To the Graduate Council:

I am submitting herewith a thesis written by Vickie Elaine Johnson entitled "Tasks Performed by Airline Terminal Office Personnel." I recommend that it be accepted in partial fulfillment of the requirements for the degree of Master of Science, with a major in Business Education.

Anthony Porreca, Major Professor

We have read this thesis
and recommend its acceptance:

Accepted for the Council:

Vice Chancellor
Graduate Studies and Research

TASKS PERFORMED BY AIRLINE TERMINAL OFFICE PERSONNEL

A Thesis

Presented for the

Master of Science

Degree

The University of Tennessee

Vickie Elaine Johnson

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It is the hope of the writer that the findings and conclusions of this study will prove helpful to others interested in airline terminal office work.

Many people have taken time to work with me in preparing this study. Gratitude is expressed to my graduate committee composed of Drs. Anthony Porreca and Jack Stallard and Professor George Wagoner, who have provided guidance and constructive criticism during the planning and writing of this thesis.

Also appreciated is my family who has supported and encouraged me, especially my mother; my sister, Rose Ann; my brother, Dwight; and my husband, Bill. I consider myself blessed to have family and friends who genuinely care.

ABSTRACT

The problem of this study was to identify airline terminal office job tasks in large and small offices, airline office workers' perceptions of tasks performed, and the basic components which constitute tasks performed by airline terminal office personnel.

Office employees of United Air Lines, American Airlines, and Delta Air Lines were interviewed at both a large and small air terminal. Profile data, task data, and task component data were reported for 35 airline terminal office employees.

Airline terminal office employment appears to have a high retention rate among workers. General office employees appear to remain with airline employment in respective job classifications longer than secretarial and supervisory office employees. Airline terminal office employees tend to have at least a high school education and one year of college. Airline terminal office employees appear to perform more sales oriented tasks than any other type of task. The basic component of airline terminal office work appears to be communication with others.

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CHAPTER I

INTRODUCTION

Railroads no longer dominate the transportation scene. Technology has advanced into the air transportation age. Today, one of the fastest growing sectors of transportation is the scheduled airline industry. Over 39,000 new jobs were created during the 1960's in the airline industry due to the use and operation of jet aircraft. Close to 100,000 jobs were created as a result of airlines investing in computerized equipment.[1] With an increased expansion of the Civil Aeronautics Board granting new air routes to airlines, growth in the demand for air carrier service, and the decline of intercity railroad passenger service have led to an increase in the United States scheduled airline industry.[2] People traveling in the United States and abroad are very dependent on the convenience of the scheduled airline industry. In order to function efficiently, airlines rely strongly on qualified air and ground personnel. Educational training for these positions is a necessity.

Probably no other industry has greater appeal for potential workers as a place of employment than the airlines. The urge to fly and the romance related to flying offer a great appeal.[3] Airline

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[1] Encyclopedia of Careers and Vocational Guidance: Planning Your Career, 2 vol. (Garden City, New York: Doubleday and Co., 1967), 1:91.

[2] Robert C. Lieb, Labor in the Transportation Industries (New York: Praeger Publishers, 1974), p. 7.

[3] Joseph L. Nicholson, Air Transportation Management, Its Practices and Policies (New York: John Wiley and Sons, 1951), p. 250.

personnel usually receive annual flying passes and make reasonably good salaries. In 1972 non-supervisory airline employees earned an average of $13,921, which is about twice the average for all non-supervisory workers in private industry and farming. The average beginning salaries of clerical workers such as ticket salesmen are $650 a month.[4]

In 1960 there were 35,440 office employees working for airlines in the United States. In 1965, 44,162; in 1971, 58,114. Approximately 20 percent of all employees of scheduled airlines in the United States were office workers.[5] Most airline jobs require a high school education, and college studies are considered an asset, especially for employees seeking advancement. More information is needed on what courses should be taken to prepare persons interested in airline careers.

In recent years, much attention has been given to defining tasks performed by general office personnel and task components. The frequent procedure used in determining such tasks is the interview based on a sample of office personnel representative of each of the current Standard Industrial Classifications. Few research studies have been completed to study the tasks performed by a single Standard Classification (SIC) or a segment of a classification.

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[4] Occupational Outlook Handbook, Bulletin 1785 (Washington, D.C.: U.S. Government Printing Office, 1974), p. 732.

[5] Lieb, Labor In Transportation Industries, p. 44, quoting Air Transport, 1972 (Washington, D.C.: Air Transportation Association of America, 1972), p. 44.

The four Standard Industrial Classifications offering the greatest employment opportunities are Finance, Insurance, and Real Estate; Government; Manufacturing; and Transportation. Scalamogna suggests that course content and methods of teaching be designed to ". . . emphasize the nature of these industrial classifications."[6] Furthermore, he recommends that research be done

> . . . pertaining to the types of duties performed in . . . each of the industrial classifications that offer the greatest opportunities for initial employment. This type of research would determine whether or not the duties performed by beginning office workers in a particular industrial classification differ from those performed in other industrial classifications.[7]

The present study pertains to airline terminal office work--a segment of one of the industrial classifications offering the greatest office employment opportunities, namely, transportation.

I. STATEMENT OF THE PROBLEM

The problem of this study was to identify airline terminal office job tasks in large and small offices, airline office workers' perceptions of tasks performed, and the basic components which constitute tasks performed by airline terminal office personnel.

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[6]Donald J. Scalamogna, "A Survey to Determine Office Positions Available and Knowledges and Skills Needed for Initial Employment of the High School Graduate with Recommendations for Updating the Business Education Curriculum" (Ed.D. dissertation, University of Houston, 1969), p. 241.

[7]Ibid., pp. 247-8.

II. QUESTIONS TO BE ANSWERED

In order to solve the problem of this study, the following questions should be answered:

1. What is the personal information profile of interviewed airline terminal office personnel?
2. What job tasks are performed by airline terminal office personnel?
   a. Are airline terminal office tasks similar in small and large airline terminal offices?
   b. Do similarities of airline terminal office tasks grouped in business function clusters exist among different job classification groups?
   c. What are the airline office worker's perceptions of job tasks relative to consequences, change, and frequency?
3. What are the basic components and supportive components of airline terminal office job tasks?

III. RATIONALE FOR THE STUDY

The findings reported in this study might assist vocational office education instruction and general business classes to demonstrate the relationship of general office work tasks to careers in airline office work. Airline office work could be demonstrated to students using air careers as a motivational tool to stimulate business and

office skill development. As a result of this study, the identifying of airline terminal office tasks could provide new instructional sequences in secondary and post-secondary business education curricula.

> An occupational task which, because of its expected motivational value, can be used as the vehicle for more general learnings. For example, we view the tasks of a reservation clerk in an airline . . . as providing potentially exciting tasks to be learned by some students. These tasks can be used as a vehicle to develop oral and written communication, computation, and social roles as they relate to customers and associates. These tasks may also contribute economic behaviors related to transportation as an industry and an individual's potential role therein.[8]

Airline office office work is a career field that can serve to stimulate students' learning in other areas. Students' interests and motivation are centered on appealing careers.

IV. DELIMITATIONS

The delimitations of this study were as follow:

1. Lack of availability of a cross section of airline terminal office employees:--The uniqueness of airline terminal office work required that the interviewees were those terminal employees available for interview in each of the job classifications.

2. Tasks not restricted to any one job classification group:--The cross-utilization of airline terminal office employees prompted

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[8]Frank W. Lanham et al., Development of Performance Goals for a New Office and Business Education Learnings System (Columbus: Ohio State University, 1970), p. 12.

the researcher not to restrict tasks to any one job in a job classification group.

3. Combined business functions in clusters instead of individual business functions:--The job tasks were classified by the researcher according to business functions (similar to the method of classifying tasks used in the NOBELS study). Related business functions were then grouped in clusters.

4. Employee perceptions used rather than employer/employee perceptions:--The interview instrument used in this study was a modified version of the interview instrument used in the NOBELS study. Because of the NOBEL finding that basic tasks identified by supervisors and employees were similar, tasks performed by airline terminal office employees were based on the perceptions of the employees interviewed.[9]

5. Limited geographic selection of terminals:--The geographical setting of the study prompted the use of United Air Lines, American Airlines, and Delta Air Lines employees as interviewees in the collection of airline terminal office employee data for the present study. United Air Lines, American Airlines, and Delta Air Lines, rank first, fifth, and thirteenth respectively among the 25 largest general transportation companies in the United States.[10]

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[9] Ibid., p. 35.

[10] "25 Largest Transportation Companies," Business World for Women, 8 (December 1974): 57.

V. DEFINITION OF TERMS

The following are definitions of important terms used in this study:

Airline Terminal Office Personnel refers to persons performing office tasks (both supervisory and non-supervisory) at an air terminal such as ticket agents, gate agents, secretaries, and station agents.

Basic Component refers to a job task component which composes five percent or more of an employee's total job time.

Business Function refers to an expected or required activity of business.

Business Function Cluster refers to a group of related or similar business functions.

Change refers to an alteration in performance.

Component refers to a specific activity which utilizes special skills, knowledges, or techniques. One or more components comprise a job task.[11]

Consequence refers to a result affecting the operation of an airline terminal office.

Frequency refers to the relative occurrence of a task being performed within the span of one work month.

