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To the Graduate Council:

I am submitting herewith a thesis written by Vera Lelia Green entitled "An Occupational Survey of Businesses in Glynn County, Georgia, as a Basis for Business Education Curriculum Revision in the Public High Schools." 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.

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AN OCCUPATIONAL SURVEY OF BUSINESSES IN GLYNN COUNTY, GEORGIA, AS A BASIS FOR BUSINESS EDUCATION CURRICULUM REVISION IN THE PUBLIC HIGH SCHOOLS

A Thesis

Presented for the

Master of Science

Degree

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Vera Lelia Green

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ABSTRACT

The purposes of this study were (1) to conduct an occupational survey of businesses in Glynn County, Georgia, for determining office job opportunities available to high school business graduates, (2) to determine the requirements necessary to fulfill these positions, and (3) to evaluate, in light of the occupational survey, the existing business education curriculum in the two Glynn County high schools for possible revisions.

Data for this study were collected by questionnaires mailed to 180 selected business firms in Glynn County, Georgia. The criteria for selecting the businesses were as follows: (1) employed office workers, (2) represented the Glynn County employment area because of the varying size of the firms, and (3) represented a cross-section of the diverse types of businesses in Glynn County.

Of the 180 business firms surveyed, 151, or 83.9 percent, returned the questionnaires; and of the 151 returned questionnaires, 138, or 91.4 percent, were usable and served as the basis for the data presented in this study.

Major findings of the study are summarized as follows:

1. The 138 business employers indicated 410 office positions were available yearly to high school business graduates. Of this number, the most important group was the general clerical group which contained 130, or 31.7 percent, available positions.

2. The most popular office employment test given by the 138 participating business employers was a typewriting test. The minimum

straight copy speed requirements ranged from 30 to 75 words per minute with 50 words per minute the rate most often indicated.

3. The minimum speed required on shorthand tests ranged from 40 to 100 words per minute with 80 words per minute the rate most often indicated.

4. Spelling was the most prevalent weakness found in the training of high school graduates employed in office positions. Other abilities in which a deficiency in training was most noticeable were, in the order ranked: penmanship, written English, and spoken English.

5. Subjects which business employers thought students should study sometime in high school included spelling--the subject indicated by the greatest number of employers. Other subjects, in the order of rank, were: bookkeeping/accounting, business correspondence, general business, and penmanship.

6. Work experience programs was the activity which business employers thought should supplement the instruction in the high school business education program.

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CHAPTER I

THE PROBLEM

I. INTRODUCTION

Preparing students for the world outside the classroom is an unending task. Business educators must be knowledgeable of the changes taking place in the business community and must keep up-to-date with current office standards and entry-level requirements in order to determine if revisions are needed in the existing business education curriculum.

Good communication between businessmen and business educators is essential in the development of good vocational programs for high school students. When realistic business standards and requirements are known, they may be incorporated into meaningful learning experiences for students. Educators are then able to prepare students for gainful employment in the business community. The importance of continuous updating of curriculums is supported by Worthington in the following statements:

> Business education, like all of education, must be in a constant state of self-renewal. We cannot rest on our accomplishments of the past. We can no longer think in narrow traditional terms. Business education must change if it is to remain dynamic.[1]

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[1] Robert M. Worthington, "Current Development in Business and Office Education," Business Education Forum, XXVIII (November, 1973), p. 12.

In educating today's youth, vocational competency is the goal of business educators.[2] In order to provide effective vocational business education, an awareness of the needs and demands of business is essential. Business educators can develop an effective business education program by keeping informed of new business methods and procedures, new office equipment, current office standards, and entry-level requirements. The best source of this information is the business community.

The problem for this particular study is: What changes are needed in the business curriculum in the Glynn County, Georgia, high schools to meet the needs of local business employers?

II. PURPOSES OF THE STUDY

The purposes of this study were (1) to conduct an occupational survey of businesses in Glynn County, Georgia, for determining office job opportunities available to high school business graduates, (2) to determine the requirements necessary to fulfill these positions, and (3) to evaluate, in light of the occupational survey, the existing business education curriculum in the two Glynn County high schools for possible revisions.

To accomplish these purposes, answers to the following questions were sought:

1. What are the business occupational opportunities available to business education graduates of the Glynn County high schools?

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[2] James Houstman, "Competent Youth for the Offices of Tomorrow," The Balance Sheet, LII (March, 1971), pp. 250-251.

a. What are the classifications of the businesses?

b. What is the number of office employees?

c. What are the types of office positions?

2. What are the pre-employment practices of business employers?

a. What types of employment tests are given?

b. What agencies are used to obtain office employees?

c. What factors are important when considering applicants for office positions?

d. What factors are important when reviewing the high school records of prospective employees?

3. What are the selected job competencies recommended by business employers?

a. What are the speed requirements in typewriting and in shorthand?

b. What degree of preparation is recommended for business machines?

c. What filing systems are used?

4. What are the opinions of business employers concerning improvement of the business education program in the Glynn County high schools?

a. What competencies are lacking in the education of high school business graduates?

b. What business subjects do employers recommend for study by high school students?

c. What school activities should supplement the instruction in the high school business program?

III. NEED FOR THE STUDY

The Glynn County public school system, with administrative offices in Brunswick, Georgia, serves a school population of about 12,000 students in grades K through 12. On October 1, 1973, approximately 3,790 students were enrolled in grades 9 through 12; and approximately 1,430 of these students were enrolled in business courses. The business course enrollment represents 37.7 percent of the total enrollment figure for grades 9 through 12, which indicates considerable pupil interest in business education courses.[3] The total number of business teachers employed for grades 9 through 12 was eleven.

The preparation of students for placement in business offices is a major objective of vocational business education, and changes that occur in today's highly complex business world greatly affect this preparation.[4] To provide for the needs of local business firms, the business curriculum must be evaluated to determine whether it is meeting the job-preparation needs of the students. Therefore, the local business community's office requirements must be known. Concerning the need for evaluating the business education curriculum, Andrew DeCraene has the following to say:

> An essential factor in the evaluation of the effectiveness of a business education curriculum is a determination of what

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[3] Interview with R. E. Jonas, Assistant Superintendent of Schools, Glynn County, Georgia, November 20, 1973.

[4] Andrew DeCraene, "Evaluate Your Business Curriculum," The Balance Sheet, LI (November, 1969), pp. 106-107, 144.

> is being done in business . . . a survey of employers will provide the kind of evaluation that so often is needed.[5]

The community occupational survey has been recommended for the purposes of finding out the vocational opportunities in the community and the requirements for beginning office workers. Concerning the importance of the survey, DeCraene states:

> The study may reinforce previous findings, show current changes and differences in today's employment standards, reveal new findings, or point to apparent trends. . . . If students are to meet the demands of the modern office, business courses must be brought into harmony with the changes that have occurred and will occur in the business world.[6]

Rapid changes taking place in the business world show the need for readjustments in business education programs, and these needs and demands must be discovered and made known to business educators. According to Haines, an occupational analysis in business education is needed more today than ever before. Technological changes have brought about many new occupations and a need to examine occupations to determine how new tasks are performed and the standards required.[7]

Emphasizing the need for community surveys, Haines states:

> The need for occupational analysis exists more today than ever in business education. Technological changes give birth to new occupations, cause the death of others, and modify many. Yet, even with modest changes in business procedures there is need to examine jobs in the local community to determine how tasks are performed and the standards that must be maintained.[8]

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[5] Ibid.

[6] Ibid.

[7] Peter G. Haines, "The Occupational Analysis in Business Education," National Business Education Quarterly, XXXV (Winter, 1966-1967), p. 79.

[8] Ibid., p. 40.

B. W. Stehr also emphasizes the need for community surveys. Stehr believes that in order to be effective in preparing students for gainful employment, business education teachers must keep up-to-date with rapidly changing business practices and standards. Stehr believes that frequent contact with employers will help business education teachers in planning for their students.[9]

Concerning the benefits of occupational surveys, Spring believes good public relations between the school and the community are often brought about by a community survey. The results of a community survey will show if the business curriculum is satisfactory or needs revision.[10]

Because of changing conditions and changing patterns of employment, Sidney Boswell (Superintendent of Schools, Glynn County, Georgia) believes an occupational survey would be worthwhile every few years (see Appendix).

Further evidence of the need for community surveys is given by Martin who believes information received from surveys serves as a basis for updating the curriculum. According to Martin, community surveys should be conducted in order to determine local business practices, employment standards, and business machines in use.[11]

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[9]B. W. Stehr, "What Small Business Employers Expect of the New Employee," Business Education Forum, XV (April, 1961), p. 36.

[10]Marietta Spring, "Community Surveys Help the Business Teacher," The Balance Sheet, XLVII (December, 1965), pp. 161-162.

[11]Thomas B. Martin, "20 Ways to Build Good Business Community Relations," The Balance Sheet, LIII (October, 1971), p. 59.

Prior to this time there has been no business occupational survey made of Glynn County for the purpose of evaluating the business education curriculum.[12]

The National Vocational Education Act of 1963 has greatly influenced curriculum in secondary schools by providing a program of education for industry, agriculture, and other occupational areas.[13] The Act authorizes Federal grants to States to assist them to maintain, extend, and improve existing programs of vocational education, to develop new programs of vocational education, and to provide part-time employment for youths who need the earnings to continue their vocational training on a full-time basis. The Act provides that vocational education be offered in all kinds of institutions, including comprehensive high schools, and that education be provided to all kinds of people for all kinds of jobs.[14]

Not until after the passage of the Vocational Education Act in 1963 was business and office education considered a part of vocational education. To show that business education was included in the Vocational Education Act, Section 108 of the Act makes the following statement:

> The term "vocational education" means vocational or technical training or retraining which is given in schools or classes . . . under public supervision and control . . . and is conducted as part of a program designed to prepare individuals for gainful

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[12]Interview with Sidney Boswell, Superintendent of Schools, Glynn County, Georgia, November 20, 1973.

[13]James Bolger, "The New Look in Vocational Education," (Part 3), Business Education World, XXXXV (November, 1964), pp. 26-29.

[14]Ibid., p. 28.

> employment as semiskilled or skilled workers . . . in recognized occupations and in new and emerging occupations. . . .[15]

To clarify what is meant by "business and office occupations," the national Legislative Action Committee of the National Business Education Association suggested that the following definition be used:

> All those duties performed by individuals in public or private enterprises that serve business management through planning, organizing, recording, communicating, interpreting, and storing the financial and other data about the enterprise comprise business and office occupations.[16]

Institutions that are part of the public school system can carry on research and developmental programs if their plans are approved by the state board of vocational education. The Vocational Education Act provides that grants be used to pay part of the cost of research and developmental programs that are designed to meet the special educational needs of youth. Concerning the research and developmental provisions of the Act, Bolger believes a closer liaison with local business firms should be developed to find out what their specific needs are, and then a curriculum should be prepared to fill the needs.[17]

The Vocational Education Act of 1963 supports the survey method for collecting occupational information; and Nolan, Hayden,

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[15] Vocational Education Amendments of 1968, Public Law 90-576, State Department of Education, Atlanta, Georgia (October 16, 1968), p. 6.

[16] Paul S. Lomax, Russell J. Hosler, and Hamden L. Forkner, "The Vocational Education Act of 1963 and Suggested Lines of Action Relating to Vocational Education for Business and Office Occupations," Business Education Forum, XVIII (January, 1964), p. 32.

[17] James Bolger, "The New Look in Vocational Education," (Part 4), Business Education World, XXXXV (December, 1964), pp. 18-21.

and Malsbary make the following statement concerning the survey:

> Particularly in the field of education for office occupations, the proposal for federal and state reimbursed programs must be supported by a survey of the need for the type of person trained under such programs.[18]

In signing the Vocational Education Act of 1963, President Lyndon B. Johnson emphasized the importance of upgrading skills to prepare individuals for gainful employment when he noted, "Modern demands upon labor and industry require new skills, and an upgrading of old skills require more education and greater knowledge."[19] Concerning training for specific jobs within the framework of the school, President Richard M. Nixon stated that "every youngster should learn at least one marketable skill before he graduates."[20]

In summary, information obtained from prominent leaders and educators supports the assumption that an occupational survey is a valid means of collecting data which can assist curriculum makers in assessing their business education programs; and this technique has been used in the current study.

This study was considered important since the results could be used in the following ways: (1) to determine whether the business education curriculum in Glynn County, Georgia, high schools was

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[18] C. A. Nolan, Carlos K. Hayden, and Dean R. Malsbary, "Development and Present Status," Principles and Problems of Business Education, 3rd Edition (Cincinnati: South-Western Publishing Company, 1967), p. 57.

[19] Philip H. DesMarais, "New Developments in Occupational Training and Vocational Education," The Balance Sheet, XLV (September, 1964), p. 23.

[20] Richard M. Nixon, "A View on Education," Educational Opinion, II (Spring, 1969), p. 5.

meeting the requirements of businesses in Glynn County, (2) to determine whether revisions were needed in the business curriculum, and (3) to aid business educators and school administrators to plan more effectively the business education curriculum to meet the needs and demands of businesses in Glynn County, Georgia.

Since public schools are supported by taxes paid by businesses and individuals, the schools have a responsibility to prepare competent employees to meet the needs and demands of businessmen in the community. The business firms, in return, support the schools by employing students prepared by the schools.

In order to provide students with marketable skills, business education teachers must study the market and its demands. The researcher believed that this could best be done by developing a program of business studies from the information obtained from an occupational survey of businesses in Glynn County, Georgia.

IV. LIMITATIONS OF THE STUDY

The study was limited in the following ways:

1. One hundred eighty selected businesses in the geographic area of Glynn County, Georgia, were surveyed.

2. The study was an occupational survey of office workers only.

3. Some of the questionnaires may have been completed by persons not familiar with hiring office workers.

4. Results of the survey apply only to the Glynn County, Georgia, area or to a similar economic-geographic area.

V. METHODS OF PROCEDURE

The purposes of this study were (1) to conduct an occupational survey of businesses in Glynn County, Georgia, for determining office job opportunities available to high school business graduates, (2) to determine the requirements necessary to fulfill these positions, and (3) to evaluate, in light of the occupational survey, the existing business education curriculum in the two Glynn County high schools for possible revisions.

In order to obtain occupational information about office employment in Glynn County, Georgia, the questionnaire technique was used. An examination of survey questionnaires and literature relating to office requirements was made, and a preliminary questionnaire was prepared. The questionnaire was pre-tested by six businessmen in Glynn County, Georgia. After final revision and approval by the thesis committee at The University of Tennessee, Knoxville, the questionnaire was duplicated and mailed to 180 selected business firms in Glynn County, Georgia (see Appendix). Enclosed with the questionnaire were a cover letter explaining the purposes of the study (see Appendix) and a stamped, pre-addressed envelope for returning the completed questionnaire to the researcher.

A listing of the 1,340 business firms in Glynn County was obtained from the Georgia Department of Employment Security and from The City of Brunswick License Department. The list from the Georgia Department of Employment Security indicated the number of employees in each business firm in Glynn County, and the list from

The City of Brunswick License Department indicated the addresses of the business firms.

From the listings, business teachers in the two high schools assisted the researcher in selecting 180 business firms to be surveyed. The criteria for selecting the businesses were as follows: (1) employed office workers, (2) represented the Glynn County employment area because of the varying size of the firms, and (3) represented a cross-section of the diverse types of businesses in Glynn County. The seven classifications (by Standard Industrial Classification)[21] of businesses were: wholesale and retail trade; manufacturing; services; transportation, communication, electric, gas, and sanitary services; contract construction; finance, insurance, and real estate; and government.

One week after the questionnaires were mailed, the researcher telephoned the business firms who had not returned the questionnaire. Duplicate questionnaires were mailed to the firms who had misplaced the original questionnaire. Four weeks later, the researcher personally delivered duplicate questionnaires to the business firms who had not returned the questionnaire. A better response resulted from the visitation.

Of the 180 business firms surveyed, 151, or 83.9 percent, returned the questionnaire; but 13, or 8.6 percent, of the returned questionnaires were not complete and could not be used in the study.

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[21]United States Bureau of the Budget. Standard Industrial Classification Manual (Washington: Office of Statistical Standards, 1967).

Of the 151 returned questionnaires, 138, or 91.4 percent, were usable and served as the basis for the data presented in this study.

Personnel in data processing at Brunswick Junior College established a coding system for the questionnaire, and the results were key punched, sorted, and tabulated for analysis. Responses to the various choices on the questionnaire were converted to percentages in order to make comparisons.

From the results of the survey, the existing business education curriculum in the Glynn County high schools was evaluated; and recommendations for curriculum revision were made.

VI. DEFINITION OF TERMS

The following terms were used in this study:

Business firm. An organization engaged in rendering a service or product to the public.

Curriculum. A series of courses and experiences designed to cover the instruction in a designated field or the whole body of courses offered in an educational institution.

Office education. A program designed to prepare individuals for employment in office occupations.

Office occupation. This term includes the following occupations: clerical, secretarial, stenographic, machine operator, receptionist, and switchboard operator.

VII. ORGANIZATION OF THE STUDY

This study is presented in the following chapters:

Chapter I presents an introduction and contains the purposes of the study, need for the study, limitations of the study, methods of procedure, definition of terms, and organization of the study.

Chapter II presents a review of related research.

Chapter III presents geographical, economic, and educational background information of Glynn County, Georgia.

Chapter IV presents the analysis of the data.

Chapter V presents the findings, conclusions, and recommendations.

CHAPTER II

REVIEW OF RELATED RESEARCH

Many business occupational surveys have been made to determine standards for beginning office workers. Studies similar to the present research are included alphabetically in this chapter.

I. BELLAND STUDY

The purpose of the Belland study[1] was to determine the local business needs in office occupations in the Addison, Illinois, area and to evaluate the feasibility of organizing a cooperative office education program.

The procedure involved the use of a questionnaire which was mailed to 73 businesses selected for the survey within a 20-minute commuting distance of Addison Trail High School. The same questionnaire was used for interviewing personally 13 randomly selected businesses and institutions. Fifty of the selected businesses participated in the investigation.

The major findings of this study were as follows:

1. The clerical occupations indicated a noticeable turnover in all businesses.

2. Less than one-tenth of all the calculators were comptometers, and 81 percent of all comptometers were being used by one participant in this study.

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[1]Ann Miller Belland, "A Survey of the Office Occupations in

3. The "International Business Machines" was the data-processing system most widely used. The most common data-processing machines were the card punch, the verifier, the sorter, the reproducer, and the interpreter.

