencies included in the upper quartile of importance and learning need two were listed under

TABLE 19

Ranking Comparison of Competency Importance and Learning Need as Perceived by Office/Information Workers

Ranking	Importance Competencies	Percentage	Learning Need Competencies	Percentage
1	34	74.4	17	31.3
2	37	70.3	18	30.7
3	33	68.4	11	30.5
4	17	67.5	34	29.1
5	16	61.5	33	28.5
6	13	60.9	37	26.6
7	11	60.1	43	25.3
8	28	56.9	16	25.5
9	21	52.7	13	24.8
10	26	52.2	21	23.1
11	18	51.1	26	22.8
12	3	50.3	28	20.9
13	43	49.5	19	19.7
14	38	48.8	15	19.1
15	14	45.7	31	19.0
16	12	43.1	38	18.4
17	1	42.5	39	17.7
18	25	42.7	22	17.4*
19	2	39.9	29	17.4*
20	32	39.4	25	17.1
21	5	37.4	12	16.9
22	27	35.0	27	16.8
23	15	34.7	3	16.2
24	19	33.9	32	14.9
25	24	33.9	24	14.9
26	39	33.5	2	14.9
27	9	31.8	14	14.6
28	31	31.6	10	14.0
29	29	31.3	9	13.7
30	4	27.4	5	13.0*
31	35	26.5	20	13.0*
32	10	25.8	1	13.0*
33	20	25.3	35	13.0*
34	6	23.6	4	12.7
35	22	19.0	49	11.7
36	41	18.3	36	11.4
37	36	16.7	6	11.1*
38	44	16.6	41	11.1*
39	30	13.4	42	11.1*
40	7	12.9	47	11.1*
41	49	12.6	44	10.4*
42	8	11.3	45	10.4*
43	40	11.0	48	10.1
44	42	9.7	30	9.8
45	46	9.1	46	8.2
46	48	6.3	23	7.9
47	47	5.7	40	7.9
48	45	5.4	8	7.3
49	23	5.0	7	7.0

* Rankings were determined by combining 4 and 5 ratings

TABLE 20

Comparison of High Rank Competency Importance with Learning Need

Rank	Importance	Learning Need
1	34	66
2	37	67
3	33	60
4	17	83
5	16	82
6	13	86
7	11	92
8	28	65
9	21	62
10	26	70
11	18	75
12	3	77
13	43	68

Category 4 - Proofreads Documents, two were from Category 5 - Operates Automated Office Equipment, one from Category 6 - Operates Office Equipment, two from Category 8 - Communicates with Others, and one listed under Category 10 - Performs Administrative Functions. The competencies which were ranked in the upper quartile of importance are below:

Category	Item	Competency
4	11	Uses correct grammar, punctuation, capitalization, spelling, word usage, and vocabulary
4	16	Prepares error-free final copy
5	17	Operates computer type keyboards utilizing numeric and function keys
5	21	Operates output devices (printer, telecommunications, etc.)
6	26	Demonstrates basic knowledge and usage of business machines

8	33	Interacts with co-workers and supervisors
8	34	Follows job instructions
10	43	Prioritizes and organizes work efficiently

The data in table 21 show that of the lowest ranked competencies only two (23%) of the lowest ranked competencies did not have learning needs ranked in the lower quartile. Of the 13 competencies ranked in the lower quartile of importance 11 appear in the lower quartile of the learning need.

TABLE 21

Comparison of Low Rank Competency Importance with Learning Need

Rank	Importance	Learning Need
37	36	6
38	44	41
39	30	42
40	7	47
41	49	44
42	8	45
43	40	48
44	42	32
45	46	47
46	48	23
47	47	40
48	45	8
49	23	7

Of the 11 competencies which were ranked in the lower quartile one fell under Category 2 - Formats Documents, one from Category 3 - Performs Transcription Duties, one from Category 5 - Operates Automated Office Equipment, one from Category 7 - Handles Financial Responsibilities, one from