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[11]Lawrence W. Erickson, Basic Components of Office Work--An Analysis of 300 Office Jobs, Monograph No. 123 (Cincinnati: South-Western Publishing Co., 1971), p. 2.

Job Classification refers to a work title or position held by an airline terminal office employee.

Job Classification Group refers to a unit of related job classifications.

Large Airline Terminal refers to an air terminal which has at least 75 daily scheduled airline flights.

Scheduled Airline refers to an airline which has a federal government permit to operate frequently scheduled flights over specific routes.

Small Airline Terminal refers to an air terminal which has less than 75 daily scheduled airline flights.

Standard Industrial Classifications refer to the titles which the United States Department of Office Management and Budget uses to group the industries which operate in the United States. The most current SIC's include: Agriculture, Forestry, and Fishing; Mining; Construction; Manufacturing; Transportation, Communications, Electric, Gas, and Sanitary Services; Wholesale Trade; Retail Trade; Finance, Insurance, and Real Estate; Services, Public Administration; Nonclassifiable Establishments.[12]

Supportive Component refers to job task components which compose less than 5 percent of total job time.

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[12]U.S. Office of Management and Budget, Standard Industrial Classifications Manual, 1972, pp. 5-7.

Task refers to a specific assignment having an identifiable end result.[13]

VI. ORGANIZATION OF THE STUDY

The present study is divided into five chapters, a Bibliography and Appendices. Chapter I includes the statement of the problem, rationale of the study, definition of terms, delimitations of the study, and organization of the study.

Chapter II includes a review of related literature. Chapter III includes procedures of the study.

Chapter IV presents the analysis of data gathered, and Chapter V presents findings, conclusions and recommendations drawn from the study. The Bibliography includes only the references cited in the study. Appendix A includes a list of schools offering aviation administration programs. Appendix B includes a copy of the letter requesting permission to interview employees. Appendix C includes the interview form.

CHAPTER II

REVIEW OF RELATED LITERATURE

Research related to tasks performed by office workers is not a new concept. Tasks of office workers in the United States were analyzed as early as the 1920's. During the 1920's, the Job Analysis and Information Section, Division of Standards and Research of the Unites States Government Department of Labor, conducted several studies. The Department of Labor studies resulted in job descriptions for many occupations in specific trades and industries, including clerical employees.[1]

In a review of literature on office task analysis, Berry[2] found that more than 200 masters' theses and doctoral dissertations between 1950-61 were related to general office assignments and/or practice instruction. Many of these studies involved the interview for job tasks performed by office employees from each of the then current Standard Industrial Classifications. Transportation office employees were often included in general office samples, but an in-depth study of transportation office job tasks in particular has not been conducted.

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[1]Thelma M. Potter, An Analysis of the Work of General Clerical Employees, Contributions to Education, No. 903 (New York: Bureau of Publications, Columbia University, 1944), p. 10, citing United States Department of Labor Bulletins under the general series title of "Description of Occupations."

[2]Doris A. Berry, "The Role of Office Practice Instruction in the Training for General Office Assignments" (Ed.D. dissertation, Indiana University, 1963), p. 10.

Because the airline industry has developed within the last 75 years, having had its start in the early 1900's, most data pertaining to transportation office job tasks deal with employees of other transportation industry forms, such as the railroad industry. Scalamogna[3] shows transportation as one of the four industrial classifications offering the greatest office employment opportunities for new workers.

No research has been reported in the research literature which specifically relates to tasks performed by airline terminal office personnel. Therefore, the purpose of the review of literature is to show relatedness of existing publications and related studies. The related literature appears in the following categories: Airline Publications, Research Studies, and Curricular Publications.

I. AIRLINE PUBLICATIONS

The airline industry was initiated in the early 1900's. In 1914 airplane passenger service was in operation but on a small scale basis. Airlines, as commonly known today, were nonexistent. In 1918 Congress allotted $100,000 to the Post Office Department for mail experiments,[4]

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[3]Donald J. Scalamogna, "A Survey to Determine Office Positions Available and Knowledges and Skills Needed for Initial Employment of the High School Graduate with Recommendations for Updating the Business Education Curriculum" (Ed.D. dissertation, University of Houston, 1969), p. 241.

[4]Charles Kelly, Jr., The Sky's the Limit (New York: Coward-McCann, 1963), p. 32.

which began to draw the attention of U.S. citizens toward the air industry and its, seemingly, infinite possibilities.

The "Air Commerce Act" of 1926 brought organization and regulation to the air industry.[5] In 1938 passage of the "Civil Aeronautics Act" organized scheduled airlines as a public service industry.[6] Thus, Congress dedicated the airlines to the public service.

Since 1938, airlines have grown into the domestic and international system known today. Domestic scheduled airlines flew 5,782 passengers in 1926; in 1961, they provided service for 58,434,872 people.[7]

The airline industry has progressed since 1926. The three airlines selected for participation in the present study were among the first scheduled airlines in the industry.

American Airlines grew from what was originally an aviation oriented holding company titled AVCO. AVCO carried mail for the government. In 1929 AVCO merged with Southern Air Transport. In the late 1930's American purchased American Export Airlines, AMEX, and with the purchase, American Overseas Airlines became a division of American Airlines.

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[5]U.S. Department of Transportation, "Federal Aviation Administration" (1971), p. 1.

[6]Encyclopedia of Careers and Vocational Guidance: Planning Your Career, 2 vol. (Garden City, New York: Doubleday and Co., 1967), 1:88.

[7]Ibid., p. 61.

American led the airline industry by initiating several innovative ideas. It was the first airline to (1) offer sleeper flights, (2) offer credit card service, (3) carry 100 million ton miles of freight in a single year, and (4) carry 100 million passengers. American was also the first airline to introduce a reduced-fare plan for young people, and the first to operate a wide-bodied jet in commercial service. American ranked first in the airline industry from 1940 until 1960 when United Air Lines merged with Capitol Airlines.[8]

In 1929 Delta Air Lines inaugurated passenger service with 90-mile-per hour travelaires from Dallas, Texas, to Jackson, Mississippi. Delta had served the South as the world's first crop dusting organization--Huff Daland Dusters, a division of Huff Daland Manufacturing Company. The dusting organization broke from the parent company in 1928 to become Delta Air Service. In 1930 the name changed to Delta Air Corporation and later to Delta Air Lines, Incorporated. Mergers proving helpful to Delta's growth included: Chicago and Southern Air Lines, 1953; Northeast Airlines, 1972. Delta's total employment as of July 1, 1973, had grown to 27,500.[9]

United Air Lines has its roots in the 1920's when Bill Boeing started the first private commercial mail service in the Unites States. United Aircraft and Transportation Corporation was formed when Pratt

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[8]Kelly, Sky's the Limit, p. 212.

[9]"This is Delta" (Atlanta: Delta Airlines, 1974), pp. 12-13.

and Whitney Tool Plant, Boeing Airplane Factory, and Boeing Air Transport merged.[10] Later, the Hamilton Propeller Company, the Standard Steel Propeller Company, and Sikorsky Airplane Company were added to the family.

United was the first airline to fly transcontinental direct from San Francisco to New York.[11] Increased routes as granted by the Civil Aeronautics Board helped United in growing. Through holding companies, concentrations of capital became available to assist in the consolidations of existing fragmentary routes into national airline systems.[12]

The Federal Aviation Administration (FAA) published a brochure in 1970 describing some typical jobs in aviation. Some of the "typical" airline jobs mentioned in the brochure were: ground radio operator, reservation agent, airline stewardess or steward, passenger service agent, sales representative, ticket agent, baggage handler, aircraft fueler, teletypist, ramp planner, and air cargo handler.[13] FAA also has information available on aviation jobs in the manufacturing of aircrafts, state and federal government agencies, and airports.[14]

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[10]Kelly, Sky's the Limit, p. 54-58.

[11]Ibid., p. 64.

[12]Ibid., p. 66.

[13]U.S. Office of Education, "Student's Handbook AVIATION Where Career Opportunities Are Bright" (March 1970), pp. 14-17.

[14]Ibid., p. 3.

The Air Transport Association of America classified airline jobs as generally dealing with (1) flight operations, (2) maintenance and engineering, and (3) office and sales in its publication "The People of the Airlines."[15] Included in it are brief job descriptions of the more important airline jobs. Jobs which require only rudimentary skills are omitted. The office jobs listed are: distric sales manager, district operations manager (city manager, station manager), sales representative, reservations agent, ticket agent, passenger service agent, air freight agent, and ramp agent, also public relations representative, personnel representative, research analyst, programmer, and accountant.

Business machine operator, teletypist, switchboard operator, secretary, stenographer, typist, and file clerk are positions cited as being similar to those performed in other industries.[16]

American Airlines employs the following office workers at air terminals: reservation sales agent, airport operations agent, passenger operator, freight airport operations agent, key punch operator, console operator, programmer/systems analyst, and secretary. All positions require applicants to have a high school diploma and be 20 years of age. Several positions require two years of college or equivalent work experience. Only for keypunch operator, passenger service

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[15]"The People of the Airlines" (Washington, D.C.: Air Transport Association of America, 1975), p. 3.

[16]Ibid., pp. 4-6.

representative, and systems analyst is there a statement as to the work experience or college work desired.[17]

II. RESEARCH STUDIES

The research studies reviewed here report the analysis of tasks performed by general office personnel or general business office practice instruction.