4. Typewriters were the most widely used office machine. There were twice as many electric typewriters as manual typewriters being used.

5. The ten-key adding machine was the second most widely used office machine.

6. "Friden" calculators were used most frequently, closely followed by the "Monroe" rotary calculator.

7. "Dictaphone" transcribing machines were used most frequently.

8. The most essential traits, according to the businesses studied, in the beginning workers were accuracy and dependability.

9. There was a wide range of deficiencies reported among the beginning employees in the office occupations regardless of the size or the type of business. These were: lack of purpose, undependable, lack of initiative, and inaccurate.

10. All businesses, except educational institutions, reported a wide variety of training programs.

11. For recruitment purposes, all businesses used advertisements most extensively, but 42 percent of the businesses made use of the high school placement service.

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the Addison, Illinois Area" (unpublished Master's thesis, Northern Illinois University, 1968).

12. All businesses measured typewriting skill in the employment tests.

13. The shorthand speed requirements for the beginning workers in the businesses studied ranged from 60 to 100 words per minute.

14. The typewriting requirements for the beginning workers in the businesses studied ranged from 35 to 60 words per minute.

15. Overall, the businesses studied most frequently reported the future opportunities in those businesses would be data-processing and secretarial occupations.

16. The two most frequently occurring recommendations of the businesses in this study for the business education program in the secondary schools were to prepare students for future work conditions and to change the attitude of students in regard to "know all" and "start at the top."

Belland concluded that one of the best future opportunities for workers in the office occupations was data-processing occupations. Secretarial opportunities were also listed as "very great" in the next few years. Varying types of business machines were used. Belland also concluded that the most essential traits of a beginning worker were accuracy and dependability and that nearly half of the businesses studied seek new employees through high school placement services. The speed requirements in shorthand and typewriting were lower than the standards set for the 1966-1967 school year in the advanced business education courses of Addison Trail High School. Belland concluded that a cooperative office education program was feasible at Addison Trail High School.

The present study and the Belland study were related in that both were surveys of local business firms to determine business needs in office occupations. Both studies used the questionnaire technique for collecting the data. The Belland study was conducted also to evaluate the feasibility of organizing a cooperative office education program. The results were used in evaluating the business education curriculum to determine whether high school business graduates were receiving sufficient training and knowledges to meet the needs of office employers.

II. BENSON STUDY

The purpose of the Benson study[2] was to determine the personal characteristics necessary for typists, stenographers, and secretaries and how these characteristics were assessed by selected employers of Cache County, Utah.

Benson used the interview method to obtain the data. Employers were selected by the Employment Security Office in Logan, Utah, as being representative of business offices in Cache County. Sixty interviews were conducted, and 58 were included in the reported data. After the interviews were conducted, data was grouped by 16 characteristics. Each characteristic was listed, and the percentage of employers seeking that particular characteristic was reported. The 16

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[2]Gail Verderamo Benson, "A Survey to Determine Methods Used by Selected Employers of Cache County, Utah, to Assess Desirable Personal Characteristics Needed by Typists, Stenographers, and Secretaries" (unpublished Master's research paper, Utah State University, 1972).

characteristics employers looked for in typists, stenographers, and secretaries were: exhibits pleasant personality; dresses appropriately for the office; speaks and writes (composes) correctly; is dependable; is intelligent; maintains good attendance record; has a pleasant speaking voice; deals with people courteously; produces high-quality work in an organized manner; gets along with and cares about people; is hard-working; shows interest in work; conducts self in businesslike manner; handles administrative details independently; adjusts easily to demands of the job; and displays creativity.

The major findings of the Benson study were as follows:

1. A pleasant personality is sought more often than any other quality by the employers of secretaries and stenographers.

2. There is a wide variation in the number of employers who would check on dependability in a typist, stenographer, or secretary.

3. The intelligence of a typist does not appear to be as important as the intelligence of a stenographer or secretary.

4. Producing high-quality work in an organized manner was sought by 92.5 percent of the employers of typists.

5. Creativity was sought by the least number of employers for either typists, stenographers, or secretaries.

6. Few employers made any differentiation in the way they checked on characteristics in different types of workers.

7. Consulting the previous employer appears to be the major source of information about a job applicant. This method was most frequently used to determine 8 of the 16 qualities.

8. Observing the applicant during the interview for various traits or mannerisms was used most commonly in 6 of the 16 categories.

9. Tests were used most often to determine intelligence.

Benson concluded that creativity is not one of the characteristics that would be necessary for a typist, stenographer, or secretary. The previous employer was a major source of information and was checked often by the prospective employer. Observation of the applicant during the interview was also a major source of information for the employer.

The present study and the Benson study were related in that both were surveys concerning office workers. The Benson study was concerned with the personal characteristics of office employees and the methods used by employers to assess the characteristics, and the present study was concerned with office job opportunities and requirements for office workers.

III. BICKEL STUDY

The purposes of the Bickel study[3] were to determine the duties and skills required of the business education graduates of the Epping, North Dakota, high school, and the extent to which the graduates were prepared to perform these skills on their job.

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[3]Gary D. Bickel, "A Study to Determine the Effectiveness of the Business Education Curriculum at the Epping Public High School, Epping, North Dakota" (unpublished Master's Independent Study, University of North Dakota, 1970).

The procedure was a follow-up study of the graduates from 1965 to 1969. Questionnaires were mailed to the 50 graduates of Epping High School. Forty-two of the graduates participated in the study.

The major findings of this study were as follows:

1. For 9 of the 42 respondents, or 21.4 percent, high school proved to be the terminal point in their formal education.

2. Sixteen of the 42 respondents stated that they were working full time while ten were attending school full time.

3. Seventeen, or 40.5 percent, of the graduates had secured their initial position through a personal application.

4. The ten-key adding-listing machine outranked all of the other office machines used, with the typewriter (non-electric) ranking second. The typewriter (electric) was third, and the full-key adding-listing machine, fourth.

5. Fourteen, or 33 percent, of the respondents were refused a position at some time or other in their business careers.

6. Three of the eleven respondents stated that they had been refused employment because of lack of experience, and three others stated that they had been refused a position because they were not qualified at the time they applied.

7. On-the-job training which the graduates thought could be incorporated into the business education curriculum were: instruction in correct telephone technique; a greater variety of machines in the business machines course; a more extensive, as well as intensive, filing, mathematics, marketing and management program. More instruction in the typing of business forms was also mentioned.

8. The three subjects taken in high school which were of the greatest value to the graduates in their work included, in order of rank: (1) typewriting, (2) bookkeeping, and (3) general business.

9. The respondents listed shorthand, business law, and business mathematics as the subjects in the high school business education curriculum which they thought were of least value in their work.

10. The greatest difficulty has been encountered by the respondents in the areas of English grammar and spelling.

11. Twelve of the 42 respondents indicated that they were required to take an employment test of some type.

Bickel made the following conclusions: The business machines office practice course should be strengthened by enlarging the variety of machines on which training could be offered; a business English course for all business education graduates should be offered in the senior year; personal application, correct telephone techniques, and filling in forms should be emphasized in the office practice classes; insurance policies, automobile title transfers, and income tax forms should be given greater emphasis in the general business class.

Although Bickel's study was a follow-up study of business education graduates and the present study was an occupational survey of office opportunities and requirements, both studies were concerned with gathering data which would help in the evaluation of the business education program. Purpose and procedures were also similar in both studies.

IV. CATTANEO STUDY

The purpose of the Cattaneo study[4] was to survey office occupations to determine job opportunities and requirements to serve as a means of evaluating the business education curriculum of Hall High School in Spring Valley, Illinois.

The procedure involved the use of a questionnaire which was mailed to 66 selected business firms in the LaSalle-Peru-Oglesby-Spring Valley, Illinois area. All possible businesses with office workers were included in the mailing. Thirty-six of the 66 questionnaires were returned, and two of the returned questionnaires were not completed.

The major findings of this study were as follows:

1. Approximately half of the employers gave some kind of employment tests, usually typewriting, arithmetic, and clerical tests.

2. The average minimum speed required in typewriting was 50 words per minute and in shorthand 80 words per minute.

3. Failure on the job was most often caused by lack of skill, lack of interest, or personality faults.

4. General deficiencies found most often in office employees were failure to use common sense, failure to "do little extras," lack of initiative, and wasting of time.

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[4]Barbara A. Cattaneo, "A Study of Office Occupations in the LaSalle-Peru-Oglesby-Spring Valley (Illinois) Area" (unpublished Master's thesis, Northern Illinois University, 1970).

5. Eighty percent of the employers believed high schools were doing an adequate job of preparing students for office positions.

Cattaneo concluded that high school graduates must take employment tests in typewriting, arithmetic, and clerical, and must type at a minimum rate of 50 words per minute and take shorthand at a minimum rate of 80 words per minute; students should be encouraged to develop these minimum speeds. More emphasis should be placed on human relations in the office practice course.

The present study and the Cattaneo study were related in that both were studies of office occupations and an evaluation of the business education curriculum in the high schools. The procedures were also similar.

V. COPELAND STUDY

The purposes of the Copeland study[5] were to determine the number and kinds of positions available to workers in Elizabethton, Tennessee, and the effectiveness of the high school business education curriculum in training students for the available positions.

The procedure involved the combination of questionnaire-interview. The questionnaire was delivered to all employers in the community of one or more persons in business occupations. Copeland interviewed the employers at the time the questionnaire was delivered, and the data was obtained at the time of the interview. If the

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[5]John Clarence Copeland, "An Occupational Survey of Elizabethton, Tennessee, With Implications for the Business Curriculum" (unpublished Master's thesis, The University of Tennessee, 1941).

questionnaire could not be completed at the time of the interview, Copeland left the questionnaire with the employer and returned repeatedly until the data were collected. A completed questionnaire was finally obtained from each of the 113 business concerns interviewed.

The major findings of this study were as follows:

1. Almost all of the employers contacted indicated that they made use of the personal application more frequently than any other agency in the obtaining of employees.

2. The average number of business positions open during the year was a few more than a hundred.

3. Ninety-one, or 80.5 percent, of the firms investigated, stated that they were willing to accept business employees with a high school education.

4. A desire was expressed by 80, or 70.8 percent, of the total included in the survey, that new employees have previous experience. Only fifteen, or 13.3 percent, of the employers demanded experience as a prerequisite for employment.

5. A total of 127 adding machines were found in 84, or 72.3 percent, of the 113 offices surveyed. Most of these machines were in retail establishments.

6. Only one concern used dictating machines. This concern had six such machines, all of which were Dictaphones.

7. Eleven, or 9.7 percent, of the 113 offices were using a total of 20 duplication machines. The Mimeograph was the machine most prevalent, and the Ditto was the next most numerous.

8. The system of filing most in use was the alphabetic; second, the numeric; and third, the subject.

9. Honesty was considered by businessmen the personal trait of greatest importance for the success of business employees.

10. Businessmen, in ranking the abilities which they found lacking in the training of high school graduates, placed spelling first. Other abilities in which a deficiency in training was most noticeable were, in the order ranked: arithmetic, general business information, spoken English, and written English.

11. Typewriting was the subject recommended the greatest number of times for the study of both boys and girls sometime during their four years in high school.

12. Relatively few offices had specific requirements as to speed in the use of the typewriter and in taking dictation in shorthand.

13. Businessmen, in their criticism of business training in the high school, insisted that greater emphasis be placed upon the fundamentals of education, that training be practical, and that desirable personal traits be cultivated.

Copeland concluded that high school graduates would find their greatest opportunities in the selling field and that the number of secretarial positions in Elizabethton were few, but that well-trained, efficient secretaries or stenographers could usually find employment. Training in making personal applications should be a part of the high school business education program and should be offered near the time of graduation. The traits of honesty, accuracy, courtesy, and interest in work should be developed in high school pupils in order to assure success in business pursuits.

Although the Copeland study was completed in 1941, the procedures and main purpose were similar to those of the present study.

VI. DOW STUDY

The purpose of the Dow study[6] was to determine the kinds of typewriting jobs being performed by typists in Eau Claire, Wisconsin, businesses so that typewriting teachers could compare what they were including in their classes with the kinds of typewriting jobs performed by employed typists during a regular working day.

The procedure involved the use of a questionnaire-opinionnaire which was mailed to the office managers of 45 selected businesses employing up to 3,100 persons. Forty-one businesses responded to the questionnaire-opinionnaire; one was not usable.

The major findings of this study were as follows:

1. The letter style used most in the Eau Claire, Wisconsin, area was the modified block with blocked paragraphs. The next most popular style was the modified block with indented paragraphs. Nine businesses out of 40 used the AMS Simplified letter style. Large envelopes were used more than small envelopes.

2. The most frequently used special letter part was the carbon copy notation. The attention line and the subject line were the next most frequently used. The company name in the closing lines was used by 65 percent of the firms responding. Approximately one-half of the businesses used two-page letters. Only 12.5 percent of responding firms used mailing notations.

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[6]Joanne Edna Dow, "A Study to Determine the Kinds of Typewriting Jobs Performed by Typists in Selected Firms in Eau Claire, Wisconsin" (unpublished Master's research paper, Wisconsin State University, 1970).

3. Over one-half of the businesses responding typed checks, invoices, and purchase orders.

4. All businesses used some style of table. Two, three, or more column tables with columnar headings were used. Leaders in tables were seldom used.

5. Thirty-four businesses out of 40 used number typewriting.

6. Of the 40 businesses surveyed, 14 typed ditto masters and stencils, and 10 typed offset masters.

Dow made the following conclusions: special parts of a letter should be taught thoroughly as to placement and variations; modified block without paragraph indentions and modified block with paragraph indentions should receive major emphasis. Correspondence should include the typing of an envelope to be attached to the letter; half of the letters typed in the classroom should include carbon copies, and the student should be required to correct all carbon copies as well as the original; two-page letters should be typed in order to show various headings for the second page. The typing of ditto, stencil, and offset masters should be emphasized. Time should be spent on typing credit memorandums, checks, invoices, and purchase orders. All types of tables with two, three, or more columns with horizontal rulings, columnar headings, and leaders should be emphasized. Dow also concluded that no time should be spent in attempting to produce proficient manuscript typists.

The present study and the Dow study were related in that both were involved with surveying selected businesses, and the results of the surveys could be used by teachers to improve business preparation of students for office jobs. The procedures were also similar.

VII. GAMBHIR STUDY

The purpose of the Gambhir study[7] was to analyse the business curriculums in a random sample of junior colleges in the states of Michigan, Minnesota, Montana, North Dakota, South Dakota, and Wisconsin operating during the 1971-1972 school year.

The procedure involved the use of a 1971 Junior College Directory to obtain the current listing of all public junior/community colleges in the six states. Stratified random sampling procedure was used for the selection of the institutions. Out of 67 public junior colleges, 33, or 50 percent, were selected to be included in the sample for the study. All of the 33 colleges responded to a letter which was sent to each school requesting their catalogue for the 1971-72 school year.

From the catalogues, an information sheet was designed to record the information needed. A questionnaire was designed for department chairmen of the various colleges in the sample. The information in the questionnaire was used to confirm the information in their catalogues. Of the 32 questionnaires sent to the department chairmen, 25, or 78 percent, were returned. The information provided in the questionnaires was found to be consistent with the information in the catalogues. One college indicated that their college had closed as of July, 1971.

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[7] Bhagwan S. Gambhir, "An Analysis of the Business Curriculums in the Public Junior Colleges of Six Midwestern States" (an independent Master's study, University of Minnesota, 1972).

The major findings of this study were as follows:

1. An average of 22 semester hours in business was required for graduation from a business transfer program, whereas the average is 39 semester hours in general education. The average total number of semester hours required for graduation from a transfer program is 63.

2. English was the most commonly required general education course listed in 100 percent of the transfer programs. Only one-half of the business transfer programs required courses in physical education be taken. Accounting was the most commonly required business course listed in 100 percent of the business administration transfer programs and in 60 percent of the business education transfer programs.

3. The most common degrees granted at the completion of business transfer programs were the Associate of Arts and the Associate in Business, which make up 42.5 percent and 27.5 percent, respectively, of all degrees granted at the completion of a business transfer program.

4. The occupational programs, numbering 148, make up 68 percent of the total business programs offered by the 32 junior colleges studied. This category is made up of 30 different programs of which secretarial programs are most numerous.

5. An average of 42 semester hours in business was required for graduation from a business occupational program, whereas the average was only 19 semester hours in general education. The average total number of semester hours required for graduation from a business occupational program was 63.

6. English was the most commonly required general education course listed in 92 percent of the occupational programs. About two-thirds of the business occupational programs required a course in physical education be taken. Typewriting and shorthand were required by all secretarial programs.

7. The most common degrees granted at the completion of business occupational programs were the Associate in Business and the Associate in Applied Science, which make up 32.8 percent and 26.8 percent, respectively, of all degrees granted at the completion of a business occupational program.

Gambhir concluded that there were numerous offerings of secretarial and clerical programs in junior colleges and that over one-half of all business occupational programs were secretarial and clerical programs. Data processing programs were common, and almost every business program included at least an introductory course in data processing. Gambir also concluded that the business programs offered in junior colleges should be continually evaluated with consideration for revision.

The present study and the Gambhir study were related in that both were surveys to find out whether public institutions of learning needed revisions in order to meet the demands of the business world. Although Gambhir's study involved the junior college level and the present study involved the high school level, the purposes and procedures were similar.

VIII. GLESSNER STUDY

The purpose of the Glessner study[8] was to determine the office job opportunities and working conditions for high school graduates in Cedar Rapids, Iowa.

Because of the large number of businesses in Cedar Rapids, only a total of 111 firms employing from one to twenty-five office employees were selected for the study. The procedure involved the use of the questionnaire-interview technique. The interviews, varying in length from 15 minutes to one hour, were conducted in the offices of the interviewees during four weeks in January, 1965. Some of the questionnaires were left with the interviewees to be completed when convenient and then returned to the researcher by mail. Of the 111 firms selected for the survey, two were out of business and eight refused to complete the questionnaire; therefore, 101 firms, or 91 percent, were used in the study.

The major findings of this study were as follows:

1. Almost 90 percent of the office workers covered in this study were women.

2. About half of the firms never hire inexperienced high school graduates, and half occasionally do so. One-half of the firms will consider inexperienced high school graduates should an opening occur, although a third of the firms would not.

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[8] Faye Renner Glessner, "A Survey of Selected Cedar Rapids, Iowa, Business Firms to Determine Office Job Opportunities for High School Graduates" (unpublished Master's thesis, State College of Iowa, 1966).