Category 9 - Performs Other Office Functions, and six were listed under Category 10 - Performs Administrative Functions. The 11 competencies which were ranked in the lower quartile in importance are below:

Category	Item	Competency
2	7	Suggests and implements unique formats
3	8	Transcribes from dictation equipment and/or shorthand notes
5	23	Operates optical character recognition (OCR) equipment
7	30	Maintains a job related checking account, including making deposits, writing checks, reconciling bank statements, and filing canceled checks
9	40	Maintains records of equipment repairs
10	42	Plans and conducts effective group leadership activities
10	44	Collects data and performs research
10	45	Speaks to company personnel and to professional groups
10	46	Plans, organizes, directs, and evaluates a program
10	47	Reviews qualifications and interviews job applicants
10	48	Provides orientation and in-service training programs

The data presented in Table 22 summarize the top five rated categories for both importance and learning need. Out of the five highest rated importance categories, four of the learning need categories were also rated high. The top five categories in importance as rated by office/information workers are as follows: Category 1 - Performs Keyboarding Duties, Category 4 - Proofreads Documents, Category 6 - Operates Office Equipment, Category 8 - Communicates with Others, and Category 9 - Performs Other Office Functions. The five categories which were considered the highest in learning need are: Category 1 - Performs Keyboarding Duties, Category 4 - Proofreads Documents, Category 5 - Operates Automated Office Equipment, Category 6 - Operates Office Equipment, and Category 8 - Communicates with Others.

TABLE 22

Summary of Comparison of the Mean Scores of the top five Importance and Learning Need Categories

Category	Importance	Learning Need
1	3.7484375	2.5325397
4	3.8414196	2.7891156
5	3.3765278*	2.7884669
6	3.9640625	2.7151899
8	3.6550000	2.4968354
9	3.4054688	2.2950949**

* Category 5 high learning need does not have a high importance in top five median rating

** Category 9 high importance does not have a high learning need in top five median rating

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

SUMMARY

The purpose of this study was to conduct an occupational analysis of office/information workers to determine which occupational skills were rated the highest and to identify which occupational areas office/information workers perceived they have a learning need. In order to delineate these competencies, it was necessary to answer the following questions:

1. What competencies do office/information workers perceive to be the most important?
2. What are the learning needs expressed by office personnel employed as information workers?

Office Competency Skills Rating Inventories were received from 324 office/information workers who were employed by industries located in East Tennessee. The inventory sheet contained 49 competencies as well as background information. Each respondent was asked to rate the importance of the competency and the degree to which the respondent felt a learning need.

Since much of the data in this study were found to be grouped at either extreme of the rating scale, the Median test was used. Rank ordering was done to determine the high and low-rated items in both categories.

The data gathered were analyzed using the median test as well as the Chi Square test at .05 level of confidence. The data revealed that there were no significant difference found. The frequency data were ranked to analyze the highest and lowest 25 percent of the rank. Frequency and cumulative percentage distributions were used in the preparation of guidelines for curriculum review.

CONCLUSIONS

Data analysis and comparisons of the results of the collection of data of 49 competency from office/information workers employed by industries in East Tennessee are the basis for the conclusions and recommendations given in this study. To the extent that these findings are valid and reliable, the following conclusions seem justified.

1. Office/Information workers perceive they have learning needs in the office skill categories of basic keyboarding duties, proofreading, operation of automated office equipment, operation of business office equipment, and communication with others.

2. The continuing education areas of greatest interest to office/information workers is automated office equipment (business computers and related software, related equipment training, etc.) followed by administrative/organizational skills. These subject areas need to be considered as basic areas in the development or review of office technology curriculums.

3. Rating competencies is not the best method for curriculum review of secretarial programs. Learning need analysis seemed to have provided a better suggestion of the areas which office/information workers may have additional learning needs.