Nobels Study

The NOBELS study is closely related to the present study in that it identified office tasks performed by general office workers. The main purpose of NOBELS was to identify, classify, and analyze tasks basic to current beginning and intermediate level office jobs primarily held by workers in the 16-24 age group who had earned less than the baccalaureate degree. The study was limited to this age group so as to provide basic data considered relevant to secondary business education.

A stratified sample of office workers for the NOBELS study was selected from the Standard Industrial Classifications. The following SIC interview cases were conducted: Service, 157; Public Administration, 220; Finance, Insurance, Real Estate, 253; Manufacturing, 377; Agriculture, 28; Transportation, 97; Wholesale and Retail Trade, 100.

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[17]"The Most Non-Stops to Success" (Dallas: American Airlines, 1975), pp. 7-22.

Approximately eight percent of the employees interviewed were from the SIC Transportation.[18] Office task data were collected from 1,253 office workers and their supervisors. According to the 1967 Standard Industrial Classifications Manual, transportation as a classification refers to railroad, local and suburban passenger, deep sea water (foreign and domestic), and air transportation industries.[19]

The NOBELS interview instrument secured data concerning the basic tasks performed by an employee, weighting factors of importance. Information concerning two task-related and two interaction critical incidents as observed in the employee's completion of tasks were secured.

The NOBELS study identified general office work tasks through use of the interview technique. The employee was asked to supply various types of personal data such as age, sex, job classification, and education completed. An employee was also asked to identify the basic tasks he/she performed on the job and to list the steps of performance. The questionnaire used in the NOBELS study was used as a guide in preparing the questionnaire for this study. The major result of the NOBELS study was 375 general office work performance goals secured from basic task data collected through interviews.[20]

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[18]Frank W. Lanham et al, Development of Performance Goals for a New Office and Business Education Learnings System (Columbus: Ohio State University), p. 32.

[19]U.S. Department of Statistical Standards, Standard Industrial Classifications Manual, 1967, p. 212.

[20]NOBELS, p. 53.

The present study identified airline terminal office work tasks through use of the interviewee technique. Employees were asked to supply personal data, to identify the basic tasks they performed on the job, and to list the components which constitute job tasks. Job tasks were classified according to eight of the functional areas of performance used in the NOBELS study. In addition, related functional areas were grouped to form four business function clusters. the NOBELS study and the present study analyze tasks performed by office personnel.

The taxonomy used to identify, describe, and analyze the activities related to the information processing, task management, and employee interactions obtained in the NOBELS study was developed by Huffman. Eight hundred action verbs were organized in three domains: operating, inter-acting, and managing. Each domain has a primary and secondary domain. The taxonomy was developed so as to provide:

1. Systematic guidance for observation and analysis of office education,
2. Common language for describing office activities,
3. Basis for consolidating data from many locations and occupations, and
4. Basis for writing performance goals.[21]

Erickson supervised the portion of the NOBELS study conducted at the University of California at Los Angeles, which included 300

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[21]Harry Huffman et al., A Taxonomy of Office Activities for Business and Office Education (Columbus: Ohio State University, 1968), p. v.

interviews. Basic tasks were analyzed to identify the basic components of beginning and intermediate level office jobs. The UCLA study's SIC breakdown and number of interviews were: Mining, 13; Contract Construction, 0; Manufacturing, 53; Transportation and Public Utilities, 27; Wholesale and Retail Trade, 29; Finance, Insurance, and Real Estate, 37; Services, 48; Government 87; and Non-classifiable Conglomerate, 6.

Components basic to the performance of office tasks were determined after having analyzed the criteria included in each basic job task description. Estimates of time spent on each task helped establish time distributions for basic components.

The top ten basic components which comprised 5 percent or more of total job time are ranked in order of the frequency with which they occurred:

1. Communicating with Others,
2. Sorting, Filing, Retrieving,
3. Typewriting,
4. Checking, Verifying, and Computing,
5. Collecting and Distributing,
6. Operating Business Machines,
7. Operating Automatic Data Processing Equipment,
8. Taking Dictation,
9. Supervising, Planning, and Training, and

10. Analyzing Procedures and Flow Charting.[22]

The Erickson study describes the component breakdown of the office job tasks performed by the interviewees. The component breakdown is essentially the same component breakdown used in the present study.

Scalamogna Study

Scalamogna[23] studied office positions available and the knowledges and skills needed by high school graduates to obtain initial employment. Transportation, Communications, and other Public Utilities (excluding railroads) was one of the Standard Industrial Classifications (based on the 1967 edition of the SIC Manual) included in Scalamogna's sample which represented 4.5 percent of the data collected.

Scalamogna found that areas of business offering the greatest opportunities for initial employment for high school graduates in beginning office positions included Finance, Insurance, and Real Estate; Government; Manufacturing; and Transportation. Scalamogna's study relates to the present study in that an attempt was made to determine skills and knowledges needed for office employment. Considering the office employment opportunities available in transportation, Scalamogna's

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[22]Lawrence W. Erickson, Basic Components of Office Work--An Analysis of 300 Office Jobs, Monograph No. 123 (Cincinnati: South-Western Publishing Co., 1971), p. 22.

[23]Scalamogna, "Survey to Determine Office Positions Available and Knowledges and Skills Needed for Initial Employment of the High School Graduate," p. 220.

study also justifies further research pertaining to airline terminal office job task components.

Frame Study

The purpose of a study completed by Frame[24] in 1971 was to determine the existing relationships between office tasks performed by first- and second-year office employees and by high school students enrolled in vocational office education courses.

Frame selected 166 office employees with less than two years of office work experience, who were formerly enrolled in Arizona public high school office education courses approved by Arizona's State Department of Vocational Education and 448 currently enrolled students to complete questionnaires. The questionnaire involved the rating of the frequency with which 600 office tasks were performed.

The 1967 Standard Industrial Classifications were used to classify the industries represented in the study. Transportation was one of the SIC's used by Frame. Only 1.81 percent of the formerly enrolled office education students were office workers in the Transportation industry.[25] Frame's findings concerning tasks performed by office employees were as follows:

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[24]Terry M. Frame, "Relationship Between Tasks Performed by Office Employees and Office Education Students" (Ed.D. dissertation, Northern Illinois University, 1971), pp. 89-99.

[25]Ibid.

1. Eighty office tasks were found to be performed by significantly higher percentages of office employees than office education students. These tasks included mailing, filing, telephoning and communicating, clerical, and meeting and working with people.

2. Other tasks (119 total) such as typewriting, office machines and equipment operations, data securing, mathematics and financial and recordkeeping, were performed by higher percentages of current office education students than by office employees.

3. A total of 116 office tasks such as mailing, filing, telephoning and communication, clerical, and meeting and working with people were performed by significantly higher percentages of employees in related occupations than by current office education students who were preparing for employment in those occupations.

The data of Frame's study was similar to the data collected for the present study because it has implications for establishing priorities among activities included in office education courses. Frame suggests that attention be given to other data that might affect the needs of students in office task performance experiences.

Cook and Lanham Study

Cook and Lanham[26] conducted a study in 1966 to determine the current labor market for high school leavers--ages 16 to 21--as was

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[26]Fred S. Cook and Frank W. Lanham, "Opportunities and Requirements for Initial Employment of High School Leavers with Emphasis on Office and Retail Jobs" (Detroit: Wayne State University, 1966), p. 4.

reported by Detroit employers. Employers and recent graduates and drop-outs were interviewed at six-month intervals for one and one-half years, equaling three interviews in all.

Cook and Lanham found that the skills demanded by businessmen most often included typewriting, other business skills, shorthand, business machines, and retail education. The present study is similar to the Cook and Lanham study because an attempt was made to identify the tasks performed by airline terminal office personnel; and as a result, skills are identified which are needed for employment in airline office job classifications.

Berry Study

The role that office instruction has in preparing students for employment was researched by Berry,[27] who gathered data on the duties performed by general office workers, the qualifications (both general and preparatory) needed in performing the tasks, and job specifications. Data was obtained from office executives in 50 selected U.S. business firms, written job descriptions and specifications, and from professional literature. Information on course content, objectives, and units and levels of instruction relative to the nature of the office practice course were obtained from research and professional

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[27]Berry, "Role of Office Practice Instruction in the Training for General Office Assignments," pp. 200-214.

literature and from 50 teachers of office practice courses in 46 selected Indiana schools.

The data revealed eight major areas of general office activities. These were: communicating orally, calculating, duplicating, filing, handling mail, machine transcribing, recording and verifying, and typewriting. The office practice course on the secondary level generally includes 11 areas of activities. Eight areas were identical to the data obtained for general office activities. Three additional areas were: human relations and personal development, employment procedures, and general clerical practices and procedures. Teachers felt that office practice courses and general qualifications of future students probably will not be greatly affected by mechanization and automation. Office executives, however, felt that office mechanization and automation will help create an upgrading of technical qualifications for general office personnel in the next few years.

Berry reported that most skills obtained in office practice courses in Indiana public secondary schools can be learned during employment. Therefore, Berry concluded that the office practice course in its present state is not justified. Berry's study relates to the present study because data was gathered on the duties or tasks performed by office workers.

Noodell Study

Noodell completed research to determine the adequacy of high school office practice instruction for work in modern business offices.