3. In most cases (77%), the employers felt high school education was adequate. The position of secretary was the only position which had a smaller number accepting high school education.

4. Almost half of the employers had proficiency requirements. The average typing speed required was 45 words per minute. The average shorthand speed required was 79 words per minute.

5. About half of the respondents required job applicants to take tests; typing tests were most frequently used.

6. Apparently the high school is seldom contacted since only 15 percent of the firms do so on a regular basis and 20 percent do so occasionally. The information employers most frequently requested when contacting the high school was grades, subjects student had taken, and teacher's opinions.

7. A majority of the firms, 65 percent, stated that a knowledge of bookkeeping was important for their stenographer or secretary.

8. Eighty percent of the firms answered that their secretary or stenographer composed letters for routine business situations.

9. Many firms used more than one system of filing. Ninety-seven percent used the alphabetical system and 35 percent used the numerical system.

10. Almost half of the firms, 48, reported that high school graduates' preparation for job interviews was average.

Glessner concluded that half of the firms hired inexperienced high school graduates, and half considered them for employment should an opening occur. The most common jobs for high school business graduates are as a clerk-typist, file clerk, general office clerk,

secretary, accounting clerk, or key punch operator. Glessner also concluded that the beginning office employee should be prepared to compose simple, routine business letters and that the graduate should be prepared to use an alphabetical filing system; and employers want their beginning office workers to have had training on manual and electric typewriters, adding machines, transcribing machines, and calculators.

The present study and the Glessner study were related in that both were surveys of business offices to determine job opportunities for high school graduates. The procedures were also similar.

IX. GOCKER STUDY

The purposes of the Gocker study[9] were to identify initial clerical skill standards of employers in Fox River Valley, Wisconsin, and to determine (1) the level of clerical skills considered adequate for initial employment, (2) whether initial office employment skill standards of business and education were in agreement, and (3) what criteria were employed by businesses to measure skills.

The procedure involved the use of a questionnaire which was mailed to 209 selected businesses employing clerical personnel in the Fox River Valley area of Wisconsin. One hundred twenty-six, 60.28 percent, of the businesses completed and returned the questionnaire.

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[9]Phillip L. Gocker, "An Analysis of Clerical Skill Standards Required of Beginning Clerical Workers in Selected Businesses in the Fox River Valley" (unpublished Master's research paper, Wisconsin State University, 1970).

The major findings of this study were as follows:

1. Thirty-six percent of the responding firms used some kind of examination to determine typewriting skill; the rest used either the applicant's word, school record, Wisconsin State Employment Service's test results, or checked with the applicant's previous employer.

2. Most of the firms expected from 50 to 70 gross words a minute with no more than one error a minute allowed on a five-minute typewriting test.

3. Seventy-eight percent of the respondents indicated they did not have established standards concerning the number of transcription belts to be typed per hour; a small percentage of the respondents required either one, two, or three transcription belts to be typed per hour.

4. Firms who had set standards for key punching required from 5,000 to 10,000 strokes per hour.

5. About 82 percent of the reporting firms used alphabetic filing, and about 56 percent used numeric filing.

6. The ten-key adding-listing machine was used by 78.57 percent of the responding firms; the full-key adding-listing machine was the second most popular machine.

7. About 75 percent of the responding firms expected familiarization with the various calculating machines as opposed to a skill on the machines.

Gocker concluded that business educators should continue the use of five-minute timed writings. A minimum vocational typewriting

speed of not less than 45 gross words per minute with no more than one error per minute should be used by teachers in the terminal vocational typewriting course. Gocker further concluded that business educators should implement current business clerical standards and inform students that these particular levels of skill were required by employers. Educators should also emphasize the importance of developing the skill of composing and writing routine correspondence.

The present study and the Gocker study were related in that both were surveys of business offices to determine the job opportunities and requirements necessary to obtain office employment. The procedures were also similar.

X. HUTTAR STUDY

The purpose of the Huttar study[10] was to determine the needs and desires of businesses in the Colorado Springs, Colorado, area so that El Paso Community College in Colorado Springs would be in a better position to train personnel to fill the needs of the business community.

Huttar prepared and mailed a questionnaire to 130 potential participants in the Colorado Springs Metropolitan area which is an area in central Colorado with a population of 200,000 people. Sixty-seven, or 51.5 percent, returned questionnaires were usable.

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[10]Richard Victor Huttar, Jr., "A Survey of Employers in the Colorado Springs Area for Use in Evaluating the Business Education Curriculum Offered by El Paso Community College, Colorado Springs, Colorado" (unpublished Master's thesis, University of Colorado, 1972).

The major findings of this study were as follows:

1. Thirty percent of the job openings in the Colorado Springs area were filled by persons having no prior experience.

2. Areas of business study considered by the respondents to be most useful for potential employees included accounting, clerical, general secretarial, business management, office administration, stenographic, marketing, data processing, merchandising, secretarial (legal), and secretarial (medical), in that order.

3. Non-business subjects considered by the respondents to be most useful for potential employees were English, human relations, public speaking, principles of economics, general psychology, applied economics, American government, social psychology, world civilization, general sociology, and language arts, in that order.

4. Lack of motivation was expressed as a weakness of new employees; another weakness of new employees was a lack of knowledge of the working world environment.

5. Businessmen of the Colorado Springs area responding to the questionnaire, expressed a desire to have employees receive business education in school.

Huttar concluded that the local community expects the college to produce a well motivated individual trained in the knowledge of business. They preferred these individuals to have a good command of the English language. Motivation and an awareness of other people should be made an integrated portion of the studies in the community college.

The present study and the Huttar study were related in that both studies were conducted to determine the needs of local businesses and how the public schools could prepare students to fill business positions. Although the Huttar study was done to benefit the community college and the present study was done to benefit the high school, both studies had similar purposes and procedures.

XI. KOCH STUDY

The purposes of the Koch study[11] were to evaluate the business education program in DeKalb High School; to gain occupational information for the business education department and other teachers, students, and for businesses in the area; and to gain a closer relationship between the business department of DeKalb High School and businesses in the area.

Fifty questionnaires were mailed to businesses in the DeKalb area which employed graduates from the Business Education Department. Thirty-four, or 68 percent, of the questionnaires were returned; but three of the returned questionnaires were not completed.

The major findings of this study were as follows:

1. A majority of the employers did not give employment tests; when employment tests were given, the types most frequently used were typewriting, dictation, and arithmetic.

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[11] Betty Lou Koch, "A Study of the Office Occupations in the DeKalb-Sycamore Area" (a qualifying Master's paper, Northern Illinois University, 1961).

2. The average speed required in typewriting was 45 words per minute, and in shorthand the average speed was 80 words per minute. Accuracy standards for these tests varied greatly.

3. In determining job qualifications, interviewing, scholastic records, experience records, and State Employment Tests were used.

4. Failure on the job was most often contributed to lack of skill, lack of interest, and personality faults.

5. The majority of the businessmen believed there was a need for closer cooperation between the high school business department and the business offices in the area.

Koch concluded that emphasis should be placed on letter writing, spelling, punctuation, and grammar and that teachers should encourage more capable students to take two years of shorthand if they plan to go into office work. Koch also concluded that teachers should guide students early in their occupation choice so that they would be able to take more courses to prepare themselves for a business position. Students should become familiar with some types of electronic machines such as key punch, verifier, and sorter and should visit business offices using these machines.

The present study and the Koch study were related in that both were studies of local office occupations and requirements in order to evaluate the business curriculum. The procedures were also similar.

XII. McCREA STUDY

The purposes of the McCrea study[12] were to determine what the business firms required of applicants applying for clerical positions in the Sonoma-Marin County, California, area; and to determine the selection procedures which are encountered by the inexperienced high school graduate seeking initial employment.

Using the interview procedure as the data gathering technique, 66 firms employing from four to 400 clerical employees of the Sonoma-Marin County area were selected for the study. The 66 firms were considered to be representative of the area because of the varying size of the firms and because they represented a cross-section of the economy of the area and were geographically distributed throughout the two counties. Two firms refused to participate in the study; one firm was unable to be interviewed because of a busy schedule.

The major findings of this study were as follows:

1. Eighty-five percent of the companies interviewed considered the personal interview as the most important selection instrument.

2. Eighty-five percent or more of the respondents considered appearance, dress, grooming and mannerisms as of major importance.

3. Approximately 82 percent of the companies always investigated the past employment of the prospective employees. Approximately

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[12]Wendell Franklin McCrea, "An Analysis of Employment Requirements for Applicants for Clerical and Secretarial Positions in Selected Sonoma County and Marin County Businesses" (unpublished Master's thesis, San Francisco State College, 1964).

64 percent always investigated personal references, and 26 percent always checked with the schools. Most of the investigating was done before hiring.

4. Eighty-five percent of the firms indicated they had employment for inexperienced high school graduates in the clerical field, and 67 percent of the firms required prospective employees to have at least a high school diploma.

5. Fifty-three percent of the firms used tests as a selecting tool of new employees. The average minimum speed for a typist was 40 net words per minute, 50 net words for a stenographer, and 55 net words for a secretary.

6. Seventy-four percent of the personnel managers specified that typing was the most important skill an applicant should have.

7. Fifteen percent of the personnel managers were of the opinion that the inexperienced applicants were poorly trained, 42 percent believed inexperienced applicants had had average training, and 18 percent believed the recent high school graduates were well trained.

McCrea concluded that high school students should be encouraged to seek part time or summer work in the clerical field since work experience was considered so important by the business firms surveyed. McCrea also concluded that business education should emphasize the development of a desirable personality, work habits, and work attitudes of students because employers attach so much importance to these traits for clerical employees.

The present study and the McCrea study were related in that both were surveys of office employment requirements. Although McCrea used the interview check form to gather data and the present study used the mailed questionnaire technique to gather data, both sought similar information.

XIII. MEDLEY STUDY

The purpose of the Medley study[13] was to determine the entry-level requirements for high school graduates with no business experience and the requirements set by the businessmen in the Pomona, California, community. The requirements would be available to the Pomona School District to determine if revisions were needed in the business education curriculum.

The procedure involved the use of a questionnaire which was mailed to 200 randomly selected businesses in Pomona, California. Seventy-three firms did not respond to the questionnaire; and of the 117 firms responding to the questionnaire, 49 firms did not employ high school graduates as general clerk, clerk-typist, or stenographer. Only 68 of the firms responding to the questionnaire employed high school graduates in jobs applicable to the survey.

The major findings of this study were as follows:

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[13]Ellen F. Medley, "A Survey of the Pomona Business Community to Determine Entry-Level Employment Requirements for High School Graduates With No Previous Business Experience Applying for Positions As General Clerk, Clerk-Typist, or Stenographer" (unpublished Master's thesis, California State College, 1970).

1. Part-time or full-time work was available from 92.6 percent of the firms responding, and the usual minimum employment age was 18.

2. Private employment agencies were used by 34.7 percent of the firms responding to secure applicants for clerical positions.

3. Technical skills such as shorthand, typing, filing, math, and language skills were tested by 77.9 percent of the firms.

4. Typing and shorthand tests were usually 5 minutes in length and require typing speeds of at least 45 words per minute and shorthand speeds of at least 80 words per minute. Filing tests were given by only 5 firms, with no significant trends in kind of test or length.

5. Employers look for the following skills and knowledges: good spelling, reading and following directions, good telephone technique, filing knowledge, use of proper vocabulary, and proficiency on an electric typewriter.

6. The firms suggested that the schools better prepare the students in: spelling, language skills, letter writing, typing ability, and a variety of behavioral traits, such as attitude.

7. Employers consider the interview impression of the applicant the most important single factor when hiring, with test scores in pre-employment testing, recommendation letters, and school records following in that order.

8. The most observed strength of applicants was a willingness and eagerness to learn and an enthusiasm for the job; the most observed weaknesses were: poor spelling; immaturity; and a lack of word power, vocabulary, and language skills in general.

Medley concluded that schools must continue to require 5-minute typing tests with a goal of at least 45 words per minute and require 5-minute shorthand tests of at least 80 words per minute. Medley further concluded that schools should familiarize students with employment tests and should provide opportunities to improve human relations skills.

The present study and the Medley study were related in that both sought information from business offices that would be helpful in evaluating the business education curriculum. There was also a similarity in procedures.

XIV. PEKAR STUDY

The purpose of the Pekar study[14] was to determine what skills and general knowledge an applicant for initial office employment must possess in order to gain employment in the Joliet, Illinois, area. A subpurpose was to discover in what phase of the hiring process, if any, candidates for employment met with the greatest degree of failure.

The procedures involved the use of both a questionnaire and a personal interview. A questionnaire was mailed to 55 selected firms in the Joliet area, and those firms not responding to the questionnaire were called upon and interviewed personally. Smith

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[14]Elaine Pekar, "A Study of the Standards for Initial Employment of Beginning Office Workers in Selected Businesses in the Joliet, Illinois, Area" (a qualifying Master's paper, Northern Illinois University, 1967).

and Leabo's table of random numbers was used to select the business firms. Nine of the 55 firms did not participate in this study. Of the 46 firms that responded, 6 stated that they had no office workers and therefore the questionnaire would not apply to them. Data from the questionnaires of 40 firms was used in the study.

The major findings of this study were as follows:

1. Objective tests to determine the degree of typing or shorthand ability which the prospective employee possesses were used in less than half of the businesses in the Joliet area.

2. Both electric and manual machines are used by the firms, although most firms still used manual machines for testing purposes.

3. The length of time for which dictation was given in shorthand tests and the number of errors allowed varied so widely that no conclusions could be drawn from the results.

4. Application blanks, personal interviews, and school records were important devices to use in screening applicants.

5. Personal appearance and a pleasing personality were listed as two of the most important factors in the selection of an employee.

6. A high school education was sufficient to meet the requirement of almost all the businesses surveyed.

7. Bookkeeping knowledge was desirable for most beginning office workers, but not essential.

8. A lack of aptitude for the position and personal qualities were by far the primary reasons for rejection of applicants for initial office employment.

9. Most business firms will not require an applicant to be able to use either a stenotype or stenograph machine or to transcribe from a voice-recording machine.

Pekar concluded that positions which required the use of shorthand required a minimum rate of 80 words per minute for a stenographer and 90 words per minute for a secretary. This conclusion, however, is inconsistent with Finding 3 of Pekar's study which stated, "The length of time for which dictation was given in shorthand tests and the number of errors allowed varied so widely that no conclusions could be drawn from the results."

For an initial office position, Pekar concluded that most applicants would be required to complete successfully an application blank and take part in a personal interview in addition to the skill and general education requirements.

The present study and the Pekar study were related in that both studies were conducted to determine the skills and knowledges necessary for initial office employment in the local area. The procedures were also similar.

XV. TWEED STUDY

The purpose of the Tweed study[15] was to determine the number and types of positions available to junior workers in Forth Smith, Arkansas, and the qualifications that employers considered necessary

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[15] Flavia Tweed, "A Survey of Business Occupations in Fort Smith, Arkansas" (unpublished Master's thesis, The University of Tennessee, 1940).

for their employees. The information was to be used in reorganizing the business curriculum of the senior high school in order to meet the local business occupational needs and in planning an effective vocational-guidance program for the business department of the Fort Smith Senior High School.

The procedures involved the use of both a questionnaire and a personal interview. Tweed interviewed 30 of the 107 selected employers and mailed questionnaires to the remaining 77 employers. Of the 107 selected employers, 70 replied to the questionnaire; and the data supplied by the 70 usable questionnaires was believed to represent a fair cross section of the commercial positions of Fort Smith, Arkansas.

The major findings of this study were as follows:

1. The survey of business occupations in Forth Smith included 70 business firms and classified 351 male and 544 female workers, a total of 895 workers.

2. The largest number of workers were found in the selling group.

3. Fifty of the employers contacted indicated that personal application was the method used most often in securing their employees. The second most popular method used in obtaining employees was through other employees or friends. Private business schools ranked third in the agencies used to obtain employees.

4. Only 75 part-time junior workers were employed in Fort Smith; and of this number, 69, or 92 percent, were in the retailing field.

5. Only 29, or 4.1 percent, of the employers indicated that they required any experience for their employees. The experience requirements ranged from six months to two years.

6. Practically all the respondents indicated that they expected their employees to be high school graduates.

7. The alphabetic system of filing was the most widely used in Fort Smith business offices.

8. The answer most often given relative to shorthand, shorthand transcription, and typewriting rates of speed were, "average." The investigator interpreted the term to mean about 80 to 100 words per minute in shorthand, about 35 words per minute in shorthand transcription, and 40 to 50 words per minute in typewriting.

9. The rank order, as listed by Fort Smith employers, of a list of personal qualifications was as follows: (1) honesty, (2) accuracy, (3) courtesy, (4) dependability, (5) efficiency, (6) loyalty, (7) intelligence, (8) health, personal neatness, pleasing personality, and initiative, and (9) poise.

10. Businessmen said that young people failed because they lacked initiative, efficiency, accuracy, courtesy, dependability, poise, confidence in self, adaptability, cooperation, and because they were lazy and conceited.

11. English and spelling were the subjects that most respondents thought should be studied by both boys and girls some time during high school. Penmanship ranked second; and business arithmetic, mathematics, and typewriting, all ranked third.

12. The six most noticeable weaknesses observed in the training of high school graduates were, in the order named: (1) lack of general business information, (2) penmanship, (3) spoken and written English, (4) knowledge of shorthand, (5) fundamentals of arithmetic, and (6) speed in typewriting.

13. The most frequent suggestion employers offered for the improvement in the training of workers was some form of cooperative training.

Tweed concluded that students should be given the necessary training in salesmanship classes since selling occupations provided many job opportunities for high school graduates; making application for employment should be stressed shortly before graduation to all business pupils; teachers should make an effort to improve the personality and character status of the graduates who are going into office positions; a course in business correspondence should be added to the business curriculum. Tweed further concluded that business teachers should be alert to all trends and changes in the business community, and that schools should modify their programs from time to time to meet these changes.

The present study and the Tweed study were related in that both studies were concerned with surveying businesses to determine local job opportunities and the requirements necessary to fill these jobs. Although the Tweed study was done 34 years prior to the present study, the purposes and procedures were similar.

XVI. SUMMARY

This chapter has presented a review of research studies similar to the present study. The next chapter presents a discussion of the geographic, economic, and educational background of Glynn County, Georgia.

CHAPTER III

GEOGRAPHICAL, ECONOMIC, AND EDUCATIONAL BACKGROUND OF GLYNN COUNTY, GEORGIA

To provide a background of the Glynn County area, the following section presents information concerning the geographic, economic, and educational aspects. A description of the business education curriculum is also included so that the findings from the occupational survey could be compared with the business offerings for recommending revisions in the business curriculum.