4. The following 13 learning need competencies were considered necessary for developing or reviewing office technology curriculums:

Category	4	Prepares error-free final copy
		Identifies typographical errors
Category	5	Operates computer type keyboards utilizing numeric and function keys
		Utilizes appropriate hardware and software features required of job tasks (word or data processing, records management, spreadsheet, etc.)
		Operates output devices (printer, telecommunications, etc.)
		Uses some form of magnetic media, fixed disks to store, retrieve and/or duplicate information
Category	6	Demonstrates basic knowledge and usage of business machines
		Photocopies, collates, and distributes copies
Category	7	Maintains a job related checking account, including making deposits, writing checks, reconciling bank statements
Category	8	Follows job instructions
		Interacts with co-workers and supervisors

Category 9 Answers telephone and routes calls, takes messages

Category 10 Prioritizes and organizes work efficiently

5. The highest percentage of the respondents indicated that their career goal was to develop in their present position followed by advance to a management position. The continuous learning needs of office/information personnel extend beyond the areas of the traditional secretary. In-service and continuing education programs need to update skills and knowledge which will enable office/information personnel to stay abreast with the rapid technological changes and advancements and to develop the skills required to assume new and expanded responsibilities.

DISCUSSIONS AND IMPLICATIONS

The length of the instrument developed for this study may have contributed to the response rate of 56.1 percent. Some respondents may have failed to complete all items of the instrument and consequently did not bother to return it to the researcher.

The researcher concludes that the data from the importance of the competency items are an accurate account of the respondent's perceptions. However, the researcher feels that some respondents may have rated the learning need competencies less accurately due to the arrangement of the instrument. Some instruments were received with ratings of very high importance and very high learning need on all or

most items. Therefore, the researcher concludes that 1) the respondents grew tired of the rating method and were not objective with their responses or 2) simply failed to understand the directions.

For example, the competency photocopies, collates, and distributes copies is rated in the upper quartile of the learning need competencies. Since photocopying and distributing copies are considered to be basic skills, the researcher assumes that 1) respondents did not accurately rate the learning need competencies or 2) respondents failed to understand the word 'collates' and assumed it was a skill they were unfamiliar with and as a result gave it a very high rating.

RECOMMENDATIONS

As a result of this research, the following recommendations are made for further study:

1. The data presented in this study have answered the proposed questions. However, further analysis of the data could be examined by using the Spearman Rho Correlation to determine if there is a correlation between the two rankings.

2. Further research is necessary to determine to what extend business and industry are meeting the continuing education needs of their office/information personnel.

3. Additional research on curriculum development and content of continuing education programs designed for office/information personnel.

4. Other studies should be conducted to determine if the competencies expected by employers are being met by existing curricula.

5. An occupational analysis should be conducted to determine if there is a difference in the perceptions of office personnel and their supervisors when comparing the importance of job competencies.

6. Curriculum should be examined to ensure that the educational objectives include the concepts, skills, behaviors, and content which incorporate the basic categories presented in this study. The desired degree of specialization could be accomplished by combining categories or splitting them into smaller sections.

Office/information personnel are experiencing many changes in their occupation which may affect their learning need. Advances in office machinery and equipment affect how jobs are performed, what is performed, and the importance of various competencies. Career opportunities are expanded as a result of the changes in the office environment. All of these factors create a need for continuous learning. As new learning needs emerge, trainers and educators should insure that curriculum address the new needs rather than continue to emphasize old skill competencies. This study has

endeavored to identify these learning needs and present their significance for curriculum review.