Nebraska businessmen and public schools participated in Noodell's study. He found that clerical workers need both business training and a good general education and that automation is changing business office systems and routines. A definite need exists for instructional units on automation, human relations, office machines, and office procedures to be included in the office practice curriculum.[28] Noodell's study relates to the present study because data were obtained concerning changes affecting business routines and task performance.

III. CURRICULAR PUBLICATIONS

Eighteen colleges in the United States offer aviation management or aviation administrative studies.[29] The researcher surveyed the schools listed to review further the curricular offerings. One school was no longer in existence. Eleven of the remaining 17 schools responded. Of the schools responding, the business courses included in aviation management curriculums most often were: accounting, management, marketing, business law, economics, finance, electronic data processing, computer programming, and statistics.

Also, information was received on aviation education from the Federal Aviation Administration. The March 1973 "Directory of Aviation

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[28]Jack Noodell, "A Study to Determine the Adequacy of High School Office Practice Instruction for the Modern Business Office," Dissertation Abstracts, 28 (Ann Arbor, Michigan: University Microfilms, 1968), p. 3568.

[29]"Airport Management, A Profession" (Washington, D.C.: American Association of Airport Executives, 1975).

and Transportation Majors and Curricula Offered by Colleges and Universities" contained a listing of schools offering aviation administration degrees,[30] Appendix A.

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[30] U.S. Department of Transportation, "Directory of Aviation and Transportation Majors and Curricula Offered by Colleges and Universities" (March 1973), pp. 4-7.

CHAPTER III

PROCEDURES

The problem of this study was to identify airline terminal office job tasks in large and small offices, airline office workers' perceptions of tasks performed, and the basic components which constitute tasks performed by airline terminal office personnel.

The station managers of American, Delta, and United Airlines at the selected stations were notified about the possibility of interviewing members of their office staff for the study. A copy of the letter sent is included in Appendix B. All station managers were notified again inquiring as to what dates would be convenient for the employee interviews. These interviews were scheduled for completion.

I. INTERVIEW TECHNIQUE

The present study required the interviewee's verbal description of what tasks were performed on the job. The data collected in these interviews provided the descriptions used to identify and analyze the basic components of airline terminal office work tasks.

Thirty-five interviewees of air terminal office personnel were used in this study.

Air Terminals

The data reported in this study is based on information received through interviewing the following airline office workers. The airlines used in this study were:

American Airlines
  Knoxville Terminal
  Nashville Terminal

Delta Airlines
  Knoxville Terminal
  Atlanta Terminal

United Air Lines
  Knoxville Terminal
  Atlanta Terminal

The Knoxville airport was considered to be a small airport. Its total daily scheduled flights was approximately 50. The Atlanta airport was considered to be a large terminal for its total daily scheduled flights was approximately 1,000. United Air Lines' and Delta Air Lines' terminal offices were used at both the Knoxville and Atlanta terminals. American Airlines' office workers were interviewed at the Knoxville terminal. The next largest air terminal that had scheduled flights for American Airlines within the central, southeast region was the Nashville air terminal. Therefore, American Airline office employees were also interviewed at the Nashville air terminal. Approximately six office workers of each airline were interviewed at the terminals already cited. Supervisory and non-supervisory personnel were interviewed.

The number of airline office personnel interviewed at the selected terminals were: American Airlines--Knoxville 5, Nashville 8; Delta Air Lines--Knoxville 7, Atlanta 6; United Air Lines--Knoxville 5, Atlanta 4. Personnel of each of the selected airlines were interviewed at both a large and a small terminal to receive adequately sampled employee task data from large and small terminals. Table I shows the distribution of the sampled interviews.

TABLE 1

DISTRIBUTION OF INTERVIEWS

Airline Terminal Offices	Secretarial Office Jobs			General Office Jobs			Supervisory Office Jobs		
	Employed	Interviewed	Percent	Employed	Interviewed	Percent	Employed	Interviewed	Percent
Small Air Terminals*									
Knoxville American	1	1	100	9	3	33.3	2	1	50.0
Knoxville United	1	1	100	8	4	50.0	6	---	---
Knoxville Delta	1	1	100	17	5	29.4	2	1	50.0
Large Air Terminals**									
Nashville American	4	3	75	21	3	14.3	6	2	33.3
Atlanta United	5	---	---	39	---	---	22	4	18.0
Atlanta Delta***	4	1	25	254	2	0.8	32	3	9.4

*Less than 75 scheduled airline flights
**More than 75 scheduled airline flights
***The large number of general office jobs at the Delta Airline terminal in Atlanta was due to Delta's home office being located in Atlanta. At each home office airline terminal an exceptionally large number of employees will be employed in general office jobs.

II. DEVELOPMENT OF THE INSTRUMENT

An interview form similar to the NOBELS[1] study interview form was suitable for airline terminal office work tasks and was consistent with the problem of this study. The interview form, Appendix C, included the following data:

1. Name, sex, age,
2. Job title held by office worker,
3. Length of service with an airline,
4. Other job titles held and length of time,
5. Employment with other airlines and length of service,
6. Work experience outside the airline industry,
7. Education and major(s),
8. Tasks performed and percentage of job time spent on various tasks,
9. Components of job tasks and percentage of time devoted to various components which compose job tasks listed,
10. Consequences of not performing tasks properly,
11. Changes in tasks and causes of change,
12. Frequency of performing a task during the course of an average work month,
13. Ranking of tasks according to difficulty, and

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[1]Frank W. Lanham et al., Development of Performance Goals for a New Office and Business Education Learnings System (Columbus: Ohio State University, 1970), p. 306.

14. Nature of a task--either supervisory, routine (non-supervisory) or a combination of both.

Items 8-13 are somewhat similar to questions included in part of the NOBELS questionnaire. Item 14 was added to the questionnaire of this study to gather data concerning the nature of the tasks performed, whether supervisory or non-supervisory. The nature of a task being classified as supervisory, non-supervisory, or a combination of both was assumed to be based completely on the perception of the interviewee. Items 1-6 were asked in order to gather data on an employee's work and educational background.

III. PILOT STUDY

The pilot study sample consisted of six interviews conducted with United Air Lines office employees at the Knoxville terminal. The interviewees included station manager, secretary, two customer service agents, and two station agents. The pilot study proved that the instrument was workable in obtaining the information desired. The pilot study showed that station managers were not good candidates for interviews to obtain information concerning tasks performed by airline terminal office personnel because the tasks performed by a station manager were management oriented, not office worker tasks. The pilot study also showed that interviews required 20-30 minutes each as compared to the 10-15 minutes originally scheduled.

IV. PRESENT STUDY

The main study was conducted during March and April of 1975. Personal profile, job task, and job taks component data were obtained using the interview technique. Sample profile data were analyzed. A scheme of business functions similar to the scheme used in NOBELS[2] was adopted for classifying the tasks of airline office terminal work according to major functional areas. These areas are: accounting/computing, personnel, production, purchasing, shipping and receiving, sales and client related, stenographic and other communications, and other services. Related business functions were grouped in clusters of business functions. Task data grouped in clusters of business functions was compared for small and large terminal offices. Basic and supportive components of each task were also analyzed. A component identification method similar to the method used by Erickson[3] for the NOBELS study was implemented.

As was done in the NOBELS study, the data analyzed for the present study include data from the pilot and main study data.[4] Data was collected from 30 interviews in the main study and five from the pilot study. A total of 31 interviews were conducted for the main study, one

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[2]Ibid., p. 43.

[3]Lawrence W. Erickson, Basic Components of Office Work--An Analysis of 300 Office Jobs, Monograph, No. 123 (Cincinnati: South-Western Publishing Co., 1971), p. 22.

[4]NOBELS, p. 25.

of which was not considered suitable due to the supervisory position of the interviewee. A total of six interviews were conducted for the pilot study, one of which was not suitable for analysis due to the interviewee's administrative position. The analysis of the data included 35 airline terminal office jobs interviews, 31 main study interviews and five pilot study interviews, on which the findings of the study are based.

CHAPTER IV

ANALYSIS OF THE DATA

The problem of this study was to identify airline terminal office job tasks in large and small offices, airline office workers' perceptions of tasks performed, and the basic components which constitute tasks performed by airline terminal office personnel. Data collected in order to solve the problem of this study are described in Chapter IV. The data are reported as collected through use of the interview survey instrument in Appendix C. The data are presented in the order of questions to be answered. Data relative to profile information are presented first; job task data , second; basic components and supportive components data, third.

I. PROFILE DATA

The profile data obtained from interviewees was grouped and analyzed according to sex and job classification group.

Grouped According to Sex

Table 2 includes profile data of airline terminal office employees who were grouped according to sex. Thirty-five airline terminal office employees were interviewed. Thirty-one percent of the employees interviewed were women, and 69 percent were men. The range in ages was between 23 and 55 years. The mean age for females was 37.6 and for males was 40.4.