I. GEOGRAPHICAL BACKGROUND

The history of the Glynn County area dates back to early American history. The colony of Georgia was established in 1733 by General James Edward Oglethorpe, and in 1771 the Colonial Council of the Royal Province of Georgia laid off the city of Brunswick and named the streets and parks. Brunswick, the seat of Glynn County, was named in honor of King George III of England who was of the House of Hanover or Brunswick. Glynn County, located on the Atlantic Ocean in the southeastern section of Georgia and midway between Jacksonville, Florida, and Savannah, Georgia, was named in honor of John Glynn, a member of parliament, who sympathized with the colonists in their struggle for independence.[1]

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[1]Brunswick-Golden Isles Chamber of Commerce, "Facts About Brunswick and Glynn County, Georgia" (Undated Brochure).

Although both French and Spanish dominance were experienced throughout southeast Georgia during the early part of the sixteenth century, the late founding of Brunswick gave it a British character which it has maintained through the years. The city was originally planned with the water front as the primary focus; but with the construction of overland transportation, the emphasis gradually turned inward to the surrounding area.[2]

By the turn of the present century, shipbuilding began to lose its status as the primary industry of the area as the rich forest resources began to be utilized. In 1914 a significant step toward the existing economic character was taken with the opening of several seafood processing plants. Since the founding and early years of Brunswick and Glynn County, steady economic growth has been experienced in the area and has created a solid foundation to support the economy.[3]

Comprising a part of the broad Atlantic Coastal Plain, the terrain in the region is generally flat and heavily wooded. Average elevation above sea level is 14 feet. The climate of the region is generally mild throughout the year with the temperature ranging from 32 degrees during the winter months to 95 degrees during the summer months. The mean January temperature is 56.0 degrees, and the mean July temperature is 82.4 degrees. Rainfall ranges from 15 to 60

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[2]Coastal Area Planning and Development Commission, Population and Economic Base Study for Brunswick-Glynn County, Georgia, (Bureau of State Planning and Community Affairs, Atlanta, Georgia, February 1972), p. 1.

[3]Ibid.

inches per year with the heaviest rains being in summer and early fall. The average annual rainfall is 53.37 inches.[4]

Glynn County, consisting of approximately 460 square miles, is bordered on the east by the Atlantic Ocean; on the northwest by Wayne County, Georgia; on the southwest by Brantley County, Georgia; on the north by McIntosh County, Georgia; and on the south by Camden County, Georgia. Of the total 460 square miles in Glynn County, over 37 square miles consist of rivers and streams, with the remaining 423 square miles considered to be land area. Only about 256 square miles is considered developable high land, and the rest is comprised primarily of low-lying wetland.[5]

Glynn County's population trend has been one of continued growth. According to the Census of Population, Glynn County's population in 1950 was 29,046; in 1960, 41,954; and in 1970, the population was 50,528. By 1980, the estimated population of Glynn County will be 61,300.[6]

II. ECONOMIC BACKGROUND

The wide diversification of manufacturing operations in Glynn County has had a stabilizing influence on the area's economy over the years. There are over 70 manufacturing and processing establishments in the county which employ four or more workers; one plant has over 1,000 workers; two have over 500; and six have over

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[4] Ibid., p. 2.

[5] Ibid., p. 37.

[6] Coastal Area Planning and Development Commission, Housing Needs Analysis for Brunswick-Glynn County, Georgia (Bureau of State Planning and Community Affairs, Atlanta, Georgia, 1972), p. 3.

100 workers. There are numerous small manufacturing establishments with less than four employees.[7] The highly diverse character of manufacturing in the Glynn County area is well illustrated by the following products of the community: processed seafoods, chemicals (including chlorine, caustic soda, process basic chemicals, paints, and varnish), bleached sulphate pulp for paper and paperboard manufacture, industrial boilers, concrete products, wallboard, plaster, gypsum lath, accoustical ceiling tile, apparel (outer garments, car coats, and jackets for girls, boys, and women), children's footwear, power saws, tools, dies, miscellaneous farm products, signs, excelsior, aluminum awnings and carports, fabricated steels, planing mill products, and creosoted timbers. Seasonal factors cause some fluctuation in employment in the seafood processing industry, but the period between the peak-season and the off-season is fairly short.[8]

Agriculture activities in Glynn County comprise a less important part of the area's economy than do nonfarm activities. A decrease in the need for manpower on area farms has been caused by increased use of farm machinery, farm consolidations, improved production techniques for field crops, and an increasing emphasis on the production of livestock and forest products. The number of nonfarm jobs in Glynn County has increased by over 2,000 during the past ten years.[9]

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[7] Georgia Department of Employment Security Agency, Labor Market Report, (Atlanta, Georgia, 1967), p. 4.

[8] Ibid., p. 5.

[9] Ibid., p. 4.

Forest products, chiefly pulpwood, are considered the most valuable of the agricultural products, and they have a steadily rising market. In addition to this source, agricultural income is derived from poultry and poultry products, livestock, corn, tobacco, vegetables, and cotton. The major farm activities in Glynn County are poultry production and dairying. Commercial farms are few, although many small units are operated by persons who work full-time in industry and farm in their spare time.[10]

Commercial fishing is a very important area activity. A large fleet of shrimp boats operates here and furnishes raw supply to the 14 seafood establishments located in Glynn County. A variety of packaged, frozen seafoods is produced by these plants for nationwide distribution.[11]

Tourism accounts for a substantial part of the total business income in Glynn County, but measuring the economic impact of tourism is difficult since few merchants take the time or effort to record income from visiting patrons and that from the local residents separately. However, tourist trade is great enough to support 32 motels with 2,040 rooms in the area, plus numerous tourist homes and inns, all of which are available as tourist accommodations.[12] The Chamber of Commerce estimates $50 million from tourism is contributed annually to the Glynn County economy.[13]

The Glynco Naval Air Station adds stature to the economy of Glynn County. Commissioned in 1943 and located approximately six

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[10] Ibid. [11] Ibid. [12] Coastal Area Planning, op. cit., p. 22.

[13] Telephone conversation with Chamber of Commerce, June, 1974.

miles north of the city of Brunswick, the Glynco Naval Air Station has given the Glynn County economy a strong boost since coming to the area. The annual payroll in 1970 for Glynco was $16.0 million, which consisted of $2.8 million paid to civilian employees and $13.2 million paid to military personnel.[14] The Navy owns approximately 4,500 acres in Glynn County where the Naval Air Station is located.[15]

Besides the revenue provided to the local economy, Glynco also has had many other impacts on the community. The facility attracts many residents with above average skill, education, and income.[16]

According to a July, 1967, Labor Market Report of the Brunswick area, Glynn County's population in 1967 was 41,954. The civilian population was 39,978, and the civilian labor force included 18,590 persons. There were 18,050 civilians employed in 1967, and 540 persons were unemployed. The 18,050 civilians were employed in the following classifications: manufacturing, 5,590; wholesale and retail trade, 2,900; government, 2,600; self-employed, unpaid family workers and domestic workers, 2,240; services, 2,170; contract construction, 1,050; transportation, communication, electric, gas, and sanitary services, 730; finance, insurance and real estate, 550, farm workers, 150; all other nonmanufacturing, 70.[17]

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[14]Coastal Area Planning, op. cit., p. 25.

[15]Navy Glynco. Lubbock, Texas: Boone Publications, Inc., 1968, p. 3.

[16]Coastal Area Planning, op. cit., p. 25.

[17]"Labor Market Report," Department of Labor, Employment Security Agency, Georgia State Employment Service, Atlanta, Georgia, 1967, p. 7.

III. EDUCATIONAL BACKGROUND

Since the beginning of public schools in Georgia, both the city and county have had a unified system of education. In 1873 the General Assembly of Georgia passed an act creating a system of public schools that would govern the entire county. The act created a County Board of Education which selects a county school superintendent.[18]

The Glynn County Grand Jury and the City Commission of Brunswick appoint five members each to the Glynn County Board of Education. One member is appointed every year by each group. The ten board members are appointed to serve five-year terms.[19]

Educational facilities of the Glynn County public school system include two high schools, two junior high schools, twelve elementary schools, and a kindergarten. On October 1, 1973, active enrollment in the 17 schools was about 12,000 students. Active enrollment in grades 9 through 12 was about 3,790 students. Approximately 800 students graduate from the two high schools each year.[20]

The Glynn County public school system employs 610 certified teachers in the 17 schools. Fourteen certificated teachers are

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[18]Curtis Winfred Childs, "History of Brunswick, Georgia" (unpublished Master's thesis, Auburn University, 1960), pp. 93-95.

[19]Personnel Handbook, Glynn County Public Schools, (Glynn County Board of Education, Brunswick, Georgia, 1973), p. 2.

[20]Interview with R. E. Jonas, Assistant Superintendent of Schools, Glynn County, Georgia, November 20, 1973.

employed at the Community Development Center, and 27 certificated personnel are employed in the administration of Glynn County public schools. Of the 159 public school systems in the state of Georgia, Glynn County is the 13th largest with a budget of $10 million.[21]

Three course plans--academic, commercial, and vocational--are provided in the existing curriculum for Glynn County students in grades nine through twelve. The make-up of each course plan is presented below:

Academic Course Plan[22]

Courses required for school recommendation to college:

English	4 Units
Albegra I, II, Geometry	3 Units
Science, Biology, Chemistry, or Physics	3 Units
Social Studies including World or American History	3 Units
Activity	1 Unit
Electives (at least)	4 Units

Recommended electives:

Foreign language	2 Units
Advanced Algebra - Trigonometry	1 Unit
Other subjects of interest and courses related to anticipated college major	

Commercial Course Plan[23]

Courses required:

English	3 Units
Business English	1 Unit

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[21] Ibid.

[22] Basic Curriculum Guide, Glynn County Schools, Brunswick, Georgia, (Glynn County Board of Education, Brunswick, Georgia, 1968), pp. 24-25.

[23] Ibid., p. 25.

Typing I, Typing II	2 Units
Shorthand I, II, or Bookkeeping I, II	2 Units
Mathematics I, II Business Mathematics, or Algebra I, II	2 Units
Social Studies including American History	3 Units
Science including Biology	2 Units
Activity	1 Unit
Electives (at least)	2 Units

Recommended Electives:

Business Mathematics	1 Unit
Business Management	1 Unit
Office Machines	1 Unit
Other subjects of interest	

Vocational Course Plan[24]

Courses required:

English	4 Units
Mathematics I, II, or Algebra I, II	2 Units
Science including Biology	2 Units
Social Studies including American History	3 Units
Activity	1 Unit
Electives (at least)	6 Units

Areas of Study: (Academic students may select courses in areas below)
Industrial Arts:
Mechanical Drawing I and/or II
Wood Shop I, II and/or Metal Shop I, II
Agriculture and Agricultural Business
Diversified Cooperative Training
Vocational Office Training
Vocational-Technical Courses

The Georgia State Department of Education requires that all graduates of the high schools in Georgia complete a total of at

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[24] Ibid.

least 18 Units of courses. The basic requirements for high school graduation (grades 9-12) in Georgia are given below:[25]

English	4 Units
Mathematics	2 Units
Science (Include Biology)	2 Units
Social Studies (Include American History)	3 Units
Activity	1 Unit
Electives (at least)	6 Units
Total (at least)	18 Units

As indicated by the state requirements, the Glynn County public school system requires one unit more than the state requires in the academic course plan of both mathematics and science.

Included in the educational program, the Glynn County public high schools provide cooperative work-study programs in the following areas: Distributive Education, Diversified Cooperative Training, and Vocational Office Training. In the 1973-1974 school term, 44 students were enrolled in the DE program; 38 were enrolled in the VOT program; and 34 were enrolled in the DCT program.

Each year, a follow-up study of the previous year's graduates is conducted by the guidance counselors in the two high schools. The information from the 1973-1974 study concerning the previous year's graduates is shown in Table I.

As indicated in the guidance follow-up report, 392, or 56.3 percent, of the 696 graduates responding to the survey, continued their formal education; 258, or 37.1 percent, were employed full-time; and 46, or 6.6 percent, were unemployed.

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[25] Ibid., p. 24.

TABLE I

GUIDANCE FOLLOW-UP OF HIGH SCHOOL GRADUATES

Item	Male		Female		Totals	
	No.	Percent	No.	Percent	No.	Percent
Total Number of Graduates Surveyed	383	49.6	389	50.4	772	100.0
Total Number Reporting	348	50.0	348	50.0	696	100.0
Formal Education						
Four-year College	70	20.1	66	18.9	136	19.5
Two-year College	90	25.9	116	33.4	206	29.6
State Technical and Vocational Schools	20	5.7	12	3.4	32	4.6
Other Schools	12	3.4	6	1.8	18	2.6
Totals	192	55.1	200	57.5	392	56.3
Full-Time Employment						
Professional, Managerial, Proprietary	1	0.2	1	0.2	2	0.3
Clerical and Sales	16	4.6	53	15.3	69	9.9
Services	31	8.9	42	12.0	73	10.4
Armed Services	27	7.9	4	1.1	31	4.5
Skilled	11	3.2	2	0.6	13	1.9
Semiskilled	17	4.9	3	0.9	20	2.9
Unskilled	39	11.2	11	3.2	50	7.2
Totals	142	40.9	116	33.3	258	37.1
Unemployed	14	4.0	32	9.2	46	6.6

IV. BUSINESS EDUCATION

A major objective of business education is to develop job competencies and to teach basic economic understandings which students need to take their places in society. The Business Education Departments of the two Glynn County high schools are staffed by 11 teachers with certification in business areas. There were 1,427 students enrolled in business courses on October 1, 1973. Of the approximately 800 students graduating from the two Glynn County high schools each year, approximately 70 graduate with business and office competency.

The student may select his business and office courses depending upon his objective. For basic business information, two options are available in the Commercial Course Plan: secretarial and clerical. Students selecting the secretarial program must complete one unit in typewriting and one unit in shorthand. Students selecting the clerical program must complete one unit in bookkeeping and one unit in typewriting. Electives may consist of any of the other business courses.

For vocational preparation, a student may choose to follow the Vocational Course Plan which includes work experience programs in the various areas of study. The Vocational Office Training program is open to juniors and seniors who have completed Typewriting I. At least two other business subjects must have been completed previously or may be taken concurrently with Vocational Office Training. The VOT program is an educational program in which students receive

part-time vocational instruction in the school and part-time employment through on-the-job training. The work situation is used as a "School Laboratory" where occupational competencies are developed. The learning experiences provided on the training job are planned and supervised by both the coordinator-teacher and the employer. Classroom instruction is correlated with the activities of the training job and with the student's occupational goal. The student receives individual instruction that is directly related to his/her individual job needs and career goals.

The business departments in each of the two high schools consist of six classrooms, and each high school is equipped with the following office machines: 122 manual typewriters; 30 electric typewriters; 4 ten-key adding machines; 1 electronic calculator; 4 printing calculators; 1 rotary calculator; 1 fluid duplicator; 1 stencil duplicator; 1 copy machine (thermafax); 1 bookkeeping machine; 2 transcribing machines; and 1 mimeoscope. The Typewriting I classrooms are equipped with manual typewriters, and the Typewriting II classrooms are equipped with electric typewriters. There is a shorthand lab in each of the two high schools, but one of the schools is in need of a new shorthand lab.

The following is a description of the business course offerings, the grades in which the courses are offered; the units of credit, and the prerequisites.[26] To earn a unit of credit, students must be enrolled in each course a full school term. Notehand and personal

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[26]Curriculum Guide, Glynn County Public Schools, Glynn County, Georgia.

typewriting, however, are one-semester courses. All classes are in session 55 minutes each school day.

Bookkeeping I
Grade Level: 10-12
Credit: 1 Unit
Prerequisite: None

This course presents the student with the fundamentals of the bookkeeping cycle and its effect on management policies. The course is designed to prepare the student to keep a simple set of books for a service business or a small sole proprietorship. The course also deals with processing cash receipts and cash payments, processing purchases of merchandise, processing credit sales, adjusting and closing the books, payroll accounting, notes payable and notes receivable, depreciation and bad debts.

Bookkeeping II
Grade Level: 11-12
Credit: I Unit
Prerequisite: Bookkeeping I

This course develops additional skill in applying principles learned in Bookkeeping I. The course includes records and accounts peculiar to a corporation, valuation of capital stock, profits, dividends, reserves and surplus. Students complete a practice set.

Business English
Grade Level: 11-12
Credit: 1 Unit
Prerequisite: Typing I or Personal Typing

Content coverage of this course includes basic grammar, spelling, punctuation, business vocabulary, sentence structure, and paragraph structure. The course also includes basic letter styles, letterheads, and the principles of letter writing. Also included in the course are writing, giving oral reports, study of business reports, basic parliamentary procedures, preparation of resumes, letters of application, and other information pertinent to a student seeking employment.

Business Law
Grade Level: 11-12
Credit: 1 Unit
Prerequisite: None (It is recommended that students have at least a "C" overall average.)

This course provides an introduction to the functions of courts, types of law, basic elements of contracts, warranties, agencies, and contracts of employment. Transferring property by will and inheritance, negotiable instruments, buying insurance, types of business organizations, and renting are also included in this course.

Business Math
Grade Level: 11-12
Credit: 1 Unit
Prerequisite: None

The number operations basic to math in business (such as addition, subtraction, multiplication, division, fractions, percentage, decimals, and interest) are included in this course. The content also includes trade and cash discounts, retail selling, discounting notes, business graphs, cost of travel and transportation, and cost of public utilities.

Business Principles and Management
Grade Level: 10-12
Credit: 1 Unit
Prerequisite: None

This course introduces the student to the principles and practices of business under the free enterprise system. The course is designed to give the student a knowledge of the organization of sole proprietorships, partnerships, corporations, cooperatives, and office organizations. Financial operations of a business are studied.

Clerical Office Practice
Grade Level: 11-12
Credit: 1 Unit
Prerequisite: Typewriting I

In this course, students explore the world of work and careers in the modern office through the following units of work: typewriting, filing penmanship, office machines, banking, spelling, and business English. Projects also provide training for various clerical duties.

Notehand
Grade Level: 11-12
Credit: 1/2 Unit (Offered 2nd Semester)
Prerequisite: None

This course includes the theory of shorthand, and the student learns the importance of listening and taking notes for college or for personal use. This course is not intended for vocational use.