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APPENDICES

APPENDIX A

MEMBERS OF REVIEW COMMITTEE
FOR THE
OFFICE COMPETENCY SKILLS RATING INVENTORY

Education

Dr. Deborah L. Bainer - The Ohio State University

Ms. Gay D. Bryant - Pellissippi State Technical Community College

Ms. Nancy Allstun - State Area Vocational-Technical School Harriman

Ms. Judy Higdon - State Area Vocational-Technical School Crossville

Industry

Ms. Patty Miller - Tennessee Valley Authority

Mr. James Perry - State of Tennessee Employment Security

Mr. Tony Adams - Sears Roebuck Company

APPENDIX B

OFFICE COMPETENCY SKILLS RATING INVENTORY

1 = Very Low
2 = Low
3 = Moderate
4 = High
5 = Very High

IMPORTANCE	COMPETENCY/SKILL	NEED
	COMMUNICATES WITH OTHERS	
1 2 3 4 5	Schedules appointments and greets visitors	1 2 3 4 5
1 2 3 4 5	Interacts with co-workers and supervisors	1 2 3 4 5
1 2 3 4 5	Follows job instructions	1 2 3 4 5
1 2 3 4 5	Arranges meeting and conferences	1 2 3 4 5
1 2 3 4 5	Arranges travel for others and prepares travel expense forms	1 2 3 4 5
	PERFORMS OTHER OFFICE FUNCTIONS	
1 2 3 4 5	Answers telephone and routes calls, takes messages	1 2 3 4 5
1 2 3 4 5	Receives and sorts mail, prepares outgoing mail	1 2 3 4 5
1 2 3 4 5	Manages office supplies, equipment, library resources, and references	1 2 3 4 5
1 2 3 4 5	Maintains records of equipment repairs	1 2 3 4 5
	PERFORMS ADMINISTRATIVE FUNCTIONS	
1 2 3 4 5	Functions effectively on committees by accepting assigned responsibilities	1 2 3 4 5
1 2 3 4 5	Plans and conducts effective group leadership activities	1 2 3 4 5
1 2 3 4 5	Prioritizes and organizes work efficiently	1 2 3 4 5
1 2 3 4 5	Collects data and performs research	1 2 3 4 5
1 2 3 4 5	Speaks to company personnel and to professional groups	1 2 3 4 5
1 2 3 4 5	Plans, organizes, directs, and evaluates a project	1 2 3 4 5
1 2 3 4 5	Reviews qualifications and interviews job applicants	1 2 3 4 5
1 2 3 4 5	Provides orientation and in-service training programs	1 2 3 4 5
1 2 3 4 5	Delegates work to others	1 2 3 4 5

AREAS RELATED TO WORK IN WHICH YOU WOULD CONSIDER CONTINUING YOUR EDUCATION IN SOME KIND OF FORMAL PROGRAM

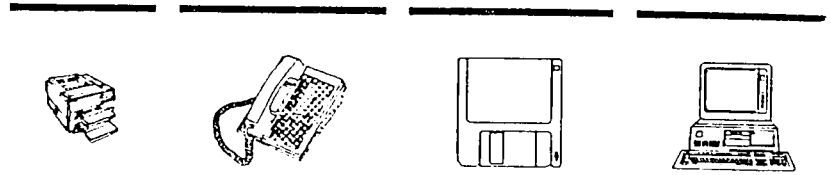
___ Secretarial Skills (Typing, Transcription, Shorthand, etc.)
___ Automated Office Equipment (business computers and related software, related equipment training, etc.)
___ Financial Responsibilities
___ Administrative/Organizational Skills
___ Other Business Area (State)_____

YOUR CAREER GOALS

___ Develop in present position
___ Move to another secretarial position
___ Advance to a management position
___ Other_____

1 = Very Low
2 = Low
3 = Moderate
4 = High
5 = Very High

OFFICE COMPETENCY SKILLS RATING INVENTORY



INSTRUCTIONS

1. *Please complete the background information below and rate the competencie on the accompanying pages.*
2. *Select and circle the Importance of the Competency (left side) in you job. Consider how often you perform the task and how critical it is i relationship to the overall operation of your job.*
3. *Rate the competencies a second time (right side) and indicate the degre to which you presently feel a Need For Additional Learning.*
4. *It is very important that all items are circled. THANK YOU FOR YOUR TIME.*

BACKGROUND INFORMATION

YOUR JOB TITLE _____

CATEGORY YOUR EMPLOYER BEST FITS

___ Agriculture, Forestry & Fishing
___ Mining
___ Transportation & Utilities
___ Manufacturing
___ Wholesale & Retail Trade
___ Services
___ Finance, Insurance, & Real Estate

TOTAL YEARS OF EXPERIENCE IN YOUR PRESENT JOB
Less than 3 ___ 3-5 ___ 6-10 ___ More than 10 ___