TABLE 2

PROFILE DATA OF AIRLINE TERMINAL OFFICE EMPLOYEES
GROUPED ACCORDING TO SEX

Date Gathered	Employees		
	Female	Male	Totals
Number	11	24	35
Percent of n	31	69	100
Age			
Mean	37.6	40.4	24-55
Range	23-54	39.5	23-55
Years in Present Job			
Mean	5.7	9.9	8.6
Range	1-17	1-30	1-30
Years with Present Airline			
Mean	12.4	17.6	16.0
Range	1-30	5-30	1-30
Other Jobs with Present Airline			
Mean	2	3	3
Range	0-5	0-6	0-6
Previous Employment with Other Airlines			
Number	2	4	6
Percent	18	17	--
Percent of n	6	11	17
Mean Years	3.0	1.8	2.2
No Previous Employment with Other Airlines			
Number	9	20	29
Percent	81.8	83.3	83.0
Percent of n	26	57	83
Previous Employment* with Other Industries			
Number	11	13	24
Percent	100	54	68
Percent of n	31	37	1
Mean No. Years	2	1	3
Mean Years	2.3	3.3	3

*Excludes military service.

The average number of years spent in present positions for men was 9.9, which was 58 percent greater than the 5.7 years for women. Time spent by women in present job titles ranged from 1 to 17 years, whereas, the range for men was 1 to 30 years.

The number of years working for present airlines ranged from 1 to 30, with a mean of 16 years. Male interviewees were with current employers approximately 5.2 years, or 30 percent longer than female interviewees. The range of years of service with present airlines was smaller (5 to 30 years) for men than for women (1 to 30 years).

Male interviewees held approximately three different positions or job titles excluding present job title during the years working with their current employers. Each of the females held approximately two different positions during the years working with their current employers. The range of other jobs held with present airlines was 0 to 6.

Seventeen percent of the interviewees, two females and four males, had previously been employed with another airline. The average number of years spent in service with other airlines was 3 years for females and 1.8 years for males, or a total average of 2.2 years. Eighty-three percent of the airline office personnel interviewed for this study were not previously employed with other airlines.

Sixty-eight percent of the interviewees (31 percent females and 37 percent males) were employed in other industries prior to working with their current employers. All female interviewees had previous work experience other than in the airline industry. Fifty-four percent of

the males had work experience in industries other than the airline industry. The average number of jobs outside the airline industry was one for the entire group, two for females, and one for males. The average number of years spent in positions that were not airline related was 2.3 for females, 3.3 for males, and 3.0 for the entire group.

Grouped According to Job Classification Groups

Fifteen different job classifications were represented by the interviewed airline terminal office employees. Table 3 presents related job classification grouped in three categories describing the nature of the work performed. The categories identified as job classification groups included secretarial office jobs, general office jobs, and supervisory office jobs. The secretarial job classification group included records clerk, secretary, and provisional office laborer. The general office job classification included ramp lift agent, customer service agent, senior customer service agent, station agent, and ticket agent. The supervisory job classification group included budget analyst, air freight supervisor, sales and service instructor, maintenance services manager, airport services manager, chief agent, and operations coordinator. Seven employees were in the secretarial job classification group, 16 employees were in the general job classification group, and 12 employees were in the supervisory job classification group. The seven secretarial airline terminal office employees interviewed, or 100 percent, were female. Three females, or 19 percent,

TABLE 3

PROFILE DATA OF AIRLINE TERMINAL OFFICE EMPLOYEES GROUPED ACCORDING TO JOB CLASSIFICATIONS

Data Gathered	Airline Office Job Classifications			
	Secretarial Office Jobs	General Office Jobs	Supervisory Office Jobs	Totals
Sex				
Female	7	3	1	11
Male		13	11	24
Age				
Mean	38	42	38	40
Work Experience with Present Airline Mean Years				
Present Airline	11	19	15	16
Present Job	6	11	4	8
Other Jobs	5	7	11	8
Other Industries	7	8	9	4
Education Mean Years				
Secondary	4	4	4	4
College	.5	-	2	1
Business School	-	-	-	0
Mean Time* Between High School and Employment with Present Airline	10	5	6	6

*Rounded off to the nearest whole number.

and 13 males, or 81 percent, worked as general office workers. One supervisory office worker, or 8 percent was female; and 11 supervisory office workers, or 92 percent, were male.

When grouped according to job classification, the mean age for secretarial office workers and supervisory office workers was 38 years; for general office workers, 42 years; and for the entire group, 40 years.

The average number of years of employment with the present airline was 16 years. For secretarial office workers, the average number of years employed with present airlines was 11 years, for general office workers the average number of years with present airlines was 19 years, and for supervisory office workers, the average number of years with present airlines was 15 years.

When grouped according to job classification, airline terminal office workers spent an average of eight years in their present job titles. Workers who remained in their present positions for the greatest average length of time, 11 years, were those workers holding general office jobs. Secretarial office workers were in their current positions for an average of 6 years, and supervisory office workers for 4 years.

When grouped according to job classification, an average of five years was spent in other jobs with present airline by secretarial office workers; seven years was spent in other jobs by general office workers; and eleven years was spent in other jobs by supervisory office

workers. For the entire group, the average number of years in other job classifications with current employers was eight years.

Twenty-four employees, or 69 percent, had work experience outside the airline industry. Seven employees, or 100 percent of the secretarial job classification group, had work experience outside the airline industry. Eight employees, or 50 percent of the general job classification group, and nine employees, or 75 percent of the supervisory job classification group had work experience outside the airline industry. All interviewees had at least a high school education. Twenty-seven of the interviewees, or 77 percent, majored in general curriculum in high school. Post-secondary educational experiences of the interviewees included time spent either in college or in business school. Secretarial office workers had an average of one year of college; general office workers, one year; and supervisory office workers, one year. Average time between completing high school and being employed with present airlines was six years--secretarial job classification group, ten years; general job classification group, five years; and supervisory job classification group, six years.

II. TASK DATA

Task data was analyzed according to business functions, job classifications, and job classification groups.

Task Data Grouped According to Business Function Scheme

The tasks performed by airline terminal office personnel were classified according to a scheme of business functions similar to that used in the NOBELS study. The eight business functions used were: accounting/computing, personnel, production, purchasing, shipping and receiving, sales and client related, stenographic and other communications, and other services (mail, file, etc.). Tasks representing related business functions were grouped in four clusters. The first cluster was identified as accounting cluster, which included accounting tasks and purchasing tasks. The second cluster of business functions was identified as sales cluster, which included production tasks, sales tasks, and shipping tasks. The third cluster of business functions was identified as personnel cluster, which contained only personnel tasks; and the fourth as stenographic cluster, which included stenographic and other communication tasks and other service tasks (mail, file, etc.). A total of 159 tasks were performed by airline terminal office employees.

Small and Large Air Terminal Offices

Table 4 reports 77 tasks according to business function clusters performed by 17 airline office employees at small terminals, which constituted 48.4 percent of 159 tasks performed. Eighty-two tasks, or 51.6 percent, were performed by 18 airline office employees at large terminals.

Table 4 reveals that 7 percent of the tasks performed were grouped in the accounting cluster, 58.5 percent of the tasks were

TABLE 4

FREQUENCY OF AIRLINE TERMINAL OFFICE TASKS
ACCORDING TO BUSINESS FUNCTIONS CLUSTERS

Tasks Grouped By Business Functions Clusters	Office Size				Totals	
	Small		Large			
	Frequency	% of n	Frequency	% of n	Frequency	% of n
Accounting	5	3.2	6	3.8	11	7.0
Sales	55	34.6	38	23.9	93	58.5
Personnel	5	3.1	23	14.4	28	17.5
Stenographic	12	7.5	15	9.5	27	17.0
Totals	77	48.4	82	51.6	159	100.0

grouped in the sales cluster, 17.5 percent of the tasks were grouped in the personnel cluster, and 17 percent were grouped in the stenographic cluster.

Five of the 11 tasks in the accounting cluster were performed by office employees at small terminals; six accounting tasks were performed by large terminal office employees. Fifty-five of the 93 tasks in the sales cluster were performed by small terminal office employees, 38 sales tasks were performed by large terminal office employees. Twenty-three of the 28 personnel tasks were performed by small terminal office employees, and five personnel tasks were performed by large terminal office employees. Fifteen of the 27 stenographic tasks were performed by small terminal office employees, and 12 stenographic tasks were performed by large terminal office employees.

Tasks Performed by Job Classifications and Job Classification Groups

Interviewees for this study represented 15 different airline terminal office job classifications. Related job classifications were combined to form three different job classification groups depicting the nature of the work performed by job classifications contained in the groups. The first group was the secretarial office job classification group which included work as a records clerk, secretary and provisional office laborer. The second group was the general office job classification group which included work as a ramp lift agent, customer service agent, senior customer service agent, station agent, and ticket agent. The third group was the supervisory office job

classification group which included work as a budget analyst, air freight supervisor, sales instructor, maintenance service manager, airport services supervisor, chief agent, and operations coordinator. Tasks performed by the interviewees were grouped in the four clusters of business functions: accounting, sales, personnel, and stenographic.

Table 5 reports data of the secretarial office workers. Thirty-three of the 159 tasks were performed by interviewees holding jobs in the secretarial job classification group. Nine percent or three tasks, performed by these airline office employees were grouped in the accounting cluster. Fifteen percent, or five tasks, were grouped in the sales cluster. Twenty-one percent, or seven tasks, were grouped in the personnel cluster; and 55 percent, or 18 tasks, were grouped in the stenographic cluster.