Personal Typewriting
Grade Level: 11-12
Credit: 1/2 Unit
(Offered 1st Semester)
Prerequisite: None

This course is designed for personal use and is not intended for vocational use. The student will learn the touch control of the keyboard and operative parts of the typewriter. The course emphasizes personal notes and letters, themes, term papers, and simple tabulation problems.

Recordkeeping
Grade Level: 10-12
Credit: 1 Unit
Prerequisite: None

This course deals basically with the records for buying and selling merchandise, controlling inventory, handling money, and the function of banking. The course also includes records for use in the home and in personal life.

Shorthand I
Grade Level: 10-12
Credit: 1 Unit
Prerequisite: Typing should be taken concurrently if not previously; also a "C" average in English recommended

This course includes the entire alphabet in the Diamond Jubilee System. A thorough mastery of the various brief forms is stressed. The following skills are required: Theory: complete theory test, 90 percent accuracy; brief forms, 90 percent accuracy. Reading: 90-120 words a minute (no errors) on new material for two minutes; 90-100 words a minute (2 errors or less) on copied homework for two minutes. Dictation: 60 words a minute to 80 words a minute for 5 minutes on new matter dictation. On new material for 3 minutes; all transcripts based on 95 percent accuracy.

Shorthand II
Grade Level: 11-12
Credit: 1 Unit
Prerequisite: "C" average in Shorthand I

This course is devoted to dictating at progressive speeds to build ability to take dictation and transcribing the material into mailable letters. The following skills are required: Theory: complete theory test, 90 percent accuracy; brief forms, 90 percent accuracy. Reading: 120-170 words a minute (no errors) on new material for two minutes; 100-150 words a minute (no errors) on copied homework. Dictation: Most 3 and 5 minute transcripts are based on 95 percent accuracy, new material. If material is practiced, accuracy should be 98 percent.

Transcription: When dictation is given at 80-100 words per minute in a group of letters comprising a total dictation of 800 to 1,000 words, the learner should transcribe at the rate of 20-25 words per minute with 20 words as a minimum rate acceptable for credit at end of year. At least 75 percent of the letters in any five consecutive daily transcription periods should be mailable.

Typewriting I
Grade Level: 9-12
Credit: 1 Unit
Prerequisite: None

This course emphasizes touch control of the keyboard and operative parts of the typewriter. The course includes tabulation, business letters, office problems, and business forms. Upon completion of the course, the student must be able to type at a rate of 50 gross words a minute with no more than 5 errors on a 5-minute timing for an "A" grade; 40 gross words a minute with no more than 4 errors on a 5-minute timing for a "B" grade; 35 gross words a minute with not more than 3 errors on a 5-minute timing for a "C" grade; and 30 gross words a minute with not more than 2 errors on a 5-minute timing for a "D" grade.

Typewriting II
Grade Level: 10-12
Credit: 1 Unit
Prerequisite: A "C" average in Typewriting I

The purpose of this course is to have students maintain and improve basic typewriting techniques and to have students develop a vocational performance level in the production of typewritten material. Upon completion of the course, the student must be able to type 70 net words a minute with no more than 8 errors on a 10-minute timing for an "A" grade; 60 net words a minute with no more than 6 errors on a 10-minute timing for a "B" grade; 50 net words a minute with no more than 5 errors on a 10-minute timing for a "C" grade; and 45 net words a minute with no more than 4 errors on a 10-minute timing for a "D" grade.

To further meet the educational needs of the Glynn County area, Brunswick Junior College was founded in 1961 by the Regents of the University System of Georgia. The college, with a campus of over 100 acres, is located in the city of Brunswick in Glynn County. Brunswick Junior College is accredited by the Southern Association of Colleges and Schools.[27]

V. SUMMARY

This chapter had presented background information concerning the geographical, economic, and educational aspects of Glynn County, Georgia. The following chapter presents an analysis of the data obtained from the research.

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[27] Brunswick Junior College Bulletin 1972-1974, Volume 9, Number 1, (Brunswick Junior College, Brunswick, Georgia, September, 1972), p. 12.

CHAPTER IV

ANALYSIS OF THE DATA

The purposes of this study were (1) to conduct an occupational survey of businesses in Glynn County, Georgia, for determining office job opportunities available to high school business graduates, (2) to determine the requirements necessary to fulfill these positions, and (3) to evaluate, in light of the occupational survey, the existing business education curriculum in the two Glynn County high schools for possible revisions.

A random selection of 180 businesses in Glynn County, Georgia, was made to gather data for the study. The criteria for selecting the businesses were as follows: (1) employed office workers; (2) represented varying sizes of firms in the Glynn County employment area; and (3) represented a cross-section of the diverse types of businesses in Glynn County. The mailed questionnaire technique was used in the collection of data. The responses of businesses selected for the survey are shown in Table II. Of the total 180 business firms selected for the survey, 151, or 83.9 percent, returned the questionnaires. Thirteen, or 8.6 percent, of the returned questionnaires were not usable. Accompanying notes indicated the businessmen did not complete the questionnaire because it "did not apply to their type of business," "office force was stable and did not change from year to year," "small new company; therefore, cannot answer questions," and "had discontinued business in Brunswick." The usable questionnaires

TABLE II

NUMBER OF BUSINESSES INCLUDED IN THE SURVEY

Item	Number	Percent
Total business firms included in the survey	180	100.0
Total questionnaires not returned by the business firms	29	16.1
Total questionnaires returned by the business firms	151	83.9
Questionnaires returned by business firms but not usable	13	8.6
Total questionnaires returned and applicable to the survey	138	91.4

returned, 138, or 91.4 percent, served as the basis for the data presented in this chapter.

Concerning adequacy of returned survey questionnaires, Kerlinger makes the following statement:

> If mailed questionnaires are used, every effort should be made to obtain returns of at least 80 to 90 percent or more. . . .[1]

Therefore, the returned response, 151, or 83.9 percent, in the present survey should be adequate for representativeness of the employment community of Glynn County, Georgia.

The data gathered in this chapter are presented and discussed under the following categories: Business Occupational Opportunities, Pre-Employment Practices of Business Employers, Selected Job Competencies, and Improvements for Business Education.

I. BUSINESS OCCUPATIONAL OPPORTUNITIES

The following section presents the business occupational opportunities available to business education graduates of the Glynn County high schools:

Classification of Businesses

The 138 business firms included in the study were classified into seven groups by Standard Industrial Classification. As shown in Table III, of the 138 business firms responding to the questionnaire, 47, or 34.0 percent, were classified as Wholesale and Retail Trade

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[1] Fred N. Kerlinger, Foundations of Behavioral Research (New York: Holt, Rinehart and Winston, Inc., 1964), p. 397.

TABLE III

CLASSIFICATION OF BUSINESS FIRMS SURVEYED[a]

Business Type	Number	Percent
Wholesale and Retail Trade	47	34.0
Services	27	19.6
Manufacturing	24	17.4
Finance, Insurance, and Real Estate	17	12.3
Transportation, Communication, Electric, Gas, and Sanitary Services	12	8.7
Contract Construction	8	5.8
Government	3	2.2
Total	138	100.0

[a]By Standard Industrial Classification.

group; 27, or 19.6 percent, Services; 24, or 17.4 percent, Manufacturing; 17, or 12.3 percent, Finance, Insurance, and Real Estate; 12, or 8.7 percent, Transportation, Communication, Electric, Gas, and Sanitary Services; 8, or 5.8 percent, Contract Construction; and 3, or 2.2 percent, Government. The results from this variety of businesses should provide information about the employment requirements and opportunities for an assessment of the adequacy of the business curriculum in the high schools.

Office Positions Available by Sex

To determine the number of office positions in Glynn County, employers were asked to indicate the number of full-time and part-time office employees in their organizations. Table IV presents a distribution of office employees as to full-time and part-time employment. The 138 business firms indicated a total of 1,911 office positions in Glynn County, Georgia. There were 1,696, or 89 percent, full-time positions, and 215, or 11 percent, part-time positions. Of the 1,911 office positions, 1,127 were full-time positions filled by women, and 569 were full-time positions filled by men. Women filled 159 part-time office positions, and men filled 56 part-time positions. The greatest number of office positions, 1,286, were filled by women, and 625 office positions were filled by men. There were more than twice as many women in office positions than men. The possibility exists that the small number of male office workers was a result of unqualified males to fill the positions. The large number of office positions indicated that qualified high school

TABLE IV

FULL-TIME AND PART-TIME OFFICE POSITIONS BY SEX

Employment Classification	Sex		Total	Percent
	Male	Female		
Full-time Employment	569	1,127	1,696	89.0
Part-time Employment	56	159	215	11.0
Total	625	1,286	1,911	100.0

business graduates, male and female, would have an opportunity to begin a business career in Glynn County, Georgia.

Concerning the number of women in office positions compared with the number of men in office positions, Smith's study indicated that women outnumbered men in office occupations by an approximate 2 to 1 ratio in 1964 and 1966.[2] Glessner[3] found that almost 90 percent of the office workers covered in her study were women. The Tweed[4] study found that of a total of 895 business employees, 544 were female workers, and 351 were male workers. The findings of the present study were consistent with the findings of previous studies thus providing a more generalized view of employment in the office.

Office Positions Available by Type

Employers were asked to indicate the office positions which could be filled yearly by high school business graduates. As shown in Table V, of the 410 office positions available to high school business graduates, 130, or 31.7 percent, were general clerical positions. Other available office positions in order of frequency were as follows: 61, or 14.9 percent, bookkeeping; 58, or 14.1 percent, typist; 50, or 12.2 percent, switchboard operator; 44, or 10.7 percent, receptionist; 36, or 8.8 percent, machine operator; and 31, or 7.6 percent, stenographer. General clerical, bookkeeping, and typist

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[2]Joan Smith, "An Occupational Survey of Knoxville, Tennessee, Firms Employing From Five to One Hundred Persons" (unpublished Master's thesis, The University of Tennessee, 1967), p. 52.

[3]Glessner, op. cit. [4]Tweed, op. cit.

TABLE V

OFFICE POSITIONS IN GLYNN COUNTY, GEORGIA, AVAILABLE YEARLY TO HIGH SCHOOL BUSINESS EDUCATION GRADUATES

Type of Position	Number	Percent
General Clerical	130	31.7
Bookkeeper	61	14.9
Typist	58	14.1
Switchboard Operator	50	12.2
Receptionist	44	10.7
Machine Operator	36	8.8
Stenographer	31	7.6
Total	410	100.0

positions accounted for 60.7 percent of the jobs available to high school business graduates.

Other office positions which could be filled by high school business graduates included the following: cashier, customer service, office aids, night auditor, salesclerk, desk clerk, and legal secretary.

The office employment opportunities available to qualified high school business graduates of Glynn County indicated that the students should be informed of the local opportunities available to them in the area of office occupations. The study also indicated that the largest number of office positions available to high school graduates was in the general clerical area. As shown in Table I, page 61, the 1973-1974 guidance department's follow-up report of the previous year's graduates in the two Glynn County high schools indicated that of the 696 graduates responding to the follow-up survey, 258 had full-time jobs. Of the 258 reporting full-time jobs, 69 were employed in full-time clerical and sales positions. Of the 69 high school graduates employed in clerical and sales positions, 53 were females; and 16 were males. According to these results, students completing courses in the business and office departments in the two Glynn County high schools were employable.

The present study indicated that of the 410 office positions available yearly to high school business graduates, the most important group was the general clerical group which contained 130, or 31.7 percent, available positions. McCrea[5] found that 85 percent of the

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[5]McCrea, op. cit.

firms indicated they had employment for inexperienced high school graduates in the clerical field. The Belland study[6] also indicated a noticeable turnover in clerical occupations. These findings were consistent with the findings of the present study.

II. PRE-EMPLOYMENT PRACTICES OF BUSINESS EMPLOYERS

The following section presents the pre-employment practices of the business employers. The data are presented and discussed in the following order:

Types of Employment Tests

To assist in the placement of new employees into positions for which they are qualified, some business employers give employment tests. The business employers were asked to indicate the types of employment tests given to prospective employees. As shown in Table VI, 27 of the business employers administered a typewriting test; 22, an arithmetic test; 16, a clerical test; 13, a dictation-transcription test; 10, a filing test; 9, a personality test; 7, an English test; 7, an I. Q. test; and 4, a psychological test. Other tests administered by the business employers included penmanship, vocabulary, aptitude, adding machine, and driving tests. Results of the survey indicated that tests were not used to a great extent by business employers in Glynn County in selecting office workers.

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[6] Belland, op. cit.

TABLE VI

TYPES OF EMPLOYMENT TESTS GIVEN TO PROSPECTIVE EMPLOYEES

Type of Test	Number of Employers Giving Test[a]
Typewriting	27
Arithmetic	22
Clerical	16
Dictation/Transcription	13
Filing	10
Personality	9
English	7
I. Q.	7
Psychological	4

[a]Some offices indicated the use of only one test; others indicated the use of more than one test. Therefore, the numbers are not additive.

Sources Through Which Office Employees Were Obtained

The employers were asked to indicate the sources through which they obtained their office employees. Of the 138 business employers surveyed, 132 responded to the question.

As shown in Table VII, personal applications were extensively used by 71, or 53.8 percent; occasionally used by 47, or 35.6 percent; and never used by 3, or 2.3 percent. No response was indicated by 11, or 8.3 percent, of the employers.

Employment agencies were occasionally used by 64, or 48.5 percent; extensively used by 33, or 25.0 percent; and never used by 18, or 13.6 percent. No response was indicated by 17, or 12.9 percent, of the employers.

Employees were occasionally used by 69, or 52.3 percent; extensively used by 32, or 24.2 percent; and never used by 4, or 3.0 percent. No response was indicated by 27, or 20.5 percent, of the employers.

Newspaper advertisements were occasionally used by 50, or 37.9 percent; never used by 32, or 24.2 percent; and extensively used by 25, or 18.9 percent. No response was indicated by 25, or 19.0 percent of the employers.

Recommendation of friends was occasionally used by 76, or 57.6 percent; extensively used by 24, or 18.2 percent; and never used by 4, or 3.0 percent. No response was indicated by 28, or 21.2 percent, of the employers.

High schools were occasionally used by 57, or 43.2 percent; never used by 36, or 27.3 percent; and extensively used by 6, or

TABLE VII

SOURCES THROUGH WHICH OFFICE EMPLOYEES WERE OBTAINED[a]

Source	Extensively Used		Occasionally Used		Never Used		No Response Indicated	
	No.	Percent	No.	Percent	No.	Percent	No.	Percent
Personal application	71	53.8	47	35.6	3	2.3	11	8.3
Employment agencies	33	25.0	64	48.5	18	13.6	17	12.9
Employees	32	24.2	69	52.3	4	3.0	27	20.5
Newspaper advertisements	25	18.9	50	37.9	32	24.2	25	19.0
Recommendation of friends	24	18.2	76	57.6	4	3.0	28	21.2
High schools	6	4.5	57	43.2	36	27.3	33	25.0
Private business schools	3	2.3	30	22.7	58	43.9	41	31.1

[a]Of the 138 business employers surveyed, 132 answered this question.

4.5 percent. No response was indicated by 33, or 25.0 percent, of the employers.

Private business schools were never used by 58, or 43.9 percent; occasionally used by 30, or 22.7 percent; and extensively used by 3, or 2.3 percent. No response was indicated by 41, or 31.1 percent, of the employers.

Brunswick Junior College was listed as a source of recruitment occasionally used by three employers.

The survey indicated that personal applications was the most extensively used source of recruitment, and that business employers occasionally rely on the high schools to furnish a list of prospective employees for consideration as office workers.

Both Copeland[7] and Tweed[8] found that most of the employers in their studies made use of the personal application more frequently than any other agency in obtaining employees. These findings were consistent with the findings of the present study.

Factors of Importance to Employers When Considering Applicants for Office Positions

The business employers were asked to rank the factors which they thought were important when considering high school applicants for office positions. Of the 138 business employers surveyed, 134 responded to the question.

As shown in Table VIII, the interview impression of the applicant was considered to be the most important factor in deciding

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[7]Copeland, op. cit. [8]Tweed, op. cit.

TABLE VIII

FACTORS OF IMPORTANCE TO EMPLOYERS WHEN CONSIDERING APPLICANTS FOR OFFICE POSITIONS[a]

Factor	Very Important		Moderately Important		Unimportant		No Response Indicated	
	No.	Percent	No.	Percent	No.	Percent	No.	Percent
Impression of applicant in interview	121	90.3	13	9.7	0	0.0	0	0.0
Letters of recommendation	40	29.9	76	56.7	12	8.9	6	4.5
Review of school records	27	20.1	41	30.6	18	13.4	48	35.9
Pre-employment test scores	23	17.1	44	32.9	23	17.1	44	32.9

[a]Of the 138 business employers surveyed, 134 answered this question.

to hire or not to hire. One hundred twenty-one, or 90.3 percent, rated the interview impression very important; and 13, or 9.7 percent, moderately important. None of the employers thought the interview impression was unimportant.

Letters of recommendation were rated moderately important by 76, or 56.7 percent; very important by 40, or 29.9 percent; and unimportant by 12, or 8.9 percent. No response was indicated by 6, or 4.5 percent, of the employers.

Review of school records was rated moderately important by 41, or 30.6 percent; very important by 27, or 20.1 percent; and unimportant by 18, or 13.4 percent. No response was indicated by 48, or 35.9 percent, of the employers.

Pre-employment test scores were rated moderately important by 44, or 32.9 percent; very important by 23, or 17.1 percent; and unimportant by 23, or 17.1 percent. No response was indicated by 44, or 32.9 percent, of the employers.

Several business employers listed other factors not included on the questionnaire. The following were rated very important: attitude, initiative, manners, personal appearance, previous work experience, references, self-confidence, stability of work pattern, and types of school subjects completed. Leadership ability was listed and rated moderately important.

The importance of the interview impression indicated that personality, grooming, and manners of the applicant helped substantially in getting a job.

Concerning factors of importance when considering applicants for office positions, 90.3 percent of the business employers in the present study indicated that the interview impression was a very important factor. McCrea[9] found that 85 percent of the companies interviewed considered the personal interview as the most important selection instrument. Medley[10] found that employers considered the interview impression of the applicant the most important single factor when hiring, with test scores in pre-employment testing, recommendation letters, and school records following in that order. Pekar[11] found that application blanks, personal interviews, and school records were important devices to use in screening applicants. These findings support the findings of the present study.