TOTAL YEARS OF EXPERIENCE IN OFFICE WORK
Less than 3 ___ 3-5 ___ 6-10 ___ More than 10 ___

TOTAL NUMBER OF OFFICE EMPLOYEES WHERE YOU WORK
Less than 3 ___ 3-5 ___ 6-10 ___ More than 10 ___

AGE Less than 20 ___ 21-24 ___ 25-35 ___ 36-45 ___ 46+ ___

EDUCATION (Check all completed)

___ High School
___ Business School
___ A.S. Degree or equal
___ B.S. Degree or equal
___ Adult Education Classes
___ Seminars or Workshops
___ Learning from co-workers
___ Other (Please state below)
___ Professional Development

_____

IMPORTANCE (1 = Very Low, 2 = Low, 3 = Moderate, 4 = High, 5 = Very High)	COMPETENCY/SKILL	NEED (1 = Very Low, 2 = Low, 3 = Moderate, 4 = High, 5 = Very High)
	PERFORMS KEYBOARDING DUTIES	
1 2 3 4 5	Operates standard typewriter keyboards	1 2 3 4 5
1 2 3 4 5	Demonstrates procedures necessary in preparing mailable letters, envelopes, and packages	1 2 3 4 5
1 2 3 4 5	Types business correspondence, reports, forms, and memoranda, etc.	1 2 3 4 5
1 2 3 4 5	Composes letters, memoranda, and messages at typewriter	1 2 3 4 5
	FORMATS DOCUMENTS	
1 2 3 4 5	Uses standard formats for letters, memoranda, reports, tables and outlines	1 2 3 4 5
1 2 3 4 5	Uses universal and in-house standard format manuals	1 2 3 4 5
1 2 3 4 5	Suggests and implements unique formats	1 2 3 4 5
	PERFORMS TRANSCRIPTION DUTIES	
1 2 3 4 5	Transcribes from dictation equipment and/or shorthand notes	1 2 3 4 5
1 2 3 4 5	Transcribes from handwritten or edited copy	1 2 3 4 5
	PROOFREADS DOCUMENTS	
1 2 3 4 5	Recognizes proofreader's marks and uses them in editing	1 2 3 4 5
1 2 3 4 5	Uses correct grammar, punctuation, capitalization, spelling, word usage, and vocabulary	1 2 3 4 5
1 2 3 4 5	Checks documents for format consistencies	1 2 3 4 5
1 2 3 4 5	Identifies typographical errors	1 2 3 4 5
1 2 3 4 5	Examines documents for visual appeal	1 2 3 4 5
1 2 3 4 5	Rewrites sentences to obtain correct structure	1 2 3 4 5
1 2 3 4 5	Prepares error-free final copy	1 2 3 4 5

IMPORTANCE (1 = Very Low, 2 = Low, 3 = Moderate, 4 = High, 5 = Very High)	COMPETENCY/SKILL	NEED (1 = Very Low, 2 = Low, 3 = Moderate, 4 = High, 5 = Very High)
	OPERATES AUTOMATED OFFICE EQUIPMENT	
1 2 3 4 5	Operates computer type keyboards utilizing numeric and function keys	1 2 3 4 5
1 2 3 4 5	Utilizes appropriate hardware and software features required of job tasks (word or data processing, records management, spreadsheet, etc.)	1 2 3 4 5
1 2 3 4 5	Uses some form of magnetic media, fixed disks to store, retrieve and/or duplicate information	1 2 3 4 5
1 2 3 4 5	Initializes/formats disks	1 2 3 4 5
1 2 3 4 5	Operates output devices (printer, telecommunications etc.)	1 2 3 4 5
1 2 3 4 5	Performs operator maintenance to determine sources for malfunctions; corrects or reports malfunctions	1 2 3 4 5
1 2 3 4 5	Operates optical character recognition (OCR) equipment	1 2 3 4 5
1 2 3 4 5	Revises documents	1 2 3 4 5
1 2 3 4 5	Uses editing capabilities of equipment	1 2 3 4 5
	OPERATES OFFICE EQUIPMENT	
1 2 3 4 5	Demonstrates basic knowledge and usage of business machines	1 2 3 4 5
1 2 3 4 5	Transmits information electronically	1 2 3 4 5
1 2 3 4 5	Photocopies, collates, and distributes copies	1 2 3 4 5
	HANDLES FINANCIAL RESPONSIBILITIES	
1 2 3 4 5	Uses the electronic calculator for computation of simple and complex mathematical problems	1 2 3 4 5
1 2 3 4 5	Maintains a job related checking account, including making deposits, writing checks, reconciling bank statements, & filing canceled checks	1 2 3 4 5
1 2 3 4 5	Keeps accurate records and budgets, files and assists with records	1 2 3 4 5