Table 6 reports data of the general office workers. Seventy-three of the 159 tasks were performed by interviewees holding job classifications included in the general job classification group. One percent, or one task, performed by these airline office employees was grouped in the accounting cluster. Eighty-four percent, or 61 tasks, were grouped in the sales cluster. Seven percent, or five tasks, were grouped in the personnel cluster; and 8 percent, or six tasks, were grouped in the stenographic cluster.

Table 7 reports data of the supervisory office workers. Fifty-three of the 159 tasks were performed by interviewees holding job classifications included in the supervisory job classification group.

TABLE 5

FREQUENCY OF TASKS PERFORMED BY
SECRETARIAL OFFICE WORKERS

Tasks Grouped by Clusters of Business Functions	Secretarial Job Classification Group			Total	
	Records Clerk	Secretary	Provisional Office Laborer	Frequency	%
Accounting					
Accounting Computing Tasks	--	1	1	2	6.0
Purchasing Tasks	--	1	--	1	3.0
Cluster SubTotals	--	2	1	3	9.0
Sales					
Production Tasks	--	--	--	--	--
Sales, Client Related Tasks	--	2	3	5	15.0
Shipping and Receiving Tasks	--	--	--	--	--
Cluster SubTotals	--	2	3	5	15.0
Personnel					
Personnel Tasks	1	5	1	7	21.0
Cluster SubTotals	1	5	1	7	21.0
Stenographic					
Stenographic and Other Communications Tasks	4	9	1	14	43.0
Other Services (mail, file, etc.) Tasks	--	4	0	4	12.0
Cluster SubTotals	4	13	1	18	55.0
Totals	5	22	6	33	100.0

TABLE 6

FREQUENCY OF TASKS PERFORMED BY GENERAL OFFICE WORKERS

Tasks Grouped By Business Function Clusters	General Job Classification Group					Total	
	Ramp Lift Agent	Customer Service Agent	Senior Customer Service Agent	Station Agent	Ticket Agent	Frequency	%*
Accounting							
Accounting Computing Tasks	-	-	1	-	-	1	1.0
Purchasing Tasks							
Cluster SubTotals	0	0	1	0	0	1	1.0
Sales							
Production Tasks	2	3	3	14	2	24	33.0
Sales, Client Related Tasks	3	6	11	8	7	35	48.0
Shipping and Receiving Tasks							
Cluster SubTotals	5	9	14	24	9	61	84.0
Personnel							
Personnel Tasks							
Cluster SubTotals	0	2	3	0	0	5	7.0
Stenographic							
Stenographic and Other Communications Tasks	-	2	1	-	-	4	5.0
Other Services (mail, file, etc.) Tasks							
Cluster SubTotals	0	4	1	0	0	6	8.0
Totals	5	15	19	25	9	73	100.0

*Percentages rounded off to nearest hundredth.

TABLE 7

FREQUENCY OF TASKS PERFORMED BY SUPERVISORY OFFICE WORKERS

Tasks Grouped By Business Function Clusters	Supervisory Job Classification: Budget Analyst	Air Freight Supervisor	Sales Instructor	Maintenance Services Mgr.	Airport Services Supervisor	Chief Agent	Operations Coordinator	Frequency	%
Accounting									
Accounting/Computing Tasks	1	-	-	-	1	2	-	4	7.0
Purchasing Tasks	1	-	1	1	-	-	-	3	6.0
SubTotals	2	0	1	1	1	2	0	7	13.0
Sales									
Production Tasks	1	1	1	3	8	4	-	18	34.0
Sales, Client Related Tasks	1	1	-	-	4	-	1	7	13.0
Shipping and Receiving Tasks	1	-	-	-	-	-	1	2	4.0
SubTotals	3	2	1	3	12	4	2	27	51.0
Personnel									
Personnel Tasks	2	-	1	2	9	2	-	16	30.0
SubTotals	2	0	1	2	9	2	0	16	30.0
Stenographic									
Stenographic and Other Communications Tasks	-	-	-	-	1	2	-	3	6.0
Other Services (mail, file, etc.) Tasks	-	-	-	-	-	-	-	-	---
SubTotals	0	0	0	0	1	2	0	3	6.0
Totals	7	2	3	6	23	10	2	53	100.0

Thirteen percent, or seven tasks, performed by these airline office employees were grouped in the accounting cluster. Fifty-one percent, or 27 tasks, were grouped in the sales cluster. Thirty percent, or 16 tasks, were grouped in the personnel cluster; and 6 percent, or three tasks, were grouped in the stenographic cluster.

Table 8 is a summary of the tasks placed in clusters of business functions according to job classification groups. Of the 159 tasks performed by the interviewees, 11 tasks, or 6.92 percent, were grouped in the accounting cluster. Ninety-three tasks, or 58.49 percent, were grouped in the sales cluster. Twenty-eight tasks, or 17.61 percent, were grouped in the sales cluster; and 27 tasks, or 16.98 percent, were grouped in the stenographic cluster.

Worker's Perceptions Relative to Consequences, Change, and Frequency

Airline office workers reported their perceptions of job tasks relative to consequences, change, and frequency. Airline office workers' perceptions of job tasks in relation to the consequences associated with the job tasks describe whether the worker felt that the consequences of not performing a task would be great, moderate, or little. Perceptions of job tasks relative to consequences are reported in Table 9. Tasks having great consequences were given a rating of 1; moderate consequences, a rating of 2; and little consequence, a rating of 3.

The mean consequences for the 158 tasks performed (consequences for one other services task was not indicated) was 1.41. A great

TABLE 8

SUMMARY OF BUSINESS FUNCTIONS TASK CLUSTER DATA
ACCORDING TO JOB CLASSIFICATION GROUPS

Business Function Task Clusters	Job Classification Groups			Total	
	Secretarial	General	Supervisory	f	% of n
Accounting Cluster	3	1	7	11	6.92
Sales Cluster	5	61	27	93	58.49
Personnel Cluster	7	5	16	28	17.61
Stenographic Cluster	18	6	3	27	16.98
Total	33	73	53	159	100.00

TABLE 9

PERCEIVED CONSEQUENCES OF NOT PERFORMING OFFICE TASKS CORRECTLY

Business Function	Consequence			
	Great (a)	Moderate (b)	Little (c)	Mean**
Accounting/Computing	6	1	---	1.14
Production	34	8	---	1.19
Sales and Client Related	32	13	2	1.36
Personnel	18	7	3	1.46
Purchasing	2	1	1	1.75
Shipping and Receiving	2	1	1	1.75
Stenographic and Other Communications	8	10	3	1.76
Other Services* (mail, file, etc.)	2	2	1	1.80
Totals	104	43	11	1.41

*One interviewee did not respond to the question asked concerning the frequency with which a task is performed.

**Mean computed using following equation: $\frac{(a \times 1) + (b \times 2) + (c \times 3)}{n} = \text{mean}$

consequence was reported for 104 tasks if improperly performed, 43 tasks had a moderate consequence, and 11 tasks had little consequence.

For the seven accounting computing tasks performed, the mean consequence for not performing the tasks correctly was 1.14. The mean consequence for completing incorrectly the 12 production tasks performed was 1.19. The mean consequence for completing incorrectly the tasks was as follows: sales tasks, 1.36; personnel tasks, 1.46; purchasing tasks, 1.75; shipping and receiving tasks, 1.75; stenographic and other communications tasks, 1.76; and other services tasks, 1.80.

Table 10 reports airline office workers' perceptions of job tasks in relation to change or anticipated change in the performance of the job tasks. Sixty-eight of the 159 tasks performed, or 42.8 percent were designated as "changing." The percentage of tasks performed indicated as changing were production tasks, 33.8 percent; sales and client related tasks, 30.9 percent; personnel tasks, 14.7 percent; stenographic and other communications tasks, 7.3 percent; accounting computing tasks, 5.9 percent; shipping and receiving tasks, 5.9 percent; and other services tasks, 1.5 percent.

Table 11 reveals task changes reported to be occurring or anticipated to occur in the near future. According to 26 interviewees, 65.37 percent of the change in task performance was attributed to mechanization of electronic or automated data processing equipment. Other forms of change in the manner in which some airline terminal office tasks are performed were mechanization of other office equipment,

TABLE 10

CHANGES IN AIRLINE TERMINAL OFFICE WORK TASKS

Business Function	Airline Office Tasks	
	Frequency of Change	Percent of Change
Production	23	33.8
Sales and Client Related	21	30.9
Personnel	10	14.7
Stenographic and Other Communications	5	7.3
Accounting/Computing	4	5.9
Shipping and Receiving	4	5.9
Other Services (mail, file, etc.)	1	1.5
Purchasing	--	--
Totals	68*	100.0

*Total number of tasks reported by airline office interviewees was 159.

TABLE 11

COMPARISON OF TYPES OF TASK CHANGE IN AIRLINE TERMINAL OFFICE WORK AND GENERAL OFFICE WORK

Type of Task Change	Airline Office*	
	Number of Responses	Percent
Mechanization		
Automatic Data Processing (ADP)	17	65.37
Other Equipment	3	11.54
Change in Need for Task	3	11.54
Change in Organizational Structure	1	3.85
Change in Customer	1	3.85
Change in Economy	1	3.85
Totals	26	100.00

*Twenty-six airline employees gave reasons for task change.

change in need for task, change in organizational structure, change in customer (his needs and temperament), and changes in the national economy.