Review of High School Records by Employers

The business employers were asked whether they reviewed the applicant's high school record prior to employment. Of the 138 business employers surveyed, 19 gave no answer to this question. Table IX shows that 68, or 49.2 percent, of the business employers replied that they reviewed the applicant's high school record prior to employment; 51, or 37.0 percent, replied they did not; and 19, or 13.8 percent, gave no answer. This finding indicated that school records of high school graduates were needed for review by a number of business employers.

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[9]McCrea, op. cit.

[10]Medley, op. cit.

[11]Pekar, op. cit.

TABLE IX

REVIEW OF HIGH SCHOOL RECORDS BY EMPLOYERS

Answer	Number Responding	Percent
Yes	68	49.2
No	51	37.0
No Answer Given	19	13.8
Total	138	100.0

As shown in Table IX, 68 employers, or 49.2 percent, indicated that they reviewed the applicant's high school record prior to employment. The business employers were asked to rate the factors which they thought were important when reviewing high school records of prospective employees.

As shown in Table X, of the 68 business employers responding to the question, attitude was rated very important by 64, or 94.1 percent; moderately important by 4, or 5.9 percent. None of the employers thought attitude was unimportant.

Attendance was rated very important by 59, or 86.8 percent; moderately important by 9, or 13.2 percent. None of the employers thought attendance was unimportant.

Types of courses completed were rated very important by 42 employers, or 61.8 percent; moderately important by 25, or 36.8 percent; and unimportant by 1, or 1.4 percent.

Grade point average was rated moderately important by 36 employers, or 53.0 percent; very important by 31, or 45.6 percent; and unimportant by 1, or 1.4 percent.

FBLA (Future Business Leaders of America) membership was rated moderately important by 34 employers, or 50.0 percent; very important by 18, or 26.4 percent; and unimportant by 16, or 23.6 percent.

Personal appearance, not listed on the questionnaire, was listed by several employers and was rated as a very important factor when high school records of potential office employees were reviewed. School activities was listed by one business employer but was not rated as to importance.

TABLE X

FACTORS OF IMPORTANCE TO EMPLOYERS WHEN REVIEWING HIGH SCHOOL RECORDS[a]

Factor	Very Important		Moderately Important		Unimportant	
	No.	Percent	No.	Percent	No.	Percent
Attitude	64	94.1	4	5.9	0	0.0
Attendance	59	86.8	9	13.2	0	0.0
Types of courses completed	42	61.8	25	36.8	1	1.4
Grade point average	31	45.6	36	53.0	1	1.4
FBLA membership	18	26.4	34	50.0	16	23.6

[a]Of the 138 business employers surveyed, 68 answered this question.

The findings indicated that employers considered attitude and attendance very important when contacting the high schools for information concerning prospective employees. McCrea[12] found that approximately 82 percent of the companies always investigated the past employment of the prospective employees, approximately 64 percent always investigated personal references, and 26 percent always checked with the schools. These findings were consistent with the findings of the present study.

III. SELECTED JOB COMPETENCIES

The business employers were asked on the survey questionnaire to indicate minimum acceptable rates in straight-copy typing, problem typing, dictation/transcription, and office machines. They were also asked to indicate filing systems used. The data are presented and discussed as follows:

Straight-Copy Typewriting

The business employers were asked to indicate the minimum speed, length of test, and error tolerance on straight-copy typewriting tests administered to prospective office workers. Of the 138 business employers surveyed, only 27 indicated a minimum speed on straight-copy typewriting tests. As shown in Table XI, the rates ranged from 30 to 75 words per minute. One employer indicated a minimum speed of 75 words per minute; 9 indicated a minimum speed of 50 words per

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[12] McCrea, op. cit.

TABLE XI

MINIMUM RATES, LENGTH OF TEST, AND ERROR TOLERANCE ON STRAIGHT COPY TYPEWRITING TESTS ADMINISTERED TO BEGINNING OFFICE WORKERS

Item	Number of Firms Responding
Minimum Speed (WPM)* Required	
75	1
60	3
55	1
50	9
45	6
40	5
30	2
No Response	111
Total	138
Length of Test in Minutes	
15	1
10	3
5	15
3	5
No Response	114
Total	138
Error Tolerance	
5	6
4	1
3	1
2	5
No Response	125
Total	138

*Words Per Minute.

minute--the rate most often given; and 2 indicated a minimum speed of 30 words per minute.

Concerning the length of straight-copy tests, only 24 of the 138 business employers indicated test length. The length of straight-copy tests ranged from 3 minutes to 15 minutes. Of the 24 business employers responding to this part of the question, 1 employer indicated the use of a 15-minute test; 15 used a 5-minute test--the time length most often used; and 5 business employers indicated the use of a 3-minute test.

Concerning error tolerance on straight-copy tests, only 13 of the 138 business employers responded to this part of the question. Six of the 13 business employers indicated 5 errors were permitted, and 5 indicated 2 errors were permitted.

The large number of business employers not responding to the question indicated that they either administered no straight-copy typewriting tests, did not take time to answer the question, or had no minimum requirements for typewriting.

Problem Typewriting

The business employers were asked to indicate the minimum speed, length of test, and error tolerance on problem typewriting tests administered to prospective office workers. Of the 138 business employers surveyed, only 7 indicated a minimum speed on problem typewriting tests. As shown in Table XII, the rates ranged from 30 to 50 words per minute. One employer indicated a minimum speed of 50 words per minute; 4 indicated 40 words per minute; and 2 indicated a minimum speed of 30 words per minute on problem typewriting tests.

TABLE XII

MINIMUM RATES, LENGTH OF TEST, AND ERROR TOLERANCE ON PROBLEM TYPING TESTS ADMINISTERED TO BEGINNING OFFICE WORKERS

Item	Number of Firms Responding
Minimum Speed (WPM)* Required	
50	1
40	4
30	2
No Response	131
Total	138
Length of Test in Minutes	
15	1
5	4
3	1
No Response	132
Total	138
Error Tolerance	
2	3
1	1
No Response	134
Total	138

*Words Per Minute.

Concerning the length of problem typewriting tests, only 6 of the 138 business employers responded to the question. The length of problem typewriting tests ranged from 3 to 15 minutes. Of the 6 responding employers, 1 indicated the use of a 15-minute problem typewriting test; 4 indicated the use of a 5-minute test; and 1 indicated the use of a 3-minute problem typewriting test.

Concerning error tolerance on problem typewriting tests, only 4 of the 138 business employers responded to the question. Three business employers permitted 2 errors on problem typewriting tests; and 1 employer permitted 1 error.

The large number of business employers not responding to the question indicated that they either adminsitered no problem typewriting tests, did not take time to answer the question, or had no minimum requirements for problem typewriting.

Shorthand Dictation/Transcription

The business employers were asked to indicate the minimum speed, length of test, and error tolerance on shorthand dictation/transcription tests administered to prospective office workers. Of the 138 business employers surveyed, only 9 indicated a minimum speed on shorthand dictation/transcription tests. As shown in Table XIII, the rates ranged from 40 to 100 words per minute. Of the 9 business employers responding to the question, 1 indicated a minimum speed of 100 words per minute; 3 indicated a minimum speed of 80 words per minute--the rate most often given; and 1 indicated a minimum speed of 40 words per minute.

TABLE XIII

MINIMUM RATES, LENGTH OF TEST, AND ERROR TOLERANCE ON SHORTHAND DICTATION/TRANSCRIPTION TESTS ADMINISTERED TO BEGINNING OFFICE WORKERS

Item	Number of Firms Responding
Minimum Speed (WPM)* Required	
100	1
80	3
75	1
60	1
50	2
40	1
No Response	129
Total	138
Length of Test in Minutes	
30	1
5	6
No Response	131
Total	138
Error Tolerance	
5	3
4	2
2	1
No Response	132
Total	138

*Words Per Minute.

Concerning the length of shorthand dictation/transcription tests, only 7 of the 138 business employers indicated test length. One employer indicated the use of a 30-minute test; and 6 indicated the use of a 5-minute test.

Concerning error tolerance on shorthand dictation/transcription tests, only 6 of the 138 business employers responded to the question. Three of the employers indicated 5 errors were permitted; 2, 4 errors; and 1, 2 errors. The failure of the large number of business employers to respond to the question indicated that they either administered no shorthand dictation/transcription tests, did not take time to answer the question, or had no minimum requirements for shorthand.

The present study indicated that of the 138 business employers surveyed, 27 administered a typewriting test to prospective employees (Table VI, page 79). The rate most often given was 50 words per minute, the 5-minute test was used most often, and 5 errors was the number most often allowed by the employers (Table XI, page 90). Similar results were indicated by the following studies: Belland[13] found that the typewriting requirements for the beginning workers in the businesses studied ranged from 35 to 60 words per minute; Cattaneo[14] found that the average minimum speed required in typewriting was 50 words per minute; Glessner[15] found that the average typing speed required was 45 words per minute; Gocker[16] found that most of the firms expected from 50 to 70 gross words a minute with

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[13]Belland, op. cit.

[14]Cattaneo, op. cit.

[15]Glessner, op. cit.

[16]Gocker, op. cit.

no more than one error a minute allowed on a 5-minute typewriting test; Koch[17] found that the average speed required in typewriting was 45 words per minute and that accuracy standards varied greatly. McCrea[18] found that 53 percent of the firms in his study used tests as a selecting tool of new employees, and that the average minimum speed for a typist was 40 net words per minute, 50 net words for a stenographer, and 55 net words for a secretary. Medley's study[19] indicated that typewriting tests were usually 5 minutes in length and required typing speeds of at least 45 words per minute.

The present study found that the minimum speed required on shorthand tests ranged from 40 to 100 words per minute; the time length ranged from 5 to 30 minutes; and the number of errors allowed ranged from 2 to 5. The Belland study[20] indicated that the shorthand speed requirements for the beginning workers in the businesses studied ranged from 60 to 100 words per minute. The Cattaneo study[21] found that the average minimum speed required in shorthand was 80 words per minute. Medley[22] found that shorthand tests were usually 5 minutes in length and required at least 80 words per minute. Koch[23] found that the majority of the employers did not give employment tests; but when tests were given, the average speed required

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[17] Koch, op. cit.

[18] McCrea, op. cit.

[19] Medley, op. cit.

[20] Belland, op. cit.

[21] Cattaneo, op. cit.

[22] Medley, op. cit.

[23] Koch, op. cit.

in typewriting was 45 words per minute; the average speed required in shorthand was 80 words per minute; and accuracy standards varied greatly.

Even though a limited number of employers answered this portion of the present study, the findings were consistent with findings in other studies. Therefore, generalizations can be drawn from these findings.

Office Machines

The extent of knowledge and skill required by employers on office machines must be known if educators are to prepare high school students for successful operation of office machines. The employers were asked to indicate the degree of training which they thought office workers should have on the various machines when they begin their initial employment. Of the 138 employers surveyed, 130 responded to the question.

As shown in Table XIV, 75, or 57.7 percent, of the employers responded that beginning workers should have moderate training on the ten-key adding machine; 31, or 23.9 percent, extensive training; and 8, or 6.1 percent, no training. No response was indicated by 16, or 12.3 percent, of the employers.

Sixty-one, or 47.0 percent, of the employers responded that beginning workers should have moderate training on the electronic calculator; 16, or 12.3 percent, extensive training; and 15, or 11.5 percent, no training. No response was indicated by 38, or 29.2 percent, of the employers.

TABLE XIV

DEGREE OF TRAINING RECOMMENDED BY EMPLOYERS ON OFFICE MACHINES[a]

Machine	Extensive Training		Moderate Training		No Training		No Response Indicated	
	No.	Percent	No.	Percent	No.	Percent	No.	Percent
Adding/Calculating								
Ten-Key Adding Machine	31	23.9	75	57.7	8	6.1	16	12.3
Electronic Calculator	16	12.3	61	47.0	15	11.5	38	29.2
Full Keyboard Adding	16	12.3	51	39.2	20	15.4	43	33.1
Printing Calculator	12	9.2	43	33.1	22	16.9	53	40.8
Duplicating								
Copy Machine	11	8.4	61	47.0	27	20.7	31	23.9
Offset Duplicator	2	1.5	26	20.0	23	17.7	79	60.8
Stencil Duplicator	1	0.8	28	21.5	29	22.3	72	55.4
Fluid Duplicator	0	0.0	26	20.0	29	22.3	75	57.7
Data Processing								
Accounting Machine	13	10.0	21	16.2	26	20.0	70	53.8
Key Punch	10	7.7	14	10.8	27	20.8	79	60.7
Verifier	6	4.6	19	14.6	29	22.3	76	58.5
Sorter	5	3.9	8	6.1	32	24.7	85	65.3
Collator	3	2.3	8	6.1	33	25.4	86	66.1
Other								
Bookkeeping Machine	14	10.8	25	19.2	22	17.0	69	53.0
Transcribing Machine	4	3.0	27	20.8	22	17.0	77	59.2

[a]Of the 138 business employers surveyed, 132 answered this question.

Fifty-one, or 39.2 percent, of the employers recommended moderate training on the full-keyboard adding machine; 20, or 15.4 percent, no training; and 16, or 12.3 percent, extensive training. No response was indicated by 43, or 33.1 percent, of the employers.

Forty-three, or 33.1 percent, of the employers recommended moderate training on the printing calculator; 22, or 16.9 percent, no training; and 12, or 9.2 percent, extensive training. No response was indicated by 53, or 40.8 percent, of the employers.

Sixty-one, or 47.0 percent, of the employers recommended moderate training on the copier; 27, or 20.7 percent, no training; and 11, or 8.4 percent, extensive training. No response was indicated by 31, or 23.9 percent, of the employers.

Twenty-six, or 20.0 percent, of the employers recommended moderate training on the offset duplicator; 23, or 17.7 percent, no training; and 2, or 1.5 percent, extensive training. No response was indicated by 79, or 60.8 percent, of the employers.

Twenty-nine, or 22.3 percent, of the employers recommended no training on the stencil duplicator; 28, or 21.5 percent, moderate training; and 1, or 0.8 percent, extensive training. No response was indicated by 72, or 55.4 percent, of the employers.

No training on the fluid duplicator was recommended by 29, or 22.3 percent, of the employers; moderate training by 26, or 20.0 percent; and extensive training on the fluid duplicator was not recommended by any of the employers. No response was indicated by 75, or 57.7 percent, of the employers.

Concerning the degree of training recommended on data processing equipment, the following responses were made by the employers: accounting machine, no training, 26, or 20.0 percent; moderate training, 21, or 16.2 percent; and extensive training, 13, or 10.0 percent. No response was indicated by 70, or 53.8 percent, of the employers.

The following responses were made concerning the keypunch: no training, 27, or 20.8 percent; moderate training, 14, or 10.8 percent; and extensive training, 10, or 7.7 percent. No response was indicated by 79, or 60.7 percent, of the employers.

The degree of training recommended on the verifier was: no training, 29, or 22.3 percent; moderate training, 19, or 14.6 percent; and extensive training, 6, or 4.6 percent. No response was indicated by 76, or 58.5 percent, of the employers.

The degree of training recommended on the sorter was: no training, 32, or 24.7 percent; moderate training, 8, or 6.1 percent; and extensive training, 5, or 3.9 percent. No response was indicated by 85, or 65.3 percent, of the employers.

The degree of training recommended on the collator was: no training, 33, or 25.4 percent; moderate training, 8, or 6.1 percent; and extensive training, 3, or 2.3 percent. No response was indicated by 86, or 66.1 percent, of the employers.

The degree of training recommended on the bookkeeping machine was: moderate training, 25, or 19.2 percent; no training, 22, or 17.0 percent; and extensive training, 14, or 10.8 percent. No response was indicated by 69, or 53.0 percent, of the employers.

The degree of training recommended on the transcribing machine was: moderate training, 27, or 20.8 percent; no training, 22, or 17.0 percent; and extensive training, 4, or 3.0 percent. No response was indicated by 77, or 59.2 percent, of the employers.

In addition, several business employers recommended moderate training on the following office machines not listed on the survey questionnaire: billing machine, rotary calculator, and cash register. (Two listed extensive training on the cash register.)

According to the responses made by the employers, moderate training on the adding/calculating, duplicating, bookkeeping, and transcribing machines was recommended as being sufficient training by more of the respondents than was extensive training or no training.

The information indicated that few high school graduates were called upon to be full-time machine operators, but that the high schools should provide moderate training in the use of these machines to meet the needs of local business offices.

No training on data processing equipment was recommended by more of the respondents than was either extensive training or moderate training. The low number of responses made to this section of the question indicated that few businesses in Glynn County had data processing equipment, or that few data processing positions were available to high school graduates.

The present study found that the most popular adding/calculating machine being used by employers was the ten-key adding machine. Belland[24]

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[24]Belland, op. cit.

found that the typewriter was the most widely used office machine, and the ten-key adding machine was the second most widely used office machine. (The present study did not list typewriters on the questionnaire.) The Bickel study[25] found that the ten-key adding-listing machine outranked all of the other office machines used. Gocker[26] also found that the ten-key adding-listing machine was the most popular machine used in business offices. These findings were in agreement with the findings of the present study.

Filing Systems in Use

The business employers were asked to indicate the system of filing used in their organizations. All 138 of the participating business employers responded to the question, which indicated the importance of well-kept files to the success of business organizations. Many of the employers indicated the use of two or more systems of filing.

As shown in Table XV, the use of the alphabetic filing system was much greater than the use of any other system. Of the 138 business employers included in the survey, 121 used alphabetic filing; 68, numeric filing; 38, subject filing; and 8, geographic filing.

The present study found that the filing system most in use was the alphabetic. Copeland[27] found that the system of filing most in use was alphabetic; second, numeric; and third, subject. Tweed[28]

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[25] Bickel, op. cit.

[26] Gocker, op. cit.

[27] Copeland, op. cit.

[28] Tweed, op. cit.

TABLE XV

FILING SYSTEMS IN USE IN GLYNN COUNTY BUSINESS OFFICES[a]

Filing System	Number Responding
Alphabetic	121
Numeric	68
Subject	38
Geographic	8

[a]Some offices indicated the use of two or more systems of filing.

also found that alphabetic filing was the most widely used system. Glessner[29] found that 97 percent of the firms used the alphabetic system of filing, and 35 percent used the numeric system. These findings were consistent with the findings of the present study.