APPENDIX C

SAMPLE COVER LETTER AND FOLLOW-UP LETTERS

Date 1991

1"

Dear 2":

As a graduate student at the University of Tennessee, I am conducting a study of the job competencies of secretarial personnel employed by East Tennessee industries.

The purpose of this study is to provide better educational opportunities for students pursuing secretarial and office education majors at area community colleges and state area vocational-technical schools. Results of the study will assist educators in the training of students to qualify for the job requirements of area employers.

Your business has been drawn from a sample of employers in the survey area. Please distribute the enclosed surveys to the appropriate clerical/secretarial personnel employed by your company. In order that the results will truly represent the skills and training needs of clerical and secretarial support persons, it is important that each questionnaire be completed and returned.

It will take less than twenty minutes to complete the survey. Your responses will be kept strictly confidential. Please note that the inventories do not require the name of individual completing the survey. The results of this study will be made available to all participating businesses upon request.

Please return the survey by , 1991. I have enclosed a stamped return envelope for your convenience. If you have any questions regarding the survey, please feel free to contact me at 882-6703 during business hours.

Thank you,

Rebecca R. Jones

Enclosures

2nd Follow-up letter

June 1991

Recently a packet of materials seeking information on secretarial competencies and learning needs was sent to you. Your business was drawn in a random sample of businesses located in the survey area.

If you already asked your secretarial employees to complete the survey and return the booklet to us, please accept my sincere thanks. If not, please do so today. Since this survey has been sent to only a small but representative sample of businesses, it is extremely important that your secretarial staff be included in the study if the results are to accurately represent the opinions of secretaries.

If by some chance you did not receive the questionnaires, or if they got misplaced, please call me right now, at 615-882-6703 and I will get another one in the mail to you today.

Thank you,

Rebecca (Becky) Jones
Technology and Adult Education

3rd Follow-up letter

Date

1"

Dear 2":

Several weeks ago, I wrote to you concerning your participation in a study of secretarial competencies and learning needs. As of today, I have not yet received the completed questionnaires. I believe your participation will prove valuable to the study, therefore, I am anxious to hear from you.

This study was undertaken because of the belief that an awareness of office skill competencies and perceived learning needs should be taken into account when planning continuing education programs or reviewing office technology curriculum at post-secondary institutions.

In the event that your questionnaires have been misplaced, replacements are enclosed.

Your cooperation is greatly appreciated.

Thank you,

Rebecca (Becky) Jones
Technology and Adult Education

VITA

Rebecca Ruth Bainer Jones was born in Pittsburgh, Pennsylvania on June 23, 1954. She graduated from Dover High School in Dover, Ohio in 1972. In 1976, she received a Bachelor of Arts degree in Communications from Geneva College in Beaver Falls, Pennsylvania.

She is currently employed at the State Area Vocational-Technical School in Harriman, Tennessee. She has served as Inservice Co-ordinator for support staff programs at the East Tennessee Vocational-Technical School's annual inservice for two years.

Ms. Jones has taught business technology courses as well as basic computer and related business software training for private industry as well as the State Area Vocational-Technical School and Pellissippi State Technical Community College. She is a member of Women in Higher Education in Tennessee.

She was awarded the Master of Science degree in Technological and Adult Education in December, 1991.