Table 12 shows data of the frequency with which tasks were performed, whether tasks were performed with high, medium, or low frequency. High task frequency performance was designated as having a rating of 1; medium frequency, a rating of 2; and low frequency, a rating of 3. The mean for the frequency with which accounting computing tasks were completed was 1.29. The frequency mean for personnel tasks was 1.68. The production task frequency mean was 1.95. The mean for the frequency with which purchasing tasks were performed was 2.50. Mean frequencies determined for shipping and receiving tasks was 2.25; sales and client related tasks, 1.77; stenographic and other communications, 1.48; and, other service taks, 2.00. The overall mean for the frequency with which 158 tasks were performed by airline office employees was 1.78.

Airline terminal office employees interviewed were also asked to rank the tasks they perform, according to their difficulty. Reportable data was indeterminable. Also, airline office employees were asked to describe the nature of tasks they perform, whether those tasks were supervisory, non-supervisory, or a combination of both. Data obtained did not appear to depict the true nature of the 159 tasks performed and was, therefore indeterminable.

TABLE 12

FREQUENCY OF BASIC TASKS PERFORMED BY AIR TERMINAL OFFICE WORKERS

Business Function	Employee Responses (a) High	(b) Medium	(c) Low	Mean**
Accounting/Computing	6	--	1	1.29
Personnel	11	15	2	1.68
Production	18	8	16	1.95
Purchasing	1	--	3	2.50
Shipping and Receiving	1	1	2	2.25
Sales and Client Related	22	14	11	1.77
Stenographic and Other Communications	12	8	1	1.48
Other Services* (mail, File, etc.)	1	3	1	2.00
Totals	72	49	37	1.78

*One interviewee did not respond to the question asked concerning the frequency with which a task is performed.

**Mean computed using following equation: $\frac{(a \times 1) + (B \times 2) + (c \times 3)}{n}$ = mean

III. JOB TASK COMPONENT DATA

Airline employees were asked to describe the components or specific activities constituting their various job tasks. Task components generally refer to activities which cause an employee to utilize special skills, knowledges, or techniques. Basic components composing 5 percent or more of an employee's total job time were tabulated to determine the composition of the job task. Components were ranked according to their frequency of occurrence. Supportive components, less than 5 percent of an employee's total job time, were also tabulated and ranked according to their frequency of occurrence.

Basic Components of Airline Office Job Tasks

Table 13 reveals the ten highest ranking basic job task components. Components are listed in the order of their frequency of occurrence; there are some components which were performed by an equal number of workers. Office job components most frequently performed by airline terminal employees were: communicating with others, 100 percent; checking, computing, and verifying, 66 percent; supervising, planning, and training, 54 percent; and operating automatic data processing equipment, 31 percent. Sorting, filing, and retrieving and physical labor constituted 23 percent of the basic airline terminal office job components.

TABLE 13

BASIC AIRLINE TERMINAL OFFICE JOB TASK COMPONENTS
(COMPOSING FIVE PERCENT OR MORE
OF TOTAL JOB TIME)

Basic Component	Number of Workers	Percent
Communicating with Others	35	100
Checking, Computing, and Verifying	23	66
Supervising, Planning and Training	19	54
Operating Automatic Data Processing Equipment (ADP)	11	31
Sorting, Filing, and Retrieving	8	23
Physical Labor	8	23
Typewriting	6	17
Collecting and Distributing	4	11
Operating Business Machines (other than typewriter and ADF equipment)	2	6
Analyzing Procedures and Flow Charting	2	6

Basic Components of Job Tasks at Small and Large Terminals

Table 14 reveals the ten most frequently occurring basic components of work at small airline terminal offices. Some components were performed by an equal number of workers. Office job components most frequently performed by airline terminal employees were: communicating with others, 100 percent; checking, computing, and verifying, 71 percent; supervising, planning, and training, 47 percent; and physical labor, 41 percent. Operating automatic data processing equipment constituted 35 percent of the basic airline terminal office job components.

Table 15 reveals the 10 most frequently occurring basic components of work at small airline terminal offices. Some job components were performed by an equal number of workers. Office job components most frequently performed by airline terminal employees were: communicating with others, 100 percent; checking, computing, and verifying, 61 percent; and operating automatic data processing equipment, 28 percent. Typerwriting and sorting, filing, and retrieving constituted 17 percent of the basic airline terminal office job components.

Supportive Components of Airline Office Job Tasks

Table 16 reveals the supportive job task components. Components are listed in the order of their frequency of occurrence. There were some components which were performed by an equal number of workers. Several components reported as basic in some tasks were only supportive components in other tasks. Major supportive components include

TABLE 14

TEN MOST FREQUENTLY OCCURRING BASIC COMPONENTS OF AIRLINE OFFICE WORK ACCORDING TO TERMINAL SIZE--
SMALL AIR TERMINALS

Basic Component	Number of Workers	Percent
Communicating with Others	17	100
Checking, Computing, and Verifying	12	71
Supervising, Planning, and Training	8	47
Physical Labor	7	41
Operating Automatic Data Processing Equipment (ADP)	6	35
Sorting, Filing, and Retrieving	5	29
Typewriting	3	18
Collecting and Distributing	2	12
Operating Business Machines (other than typerwriter and ADP equipment)	2	12
Analyzing Procedures and Flow Charting	1	6

TABLE 15

TEN MOST FREQUENTLY OCCURRING BASIC COMPONENTS OF AIRLINE OFFICE WORK ACCORDING TO TERMINAL SIZE--
LARGE AIR TERMINALS

Basic Component	Number of Workers	Percent
Communicating with Others	18	100
Checking, Computing, and Verifying	11	61
Supervising, Planning, and Training	11	61
Operating Automatic Data Processing Equipment (ADP)	10	28
Sorting, Filing, and Retrieving	3	17
Typewriting	3	17
Collecting and Distributing	2	11
Analyzing Procedures and Flow Charting	2	11
Researching	1	6
Physical Labor	1	6

TABLE 16

SUPPORTIVE AIRLINE TERMINAL OFFICE TASK COMPONENTS
(COMPONENTS COMPRISING LESS THAN FIVE PERCENT OF
THE TOTAL TIME REQUIRED TO PERFORM A JOB)

Component	Number of Workers Reporting Component Appearance
Typewriting	6
Checking, Computing, Verifying	6
Sorting, Filing, Retrieving	4
Collecting Money	3
Physically Laboring	3
Operating Business Machines (other than typewriter and ADP equipment)	2
Operating Automatic Data Processing Equipment	2
Reading	2
Analyzing Procedures and Flow Charting	2
Compiling	1
Depositing Money	1
Maintaining Mailing List	1
Dictation	1
Opening Station	1
Mailing	1
Supervising, Planning, Training	1
Maintaining Files	1
Researching	1
Parking Plane	1
Miscellaneous	1
Collecting and Distributing	1

typewriting and checking, computing, and verifying, which both appeared in jobs held by six workers.

CHAPTER V

FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS

The problem of this study was to identify airline terminal office job tasks in large and small offices, airline office worker's perceptions of tasks performed, and the basic components which constitute tasks performed by airline terminal office personnel.

I. FINDINGS

The findings of this study were:

Profile Data Analysis

1. The average number of years spent in present positions or job classification for men was 9.9 years, which was 58 percent greater than the 5.7 years spent in present positions by women. Males were with current employers 30 percent longer than females.

2. Eighty-three percent of the airline office personnel were not previously employed with other airlines.

3. All female employees and 54 percent of the male employees had previous work experience other than in the airline industry. Sixty-nine percent of the employees had work experience outside the airline industry.

4. All of the secretarial office workers were female. Eighty-one percent of the general office workers were male. Ninety-two percent of the supervisory office workers were male.

5. General office workers were employed with their current employers an average of four years longer than supervisory office workers and eight years longer than secretarial office workers. General office workers remained in their present positions an average of five years longer than secretarial office workers and seven years longer than supervisory office workers. Supervisory office workers had spent an average of six years longer in other job classifications with their current employers than secretarial office workers and four years longer than general office workers.

6. All employees had at least a high school education. The average amount of post secondary education held by employees was one year. Secretarial office employees had an average of one year of college, general office employees had an average of one year, and supervisory employees had an average of one year.

7. The average time between completing high school and being employed with present airlines was six years.

Task Data Analysis

8. The sales cluster, or 34.6 percent, constituted the largest percentage of tasks performed by small airline office terminals; at large airline office terminals, 23.9 percent of the tasks were within the sales cluster.

9. Tasks within the stenographic cluster performed by employees at small and large terminals were 7.5 percent and 9.5 percent, respectively.

10. Accounting cluster business functions performed by employees constituted 3.2 percent of tasks at small airline terminals and 3.8 percent of tasks at large airline office terminals, respectively.

11. The secretarial office workers performed 55 percent of their tasks within the stenographic cluster.

12. The general office workers performed 84 percent of their tasks within the sales cluster.

13. The supervisory office workers performed 51 percent of their tasks were within the sales cluster.

14. When rated as a great consequence of 1.0, a moderate consequence of 2.0, and little consequence as 3.0, the tasks having the greatest consequence if not peoperly performed were accounting/computing tasks with a mean of 1.14, production tasks with a mean consequence of 1.19, sales and client related tasks with a mean of 1.36, and personnel tasks with a mean of 1.46.