IV. IMPROVEMENTS FOR BUSINESS EDUCATION

The following section presents the opinions of business employers concerning improvement of the business education program in the Glynn County high schools; the data are presented and discussed as follows:

Weaknesses in High School Graduates Employed in Office Positions

Business employers are in a position to observe the weaknesses in high school graduates employed in office positions. In order to improve the business education program, educators must know these weaknesses. The business employers of Glynn County were asked to indicate the weaknesses found in high school graduates employed in their offices. Of the 138 employers surveyed, 114, or 82.6 percent, responded to the question. A number of employers stated that they did not hire high school graduates and could not answer the question.

As shown in Table XVI, spelling was the weakness which business employers found most prevalent in the high school graduates they employed. Spelling was checked as most prevalent by 44, or 38.6 percent, of the 114 responding employers; 40, or 35.0 percent, checked spelling as moderately prevalent; 11, or 9.7 percent, checked

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[29]Glessner, op. cit.

TABLE XVI

WEAKNESSES IN HIGH SCHOOL GRADUATES EMPLOYED IN OFFICE POSITIONS[a]

Weakness	Most Prevalent		Moderately Prevalent		Least Prevalent		No Weakness Indicated	
	No.	Percent	No.	Percent	No.	Percent	No.	Percent
Spelling	44	38.6	40	35.0	11	9.7	19	16.7
Penmanship	29	25.4	27	23.6	25	22.0	33	29.0
Written English	28	24.6	33	29.0	21	18.4	32	28.0
Spoken English	27	23.7	35	30.8	22	19.2	30	26.3
Bookkeeping/ Accounting	25	22.0	28	24.6	15	13.1	46	40.3
Shorthand	23	20.1	13	11.4	19	16.7	59	51.8
Arithmetic	22	19.2	37	32.4	20	17.6	35	30.8
Typewriting	18	15.8	28	24.6	38	33.3	30	26.3
Machine Operation	10	8.8	29	25.4	26	22.8	49	43.0

[a]Of the 138 business employers surveyed, 114 answered this question.

spelling as least prevalent. No weakness in spelling was indicated by 19, or 16.7 percent, of the employers.

Lack of ability in penmanship was checked most prevalent by 29, or 25.4 percent, of the responding employers; moderately prevalent by 27, or 23.6 percent; and least prevalent by 25, or 22.0 percent. No weakness in penmanship was indicated by 33, or 29.0 percent, of the employers.

Lack of ability in written English was checked moderately prevalent by 33, or 29.0 percent; most prevalent by 28, or 24.6 percent; and least prevalent by 21, or 18.4 percent. No weakness in written English was indicated by 32, or 28.0 percent, of the employers.

Lack of ability in bookkeeping/accounting was checked moderately prevalent by 28, or 24.6 percent; most prevalent by 25, or 22.0 percent; and least prevalent by 15, or 13.1 percent. No weakness in bookkeeping/accounting was indicated by 46, or 40.3 percent, of the employers.

Lack of ability in shorthand was checked most prevalent by 23, or 20.1 percent; least prevalent by 19, or 16.7 percent; and moderately prevalent by 13, or 11.4 percent. No weakness in shorthand was indicated by 59, or 51.8 percent, of the employers.

Lack of ability in arithmetic was checked moderately prevalent by 37, or 32.4 percent; most prevalent by 22, or 19.2 percent; and least prevalent by 20, or 17.6 percent. No weakness in arithmetic was indicated by 35, or 30.8 percent, of the employers.

Lack of ability in typewriting was checked least prevalent by 38, or 33.3 percent; moderately prevalent by 28, or 24.6 percent; and most prevalent by 18, or 15.8 percent. No weakness in typewriting was indicated by 30, or 26.3 percent, of the employers.

Lack of ability in machine operation was checked moderately prevalent by 29, or 25.4 percent; least prevalent by 26, or 22.8 percent; and most prevalent by 10, or 8.8 percent. No weakness in machine operation was indicated by 49, or 43.0 percent, of the employers.

Lack of ability in other areas was mentioned most prevalent by a number of business employers responding to the question. They were: filing, telephone manners, vocabulary, business correspondence, taking dictation, and reading comprehension.

According to the results of the survey, high school graduates had a definite weakness in spelling which was listed as the most prevalent weakness by 38.6 percent of the employers and was listed as moderately prevalent by 35.0 percent. These figures were consistent with those in Table XVII, since spelling was mentioned as the subject recommended more than any other subject for study by both males and females during high school.

Penmanship was the second most prevalent weakness. Written English and spoken English were the third and fourth most prevalent weaknesses found in high school graduates. According to the business employers surveyed, the information indicated that the high school graduates lacked sufficient training in verbal and written communication, and that more emphasis should be placed on these subjects in the high schools of Glynn County.

TABLE XVII

RECOMMENDED BUSINESS SUBJECTS FOR HIGH SCHOOL BUSINESS STUDENTS BY SEX[a]

Subject	Male	Female	Both
Spelling	0	3	120
Bookkeeping/Accounting	0	14	110
Business Correspondence	3	14	106
General Business	10	1	98
Penmanship	0	7	94
Typewriting	0	36	89
Office Practice	0	23	79
Machine Calculation	0	13	78
Filing	0	29	77
Economics	14	3	58
Salesmanship	21	2	57
Business Law	24	0	43
Advertising	9	3	38
Economic Geography	7	0	25
Business Mathematics	14	2	22
Shorthand	0	67	12

[a]All of the 138 business employers surveyed responded to this question, but all did not respond to each subject.

A large number of business employers in Glynn County did not indicate weaknesses in the high school graduates they employed. Thus, they were satisfied with the business education of the high school graduates employed in their business offices.

Concerning weaknesses observed by employers of high school graduates employed in business offices, Bickel[30] found that the greatest difficulty had been in the areas of English grammar and spelling. In Copeland's study,[31] the business employers listed spelling as the number 1 weakness; and other abilities in which a deficiency in training was most noticeable were, in the order ranked: arithmetic, general business information, spoken English, and written English. Medley[32] also found that the most observed weaknesses were: poor spelling; immaturity; and a lack of word power, vocabulary, and language skills in general. Tweed[33] found that the most noticeable weaknesses observed in the training of high school graduates in business offices were, in the order named: lack of general business information, penmanship, and spoken and written English. These findings were consistent with the findings of the present study.

Recommended Business Subjects for High School Business Students by Sex

By knowing the subjects in which office workers lack information and skills, business educators can appraise the curriculum,

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[30]Bickel, op. cit.

[31]Copeland, op. cit.

[32]Medley, op. cit.

[33]Tweed, op. cit.

make necessary revisions, and thus prepare office workers with the knowledges and skills businessmen require. The survey questionnaire contained a list of various business subjects, and the business employers were asked to check the subjects which they believed should be studied by male students, by female students, and by both male and female students. All of the 138 business employers surveyed responded to this question, but all did not respond to each subject.

Table XVII, page 108, shows the responses of the business employers regarding subjects which they believed high school students needed most. Spelling was ranked number 1 as the subject that most respondents thought should be studied by both male and female students sometime during high school. Spelling was indicated by 120 of the business employers. Other subjects and responses given most often for study by both male and female students were: bookkeeping/ accounting, 110 responses; business correspondence, 106; general business, 98; penmanship, 94; typewriting, 89; office practice, 79; machine calculation, 78; filing, 77; economics, 58; salesmanship, 57; and business law, 43 responses. Advertising received 38 responses; economic geography, 25; business mathematics, 22; and shorthand, 12 responses.

Other courses recommended by the employers for both male and female students were: office machines, business management, and business English. Several employers listed other areas of study which they thought should be studied by both male and female students in high school: psychology--the basics of working with and getting along with others; telephone courtesy, general business manners (and personal manners), and general office dress codes.

Subjects recommended most for study by male students were: business law, 24 responses; salesmanship, 21; business mathematics, 14; economics, 14; general business, 10; advertising, 9; economic geography, 7; and business correspondence, 3 responses. Other courses of study for male students by the employers were finance and money and banking.

Subjects recommended most for study by female students were: shorthand, 67 responses; typewriting, 36 responses; filing, 29; office practice, 23; bookkeeping/accounting, 14; and business correspondence, 14 responses. Advertising, economics, and spelling were checked for female students 3 times each; salesmanship, 2; and business mathematics, 2.

According to employer responses, both male and female students preparing for office positions should include in their high school program the following subjects: spelling, bookkeeping/accounting, business correspondence, general business, penmanship, typewriting, office practice, machine calculation, and filing. At least half of the 138 employers thought these subjects were important.

Concerning the recommended business subjects for high school business students by business employers, Tweed[34] found that English and spelling were the subjects that most respondents thought should be studied by both boys and girls some time during high school; penmanship ranked second; and business arithmetic, and typewriting, all ranked third. Medley[35] also found that the firms suggested

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[34] Ibid.

[35] Medley, op. cit.

that the schools better prepare the students in: spelling, language skills, letter writing, typing ability, and a variety of behavioral traits, such as attitude. These findings support the findings of the present study.

Recommended Activities to Supplement High School Business Education Instruction

The business employers were asked to rate the activities which they thought should supplement the instruction in the high school business education program. Of the 138 business employers surveyed, 133 answered this question.

As shown in Table XVIII, work experience programs were rated very important by 102, or 76.7 percent, of the employers. Eighteen, or 13.6 percent, rated work experience programs moderately important. Three, or 2.2 percent, thought work experience programs were unimportant. No response was indicated by 10, or 7.5 percent, of the employers.

Business education clubs, such as Future Business Leaders of America, were rated moderately important by 74, or 55.7 percent; very important by 36, or 27.0 percent; and unimportant by 18, or 13.5 percent. No response was indicated by 5, or 3.8 percent, of the employers.

Speakers from businesses were rated moderately important by 67, or 50.4 percent; very important by 35, or 26.3 percent; and unimportant by 12, or 9.0 percent. No response was indicated by 19, or 14.3 percent, of the employers.

TABLE XVIII

RECOMMENDED ACTIVITIES TO SUPPLEMENT HIGH SCHOOL BUSINESS EDUCATION INSTRUCTION[a]

Activity	Very Important		Moderately Important		Unimportant		No Response Indicated	
	No.	Percent	No.	Percent	No.	Percent	No.	Percent
Work experience programs	102	76.7	18	13.6	3	2.2	10	7.5
Business education club	36	27.0	74	55.7	18	13.5	5	3.8
Speakers from businesses	35	26.3	67	50.4	12	9.0	19	14.3
Use of audio/ visual aids	30	22.6	71	53.4	14	10.5	18	13.5
Field trips to businesses	29	21.9	67	50.3	21	15.8	16	12.0

[a]Of the 138 business employers surveyed, 133 answered this question.

The use of audio/visual aids was rated moderately important by 71, or 53.4 percent; very important by 30, or 22.6 percent; and unimportant by 14, or 10.5 percent. No response was indicated by 18, or 13.5 percent, of the employers.

Field trips to business offices were rated moderately important by 67, or 50.3 percent; very important by 29, or 21.9 percent; and unimportant by 21, or 15.8 percent. No response was indicated by 16, or 12.0 percent, of the employers.

The information indicated that supplementing instruction with work experience programs, business education club, speakers from businesses, and field trips to business offices, would help to establish closer relations between the high schools and the business community.

The high regard for work experience programs by 102, or 76.7 percent, of the employers indicated that the employers desired experienced workers. The high rating of work experience programs justifies the existence of the VOT (Vocational Office Training) programs in the high schools in Glynn County.

The VOT plan permits students to work part-time in offices and receive pay for their hours of employment as well as receive credit in school for the VOT course. Those students not in the VOT programs should be encouraged to seek part-time or summer work in business offices since work experience was considered very important by the business employers in Glynn County.

Consistent with the findings of the present study, Tweed[36] found that the most frequent suggestion employers offered for the improvement in training of office workers was some form of cooperative training.

Suggestions Given by Business Employers for Better Preparation of Office Workers

The survey questionnaire included an open-end question which asked the business employers to list any suggestions which they thought would result in a better preparation of office workers. As shown in Table XIX, of the 138 business employers surveyed, 85, or 61.6 percent, responded to the question.

Of the 85 respondents, 9, or 10.6 percent, thought that more instruction and training should be provided in each of the following areas: work experience programs; telephone usage and telephone manners; and spelling.

For better preparation of office workers, 8, or 9.4 percent, of the employers thought more instruction and training should be provided in English grammar; and 6, or 7.0 percent, mathematics.

For better preparation of office workers, 5, or 5.9 percent, of the employers thought that each of the following should be emphasized: dressing appropriately for the office job; neat appearance and good grooming; and more practice on penmanship.

Concerning the suggestions given by the employers for better preparation of office workers, 4, or 4.7 percent, thought each of

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[36]Tweed, op. cit.

TABLE XIX

SUGGESTIONS GIVEN BY BUSINESSMEN FOR BETTER PREPARATION OF OFFICE WORKERS[a]

Suggestions	Number of Businesses	Percent
Provide more work experience programs	9	10.6
Provide more instruction and training in:		
Correct telephone usage and manners	9	10.6
Spelling	9	10.6
English grammar	8	9.4
Mathematics	6	7.0
Teach students the importance of:		
Dressing appropriately for the office job	5	5.9
Neat appearance and good grooming	5	5.9
Good penmanship	5	5.9
Provide more learning opportunities to develop proper attitude toward one's job	4	4.7
Provide more instruction and training in:		
Bookkeeping	4	4.7
Emphasize the importance of:		
Getting along with and working with people	4	4.7
Being able to take and relay messages correctly	3	3.5
Provide activities to prepare students for the interview	3	3.5
Stress the importance of:		
Being able to proofread one's own work	3	3.5
Good customer service and making customers feel needed and welcomed	3	3.5
Willingness to work and doing best job possible	3	3.5
Encourage students to seek actual work experience after school hours	2	2.3
Provide learning activities to develop desirable office etiquette and courtesy	2	2.3
Provide more instruction and training in:		
Accounting	2	2.3
Letter composition	2	2.3
Office machines	2	2.3

TABLE XIX (continued)

Suggestions	Number of Businesses	Percent
Stress the importance of dealing with unpleasant situations in a calm, quiet, and friendly manner	2	2.3
Teach importance of:		
Good attendance and punctuality on the job	2	2.3
Pride in job well done	2	2.3
Provide more instruction and training in:		
Cash register	1	1.1
Correct filing	1	1.1
Data processing	1	1.1
General office procedures	1	1.1
Personal improvement	1	1.1
Reading	1	1.1
Salesmanship	1	1.1
Shorthand	1	1.1
Ten-Key adding machine	1	1.1
Provide more information concerning:		
General business principles	1	1.1
The business world in general	1	1.1
Teach importance of:		
Accuracy in all areas of work	1	1.1
Asking questions when they do not understand how to do a job	1	1.1
Being able to express one's self	1	1.1
Being able to make decisions	1	1.1
Being discreet with confidential information and not discussing business matters with outsiders	1	1.1
Loyalty to one's employer	1	1.1
Neatness of work	1	1.1
Teach students that all offices operate differently due to different types of businesses	1	1.1

[a]As indicated by 85 firms responding to the question.

the following should be emphasized: learning opportunities to develop proper attitude toward one's job; bookkeeping; and getting along with people.

For better preparation of office workers, 3, or 3.5 percent, of the employers thought that each of the following should be emphasized: being able to take messages and relaying them correctly; preparing for the interview; proofreading; good customer service; and willingness to work.

Other areas for improvement suggested by the employers included: actual work experience; desirable office etiquette; good attendance and punctuality on the job; and pride in a job well done.

In addition to the fundamental processes of spelling, English grammar, and mathematics, the employers considered good grooming, desirable personality traits, and dealing with the public in a satisfactory manner areas for improvement in the preparation of high school students for office positions.

V. SUMMARY

This chapter has presented an analysis of the data obtained from an occupational survey conducted in Glynn County, Georgia. Information concerning office job opportunities in Glynn County, and the requirements necessary to fulfill these office positions, were presented.

The following chapter presents (1) a summary of the findings of the survey, (2) the conclusions based on the findings, and (3) the recommendations for the improvement of the business curriculum in the Glynn County high schools.

CHAPTER V

FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS

I. SUMMARY

The purposes of this study were (1) to conduct an occupational survey of businesses in Glynn County, Georgia, for determining office job opportunities available to high school business graduates, (2) to determine the requirements necessary to fulfill these positions, and (3) to evaluate, in light of the occupational survey, the existing business education curriculum in the two Glynn County high schools for possible revisions.

To accomplish these purposes, answers to the following questions were sought:

1. What are the business occupational opportunities available to business education graduates of the Glynn County high schools?
   a. What are the classifications of the businesses?
   b. What is the number of office employees?
   c. What are the types of office positions?
2. What are the pre-employment practices of business employers?
   a. What types of employment tests are given?
   b. What agencies are used to obtain office employees?
   c. What factors are important when considering applicants for office positions?
   d. What factors are important when reviewing the high school records of prospective employees?

3. What are the selected job competencies recommended by business employers?
   a. What are the speed requirements in typewriting and in shorthand?
   b. What degree of preparation is recommended on business machines?
   c. What filing systems are used?
4. What are the opinions of business employers concerning improvement of the business education program in the Glynn County high schools?
   a. What abilities are lacking in the education of high school business graduates?
   b. What business subjects do employers recommend for study by high school students?
   c. What school activities should supplement the instruction in the high school business program?

Data for this study were collected by questionnaires mailed to 180 selected business firms in Glynn County, Georgia, which were believed to employ office workers. The selected firms were considered to be representative of the diverse types of businesses in Glynn County.

Of the 180 business firms surveyed, 151, or 83.9 percent, returned the questionnaires; and of the 151 returned questionnaires, 138, or 91.4 percent, were usable and formed the basis of the information presented in this study.

II. FINDINGS

The major findings of this study are presented under the following categories: Business Occupational Opportunities Available to High School Business Graduates; Procedures Used by Employers in Hiring Office Workers; Job Competencies Required; and Suggested Improvements for Business Education.

Business Occupational Opportunities Available to High School Business Graduates

1. The survey of office occupations in Glynn County, Georgia, included 138 business firms employing office workers. Of this number, the Wholesale and Retail Trade group, 47, or 34.0 percent, was the largest group responding to the survey. The second largest group was the Services group, 27, or 19.6 percent; and the third largest was the Manufacturing group, 24, or 17.4 percent (Table II, page 70; Table III, page 72).
2. The 138 business firms classified a total of 1,911 office employees. Of this number, 1,286, or 67.3 percent, were females; and 625, or 32.7 percent, were males. Of the total 1,911 office employees, 1,696, or 89.0 percent, were classified as full-time employees; and 215, or 11.0 percent, were classified as part-time employees (Table IV, page 74).
3. The 138 business employers indicated 410 office positions available yearly to high school business graduates. Of

this number, the most important group was the general clerical group which contained 130, or 31.7 percent, available positions (Table V, page 76).