15. Airline office employees reported the following changes in performance of tasks: production tasks, which represented 33.8 percent of total tasks; sales and client related tasks, which represented 30.9 percent, and personnel tasks, which represented 14.7 percent.

16. The greatest change in airline terminal office tasks was mechanization of automatic data processing equipment.

Component Data Analysis

17. Basic components of airline terminal office work in the other of frequency were communicating with others; checking, computing,

and verifying; supervising, planning, and training; operating automatic data processing equipment (ADP); sorting, filing, and retrieving; physical labor; typewriting; collecting and distributing; operating business machines other than typewriter and ADP equipment; and analyzing procedures and flow charting.

18. Communicating with others was the only basic component reported as occurring in all the jobs performed by employees.

II. CONCLUSIONS

Based on the findings of this research, the following conclusions were made:

1. Airline terminal office employment appears to have a high retention rate among workers. General office workers appear to remain with airline employment and in a respective job classification longer than secretarial and supervisory office workers. Supervisory office employees tend to hold more job classifications while employed with an airline than secretarial and general office workers.

2. Male airline office employees remain in a job classification and work longer than female employees.

3. Secretarial airline office workers tend to be female, while general and supervisory airline office workers tend to be male.

4. Office employees appear to have work experience outside the airline industry prior to airline employment. Female employees possess more previous work experience outside the airline industry than do male employees.

5. Airline office employees tend to have at least a high school education. Most employees tend to have one year of college education. No difference in educational backgrounds of secretarial, general, and supervisory airline office employees was apparent.

6. Airline terminal office employees appear to perform more sales oriented tasks than any other type of work.

7. Although small and large airline terminal office employees perform similar tasks, small offices appear to have more work relative to sales and stenography, and large offices appear to have more work relative to personnel and sales.

8. Changes are occurring in airline terminal office work, and these changes appear to be attributable to automation.

9. The basic component of airline terminal office work appears to be communication with others, followed by checking, computing, and verifying.

III. RECOMMENDATIONS

The findings and conclusions serve as a basis for the following recommendations:

1. Development of communication skills should be emphasized in secondary and post-secondary level office curricula.

2. Office education curricula might include some career awareness for airline terminal office work. Both male and female students would be attracted to this career field. Tasks performed by airline

office workers appear to include accounting, sales, personnel, and stenographic tasks. Perhaps these areas of business should be emphasized in office education in addition to skill development.

3. Further research could be conducted to assess and project the needs of airline terminal office personnel for future curricular revision.

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APPENDICES

APPENDIX A

SCHOOLS OFFERING AVIATION ADMINISTRATION PROGRAMS

Other Nomenclature: Aviation Management/Administration (1), Aerospace Operations Management (2), Airport Operation/ Airport Management (3), Airline Operation (4), Airline and Air Cargo Management (5), Aircraft Maintenance Management (6), Travel Industry Management (7)

Degrees Available: A.A. or A.S., B.S., M.S., Ph.D.

Aviation Administration provides a unique interdisciplinary curriculum for the student whose interests range the boundaries of aviation knowledge. Such a program can combine the areas of industrial and business management, aviation transportation, and aerospace engineering. Courses may be offered in data processing, space sciences, technical writing, aviation law, and flight training at some institutions.

Institutions differ as to the division under which aviation administration programs are placed. Some are offered by business administration departments, others by colleges of engineering, and still others by departments of aviation or aerospace studies.

	DEGREE					
	Cert. Dipl.	Associate	Bachelor	Master	Doctor	Other
Alabama						
Auburn University			X			
Arizona						
Arizona State University			X			
California						
Cypress College		X				
Palomar College		X				
Pepperdine University			X			
University of California		X	X			
San Jose State College			X			
Colorado						
Metropolitan State College			X			

	DEGREE					
	Cert. Dipl.	Associate	Bachelor	Master	Doctor	Other
Delaware						
Wilmington College			X			
District of Columbia						
Washington Technical Institute		X				
Florida						
Broward Community College		X				
Florida Institute of Technology		X	X	X		
Fort Lauderdale University (AM)		X	X			
Manatee Jr. College		X				
Miami-Dade Jr. College		X				
Embry Riddle Aeronautical University		X	X			
St. Petersburg Jr. College		X				
Hawaii						
University of Hawaii			X			
Idaho						
Boise State College						X
Illinois						
Louis College			X			
Parks College		X	X			
Southwest College, City College of Chicago		X				
University of Illinois			X	X	X	
St. Louis University			X			
Indiana						
Indiana State University			X			
Iowa						
Parsons College			X			
Kansas						
Kansas Technical Institute		X				
Seward County Community College		X				

	DEGREE					
	Cert. Dipl.	Asso-ciate	Bache-lor	Master	Doctor	Other
Kentucky						
Kentucky State College		X				
St. Catherine College		X				
Louisiana						
Louisiana Technical University			X			
Northeast Louisiana University			X			
Massachusetts						
Aviation Careers Institute		X				
Worcester Jr. College						X
Maryland						
Catonsville Community College		X				
Minnesota						
Manakato State College		X	X			
Nebraska						
Chardron State College		X				
McCook College		X				
New Hampshire						
Nathaniel Hawthorne College		X	X			
New Jersey						
Mercer County Community College		X				
New York						
Dowling College			X			
Niagra University	X		X			
North Carolina						
Guilford Technical Institute		X				
Lenoir Community College		X				

	DEGREE					
	Cert. Dipl.	Asso-ciate	Bache-lor	Master	Doctor	Other
North Dakota						
Valley City State College		X				
The University of North Dakota			X			
Ohio						
Columbus Technical Institute		X				
Kent State University			X			
Oregon						
Southwest Oregon Community College		X				
Puerto Rico						
World University		X	X			
Tennessee						
Middle Tennessee University			X			
Motlow State Community College						X
University of Tennessee Space Institute				X		
Texas						
San Jacinto College		X				
Virginia						
Northern Virginia Community College		X				
Washington						
Big Bend Community College		X				
Green River Community College		X				
Central Washington State College			X			
Wisconsin						
Gateway Technical Institute		X				

APPENDIX B

LETTER REQUESTING PERMISSION TO INTERVIEW

January 22, 1975

Mr. Lee Moses
Manager of Station Operations
United Airlines
Hartsfield International Airport
Atlanta, GA 30320

Dear Mr. Moses:

I am a graduate student at the University of Tennessee. All graduate students working toward a Master of Science Degree are required to write a thesis on a topic which is related to their major field of study. As a Business Education major, I have chosen to do my research on common tasks performed by supervisory and routine airline terminal office personnel.

In order to make an accurate appraisal of what tasks are performed by airline terminal office personnel, I plan to interview

1. Office employees of American, Delta, and United Airlines working at a small- or medium-size air terminal.

2. Office employees of American, Delta, and United Airlines working at a large-size air terminal.

Could you tell me if it would be permissible for me to interview office personnel working for United Airlines at the Hartsfield International Airport? Also, I would greatly appreciate (if you decide to grant me permission to interview) suggestions as to what dates in March would be convenient for me to interview personnel at your offices in Atlanta.

Any assistance you can give will be welcomed.

Sincerely,

Vickie E. Johnson
Graduate Teaching Assistant
Department of Office Administration

APPENDIX C

INTERVIEW FORM

A D U

code 1 1 1

2 3 3

1. Name: _____ sex: _____ age: _____

2. Job title: _____

3. Date of initial employment: month _____ year 19____

4. a. Date present title was acquired: month _____ year 19____

   b. Other job titles held: _____, _____

   _____, _____, _____

5. a. Other airline employment? yes _____, no _____

   b. If yes, state job title: _____

   length of service: _____

6. a. Work experience outside airline industry? yes _____, no _____

   b. If yes, state major work experience: _____

   length of service: _____

7. Education:

   a. High school - year completed: 19____, major _____

   b. College - year completed: 19____, major _____

This question is concerned with basic tasks which constitute the central purpose of your job. Your basic tasks would include the most difficult tasks, the most time consuming tasks, and the tasks requiring the most responsibility.

Task List basic components of a job task (5% or more of total job time)	consequences (1, 2, 3)	changing yes/no	frequency: H/M/L	% of time spent	task difficulty (1-6)	supervising	routine	s & r
1								
2								
3								
4								
5								
6								

Indicate the following for each task:

A. Consequences: 1 - great, 2 - moderate, 3 - little

B. Changing: Yes or no (if yes, indicate how it is changing in the margin)

C. Frequency: H - high, M - medium, L - low

D. Percentage of time spent on a task

E. Task difficulty: 1 - 6 ranging from easiest to hardest

F. Supervisory: check mark if task is basically supervisory in nature

G. Routine: check mark if task is basically routine in nature

H. S & R: check mark if task is both supervisory and routine in nature

VITA

Vickie Elaine Johnson was born in Oak Ridge, Tennessee on February 4, 1952. She attended elementary schools in that city and was graduated from Oak Ridge High School in 1970. The following September she entered Tennessee Technological University, and in June 1974, she received a Bachelor of Science degree in Business Administration with a major in Business Education.

In the fall of 1974, she accepted a teaching assistantship at the University of Tennessee and began study toward a Master's degree. She received the Master of Science degree with a major in Business Education in August 1975. She is a member of the National Business Education Association, Delta Pi Epsilon, and Phi Delta Kappa.