Procedures Used by Employers in Hiring Office Workers

4. The most popular employment test given by the 138 participating business employers was typewriting. Twenty-seven of the employers administered a typewriting test to prospective employees (Table VI, page 79).

5. Concerning sources through which office employees were obtained, 132, or 95.7 percent, of the 138 participating employers responded to the question. Personal applications were extensively used by 71, or 53.8 percent; occasionally used by 47, or 35.6 percent (Table VII, page 81).

6. Concerning factors of importance when considering applicants for office positions, 134, or 97.1 percent, of the 138 participating business employers responded to the question; 121, or 90.3 percent, thought the interview impression was the most important factor (Table VIII, page 83).

7. Sixty-eight, or 49.2 percent, of the 138 participating employers reviewed the prospective employee's high school record. Concerning factors of importance to employers when reviewing high school records, attitude was mentioned the greatest number of times--64, or 94.1 percent, of the 68 firms thought attitude was very important; 59, or 86.8 percent, thought attendance was very important (Table IX, page 86; Table X, page 88).

Job Competencies Required

8. Concerning straight-copy typewriting tests, the speed requirements ranged from 30 to 75 words per minute; the rate most often given was 50 words per minute. The time length ranged from 3 to 15 minutes with the 5-minute test being most popular. The number of errors ranged from 2 to 5 with 5 errors the number most often allowed (Table XI, page 90).

9. Concerning problem typewriting tests, the speed requirements ranged from 30 to 50 words per minute; the rate most often given was 40 words per minute. The time length ranged from 3 to 15 minutes with the 5-minute test being most popular. The number of errors allowed was one and two errors (Table XII, page 92).

10. Concerning shorthand dictation/transcription tests, the speed requirements ranged from 40 to 100 words per minute; the rate most often indicated was 80 words per minute. The time length ranged from 5 to 30 minutes with the 5-minute test being most popular. The number of errors allowed ranged from 2 to 5 with 5 errors the number most often allowed (Table XIII, page 94).

11. Concerning the degree of training recommended on office machines, 130, or 94.2 percent, of the 138 employers responded to the question. Of the adding/calculating machines being used, the ten-key adding machine was the most popular: 75, or 57.7 percent, recommended moderate

training; and 31, or 23.9 percent, extensive training (Table XIV, page 98).

12. The most popular duplicating machine was the copy machine: 61, or 47.0 percent, recommended moderate training; 11, or 8.4 percent, extensive training (Table XIV).

13. The most popular data processing equipment in use was the accounting machine; 21, or 16.2 percent, recommended moderate training; 13, or 10.0 percent, extensive training (Table XIV).

14. The bookkeeping machine was another popular machine used in the business offices in Glynn County: 25, or 19.2 percent, recommended moderate training; 14, or 10.8 percent, extensive training (Table XIV).

15. The system of filing most in use was the alphabetic, which was used by 121, or 51.5 percent, of the employers; second, the numeric, by 68, or 28.9 percent; third, the subject, by 38, or 16.2 percent; and fourth, the geographic, by 8, or 3.4 percent. Some offices indicated the use of two or more systems of filing (Table XV, page 103).

Suggested Improvements for Business Education

16. In ranking the abilities found lacking in the training of high school graduates employed in office positions, spelling was the most prevalent weakness: 44, or 38.6 percent, of the 114 employers responding to the question indicated spelling was most prevalent; 40, or 35.0 percent,

moderately prevalent. Other abilities in which a deficiency in training was most noticeable were, in the order ranked: penmanship, most prevalent by 29, or 25.4 percent, and moderately prevalent by 27, or 23.6 percent; written English, moderately prevalent by 33, or 29.0 percent, and most prevalent by 28, or 24.6 percent; spoken English, moderately prevalent by 35, or 30.8 percent, and most prevalent by 27, or 23.7 percent (Table XVI, page 105).

17. Concerning subjects which business employers thought students should study sometime in high school, spelling was the subject mentioned by the greatest number of employers for study by both males and females, by 120 of the 138 employers. Other subjects recommended for both males and females, in the order of rank, were: bookkeeping/accounting, business correspondence, general business, and penmanship. The subject recommended most frequently for study by males only was business law, by 24 of the 138 employers. Other subjects mentioned in order of rank, for males only, were salesmanship and business math. Shorthand was the subject most frequently mentioned for study by females, by 67 of the 138 employers. Typewriting was the second most frequently mentioned subject for females only, by 36 of the 138 employers (Table XVII, page 108).

18. Concerning the activities which business employers thought should supplement the instruction in the high school

business education program, work experience programs were mentioned the greatest number of times: 102, or 76.7 percent, of the 133 employers responding to the question indicated work experience was very important; 18, or 13.6 percent, moderately important (Table XVIII, page 113).

19. Other suggestions from business employers for specific training the high schools should offer to better prepare students for office positions correlate with the findings cited above. The following suggestions, in order of importance, were emphasized: provide more work experience programs; provide more instruction and training in correct telephone usage and manners, spelling, English grammar, and business mathematics; teach students the importance of attitude, attendance, dressing appropriately for the office job, neat appearance and good grooming, and good penmanship (Table XIX, page 116).

III. CONCLUSIONS

From a thorough study and analysis of the findings obtained in the business occupational survey of Glynn County, Georgia, the following conclusions are made:

1. The business community in Glynn County, Georgia, offers job opportunities to high school business graduates. More general clerical jobs were available than other types of office positions. (This conclusion is based on Findings 1-3.)

2. High school training is considered satisfactory for performing duties related to typewriting and shorthand skills, operating business machines, and filing procedures. (This conclusion is based on Findings 8-12; 14, 15.)
3. Sufficient training is lacking in the areas of spelling, penmanship, written English, spoken English, and correct telephone usage. (This conclusion is based on Finding 16.)
4. The most important subjects to include in business education are: spelling, bookkeeping/accounting, business correspondence, general business, penmanship, business law, salesmanship, business math, typewriting, and shorthand. (This conclusion is based on Finding 17.)
5. Work experience programs is an important part of a student's business preparation as viewed by business employers. (This conclusion is based on Finding 18.)

IV. RECOMMENDATIONS

In view of the findings and conclusions of this study, the following recommendations are made for the improvement of the existing business education program in the Glynn County high schools and for further study:

Improvement of Existing Business Education Program

1. A cooperative placement bureau is recommended through the business and guidance departments. The bureau should keep the students informed of the availability of office

positions in the community; special attention should be given to the fact that the largest number of available office jobs are in the clerical field. More male students should be encouraged to prepare for these jobs. The bureau should also keep employers informed of the availability of competent students to fill office positions.

2. The General Business course should be added to the existing business curriculum and should be offered in the 9th grade for one year to provide the students with a background of general information and basic vocational-use subjects. Both vocational and non-vocational students will benefit from taking the course. General Business correlates with such subjects as bookkeeping, business math, spelling, and penmanship--all areas of study recommended by the employers. One unit of credit should be allowed, and no prerequisites should be required.
3. A semester of a salesmanship course should be added to the existing curriculum and should be offered in the 12th grade. A salesmanship course has personal-use values as well as vocational values and correlates with the business English and business math courses. Such traits as neatness, good manners, and personality are developed in the salesmanship course--traits employers would like to see improved. One-half unit of credit should be allowed, and no prerequisites should be required.

4. According to the business employers, the existing business program provides sufficient training in the areas of shorthand and typewriting. Accuracy should continue to be stressed more than speed in these courses. Consideration should be given to offering only three semesters of each of these courses rather than the existing four semesters. A business correspondence course should be offered to give students an opportunity to apply the fundamentals of grammar and composition to business letter writing with a high degree of correctness expected as to form, grammar, punctuation, and spelling--abilities found lacking in high school graduates employed in business offices. The business correspondence course could replace the existing business English course. Perhaps the change in title and revised content would attract more students. The business correspondence course should receive one-half unit of credit. One year of typewriting would be preferable as a prerequisite. The fourth semester of typewriting could be replaced with a course in business report writing with emphasis on business forms and statistical typing which correlates with business math and the use of business machines. The business report writing course should receive one-half unit of credit. One year of typewriting would be preferable as a prerequisite.

5. The existing courses in office practice, recordkeeping, bookkeeping, and VOT should continue to emphasize the following areas of instruction: ten-key adding machine, business math, spelling, penmanship, correct telephone usage, personal applications, and the interview.

6. The existing VOT work experience programs should be expanded to include more students since this activity was rated very important by 76.7 percent of the business employers. Students not in the VOT program should be encouraged to seek part-time office work after school or during summer vacation.

7. Consideration should be given to the addition of a remedial course to include the following areas of study: spelling, English grammar, penmanship, and business math since sufficient training in these areas was found lacking by the employers. The course should be a one-semester course offered in grades 9 through 12 with no prerequisite. This would be an excellent opportunity for study hall students to pursue this course. Perhaps a program of individualized instruction may be incorporated. Correct spelling and English grammar should be emphasized by all teachers in all classes to make students aware of their importance in future employment.

Further Study

8. A study should be conducted to determine why more females than males work in business offices.

9. A similar study should be made in approximately 3 to 5 years to determine how well the business education program in the Glynn County high schools is meeting the needs of local employers and whether the business education program has helped graduates overcome weaknesses in spelling, English grammar, penmanship, and business math.

10. In addition, studies involving the business environment should be made. The availability and effect of word processing would be an example of a changing business environment.

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APPENDIX

APPENDIX

Board of Education
GLYNN COUNTY
SIDNEY BOSWELL
SUPERINTENDENT OF SCHOOLS
BRUNSWICK, GEORGIA 31520

R.E. Jonas
Assistant Superintendent

James A. Warren
Personnel Director

Fred Wild
Director of Instruction

J.M. Hodges
Business Manager

July 10, 1973

Mrs. Vera Green
1405 West Clinch Avenue
Knoxville, Tennessee 37916

Dear Mrs. Green:

I have your letter of July 6, 1973.

There have been one or two occupational surveys made of Glynn County in the last few years. I do not have a copy of either of these, so do not know just what the studies entailed. Some four years ago, we made a study for Brunswick High School in connection with their comprehensive vocational department but this was mainly along the line of job potential in the fields we were offering.

I called Mr. Holloway at Brunswick Junior College and he gave me the names of two such studies, but I am not familiar with either as I previously stated.

One of them, under the title of "Creative Employment Potential by I-95 in Coastal Georgia" was done to satisfy the requirements of a master's degree at Georgia Southern by Philip H. Flournoy and printed by Coastal Area Community Action Authority in 1972.

Another study, under the title, "A Study of Job Training Needs in Selected Areas of Georgia" by a joint committee of the Post-Secondary Vocational and Technical Adult Education by the State Department of Education and the Board of Regents. I am sure you could get a copy of this from the State Department of Education.

An occupational survey, it seems to me, would be worth while every few years because of changing conditions and changing patterns of employment. I feel that our guidance people in both of our high schools and even the junior college would like an up-to-date occupational survey.

The Southern Association Committee, on the evaluation of Glynn Academy, made some pretty definite recommendations for business education curriculum. I am enclosing a copy of this on a separate sheet.

Mrs. Mary Haney Rice, Instructor of Clerical Science at Brunswick Junior College, is preparing a Community/Career Resource Directory containing the names and addresses of companies who are willing to share their resources with educators, thus helping enrich the learning experience of all students. I am also enclosing copy of this for your information. However, this is not strictly an occupational survey.

I hope some of this material may be of help to you.

Sincerely yours,

Sidney Boswell
Superintendent

SB/ cms
Enc

Board of Education
GLYNN COUNTY
SIDNEY BOSWELL
SUPERINTENDENT OF SCHOOLS
BRUNSWICK, GEORGIA 31520

R.E. Jonas
Assistant Superintendent

James A. Warren
Personnel Director

Fred Wild
Director of Instruction

J.M. Hodges
Business Manager

January 8, 1974

Dear Office Manager:

A survey of office occupations is being made of business and industrial firms in Glynn County to determine the office job opportunities available to our high school graduates and the requirements necessary to fulfill these jobs. The survey will help us to evaluate our present business curriculum for possible revisions. The information obtained from the questionnaire will be of value in developing a better business education program and will help us to provide competent office workers for you and other businessmen in our area.

Will you please help by completing the enclosed questionnaire. Your firm will not be identified in the study. I am aware of the time required to complete the questionnaire, but the value of the information you provide will make the time spent worthwhile.

I shall appreciate your completing the questionnaire and returning it to me within one week after its receipt in the enclosed stamped, pre-addressed envelope. If you have any questions concerning the study, please call me at school, 265-8452; or at my home, 265-9151.

Thank you for participating in this study.

Sincerely yours,

Vera L. Green
Mrs. Vera L. Green
Business Education Teacher

Sidney Boswell
Sidney Boswell, Superintendent
Glynn County Public Schools

Enclosures

QUESTIONNAIRE

A SURVEY OF OFFICE OCCUPATIONS IN GLYNN COUNTY, GEORGIA

Firm Name _____ Address _____

Kind of business (such as retail grocery store) _____

Reported by _____ Position _____

The purpose of the items included on this questionnaire is to identify office job opportunities and requirements for beginning office workers.

Please use an "X" wherever possible to indicate your answer; if not applicable, please use "N/A."

1. (A) Total number of full-time office employees: Male___ Female___
   (B) Total number of part-time office employees: Male___ Female___

2. Please state the approximate number of positions listed below which could be filled yearly in your office by students completing the high school business program.

   (A)_____ Bookkeeper
   (B)_____ General Clerical
   (C)_____ Machine Operator
   (D)_____ Receptionist
   (E)_____ Stenographer
   (F)_____ Switchboard Operator
   (G)_____ Typist
   (H)_____ Others: (Please list)_____

3. If your firm gives employment tests to prospective employees, please check the type of tests given:

   (A)_____ Arithmetic
   (B)_____ Clerical
   (C)_____ Dictation/Transcription
   (D)_____ English
   (E)_____ Filing
   (F)_____ I.Q.
   (G)_____ Personality
   (H)_____ Psychological
   (I)_____ Typewriting
   (J)_____ Others: (Please list)_____

4. On the basis of the above tests (Question 3), what are the minimum acceptable rates in:

	Minimum Words Per Min. Accepted	Length of Test in Minutes	Errors Permitted
Straight-Copy Typing			
Problem Typing			
Dictation/Transcription			
Other: (Please list)			

5. Please indicate by checking the appropriate column the business subjects that you believe every student should study sometime during his/her four years in high school. Check those subjects which you believe should be studied by boys, by girls, by both.

Subject	Boys	Girls	Both
Advertising			
Bookkeeping/Accounting			
Business Mathematics			
Business Correspondence			
Business Law			
Economic Geography			
Economics			
Filing			
General Business			
Machine Calculation			
Office Practice			
Penmanship			
Salesmanship			
Shorthand			
Spelling			
Typewriting			
Others: (Please list)			

6. On the following machines, please indicate by checking the appropriate column the degree of training you recommend for beginning office workers in your organization.

	Extensive Training	Moderate Training	No Training
Adding/Calculating Machines			
(A) Full-keyboard adding machine			
(B) Ten-key adding machine			
(C) Electronic calculator			
(D) Printing calculator			
Duplicating Machines			
(E) Fluid duplicator			
(F) Offset duplicator			
(G) Stencil duplicator			
(H) Copy machine			
Data Processing Equipment			
(I) Keypunch			
(J) Verifier			
(K) Sorter			
(L) Collator			
(M) Accounting machine			
Other			
(N) Bookkeeping machine			
(O) Transcribing machine			
Others: (Please list)			

7. Please indicate by checking the appropriate column the weaknesses you have found in the high school graduates you have employed.

	Most Prevalent	Moderately Prevalent	Least Prevalent
(A) Arithmetic			
(B) Bookkeeping/Accounting			
(C) Machine operation			
(D) Penmanship			
(E) Shorthand			
(F) Spelling			
(G) Spoken English			
(H) Typewriting			
(I) Written English			
(J) Others: (Please list)			

8. Please rank the importance of each of the following activities which you believe should supplement the instruction in the business education program. (Very Important: essential or vital; Moderately Important: not essential but some value; Unimportant: no value). Indicate your ranking with a checkmark in the proper column.

	Very Important	Moderately Important	Unimportant
(A) Business education club (Such as Future Business Leaders of America)			
(B) Field trips to business offices			
(C) Greater use of audiovisual aids			
(D) Speakers from businesses			
(E) Work experience programs			
(F) Others: (Please list)			

9. Do you review the applicant's high school record prior to employment?
_____Yes _____No

If you do, please rank the importance of each of the following items when reviewing the applicant's high school record. Indicate your ranking with a checkmark in the proper column.

	Very Important	Moderately Important	Unimportant
(A) Attendance			
(B) Attitude			
(C) FBLA Membership (Future Business Leaders of America)			
(D) Grade point average			
(E) Types of courses completed			
(F) Others: (Please list)			

10. Please rank the importance of each of the following items when considering applicants for office positions in your firm. Indicate your ranking with a checkmark in the proper column.

	Very Important	Moderately Important	Unimportant
(A) Impression of applicant in interview			
(B) Letters of recommendation			
(C) Pre-employment test scores			
(D) Review of school records			
(E) Others: (Please list)			

11. Please indicate by checking the appropriate column the agencies through which you obtain your office employees.

	Extensively Used	Occasionally Used	Never Used
(A) Employees			
(B) Employment agencies			
(C) High schools			
(D) Newspaper advertisements			
(E) Personal applications			
(F) Private business schools			
(G) Recommendations of friends			
(H) Others: (Please list)			

12. Please check ("X") the system of filing used in your organization:

(A)_____Alphabetic
(B)_____Geographic
(C)_____Numeric
(D)_____Subject
(E)_____Other: (Please list)_____

13. In terms of your experience, please list any suggestions which you believe would result in a better preparation of office workers for your type of business._____

VITA

Vera Lelia Green was born in Evans, Georgia, a suburb of Augusta, Georgia. She attended elementary and high schools in Benton, Tennessee. Her home is in Cleveland, Tennessee, where she attended Lee College.

She received the Bachelor of Science degree in Business Education from The University of Tennessee, Knoxville. In June, 1972, she entered The University of Tennessee Graduate School and received the Master of Science degree in Business Education in August, 1974.

She has a background of business and office experience and has taught school in the Glynn County public school system in Brunswick, Georgia.

She is a member of Delta Pi Epsilon, Phi Kappa Phi, and Pi Lambda Theta fraternities.